

PA13-183

HB6527

Children	1025-1047, 1062-1066, 1081-1089, 1097-1102, 1106-1112, 1125-1127, 1144-1154, 1192-1200, 1339, 1491-1525, 1528- 1545, 1548-1562	142
House	6509-6519, 9041-9049	20
Senate	4485-4492	8
		170

H – 1168

**CONNECTICUT
GENERAL ASSEMBLY
HOUSE**

**PROCEEDINGS
2013**

**VOL.56
PART 19
6233 – 6539**

(Chamber at ease.)

SPEAKER SHARKEY:

Will the House please come back to order. Will the House please come back to order. Will the Clerk please call -- will the Clerk please call Calendar 172.

THE CLERK:

House Calendar 172, substitute House Bill 6527,
AN ACT CONCERNING GENETICALLY ENGINEERED BABY FOOD.

DEPUTY SPEAKER SAYERS:

Representative Diana Urban, Chairman of the Children's Committee. You have the floor, Madam.

REP. URBAN (43rd):

Thank you, Mr. Speaker. Mr. Speaker, I move acceptance of the joint committee's favorable report and passage of the bill.

DEPUTY SPEAKER SAYERS:

The question is on acceptance of the joint committee's favorable report and passage of the bill. Will you remark, Madam.

REP. URBAN (43rd):

Yes, Mr. Speaker, and thank you. This bill

directs itself at what are called genetically modified organisms but it's -- it is directed at baby food and genetically modified organisms in baby food.

Sometimes because this is a bit of a difficult subject, Mr. Speaker, the idea of what is a genetically modified organism and does the genetically modified organism have an adverse effect on a child's growing body has been a subject of discussion.

It has been a subject of long term investigation. And we as a body here in the State of Connecticut have been looking at the labeling of these baby foods. And myself looking at how markets develop and knowing that when the consumer has the most information available that is when markets work the best, Mr. Speaker. And that is actually called consumer sovereignty because when the consumer has as much information as they possibly can then they will make a choice that is in the best interest of themselves and as Adam Smith has pointed out to us through the invisible hand of the market, that consumer choice then allows the market to actually produce what it is that the consumer wants.

And as I said that's the invisible hand of the market through consumer sovereignty and actually we refer to it as dollar votes. So when you go and you

purchase something at the store you're actually voting for that product and that gets back to the manufacturer of the product and they produce more of it.

What we have looked at when we've talked about baby foods is the actuality that when we're thinking about what is a genetically modified organism and I have been known to tell this story, Mr. Speaker, that people think that you know a tomato goes out with a flounder and they're on a date and they do their thing and they exchange DNA and that that's all a very you know sort of natural process.

But in fact that is not the case. What actually happens in order to introduce DNA from one cell to another the cell in fact has to be fooled and by that I mean that into -- to introduce foreign DNA into another cell's DNA you have to either use bacteria or a virus to fool the cell into taking the other cell's DNA or it can be done with something which is called a gene gun.

And the gene gun can be actually shot at the cell and then the cell will accept the other cell's DNA. This actually does worry a lot of people and they are concerned about the outcome of that kind of a process

and would like to be able to make the choice as to whether they would prefer to know whether their food that they are giving their baby or the formula that they're feeding their baby actually has genetically modified organisms in it.

So we have been looking at this and Mr. Speaker, I'm thinking we might have been looking at this for the last eight years. I think I have been in the General Assembly for 13 years and I feel like it's been at least the last eight years that we have been examining this idea of whether we really need to label genetically modified organisms that happen to be utilized in our food.

And it has become so extraordinarily widespread that now virtually almost all corn that is produced in this country has genetically modified seeds in it. The genetically modified seeds contain something called BT which allows that seed to have its own insecticide as part of the cell so that when an insect comes and bites into that corn they are actually -- the insecticide is actually a part of the corn and explodes the insides of that insect and that's how the insecticide works because it's actually become a part of the cell of the corn.

We also have an extraordinary amount of soy in this country that is genetically modified also. And it has become clear that there are particularly moms, Mr. Speaker, that would like to know exactly what they are putting into their children's bodies. And we believe, this body of the Legislature believes that indeed moms should be able to know +what kind of food they are putting into their babies' bodies.

And that was the genesis of this particular bill. And we had an enormous, Mr. Speaker -- an enormous amount of support, grassroots support. When we were doing the public hearings on this bill it was amazing the amount of people that were willing to come out.

People that were willing to come out over and over again to talk about who really critical it was to them to be able to have the choice. So Mr. Speaker, I urge my colleagues yield to support this bill.

SPEAKER SHARKEY:

Thank you, Madam. Would you care to remark further? Do you care to remark further on the bill that's before us? Representative Miller.

REP. MILLER (36th):

Mr. Speaker, the Clerk has an amendment, a strike all amendment, LCO number 7848. I would ask the Clerk

to please call the amendment and that I be granted leave of the Chamber to summarize.

SPEAKER SHARKEY:

Will the Clerk please call LCO 7848 which will be designated House Amendment A.

THE CLERK:

House Amendment A, LCO 7848 introduced by Speaker Sharkey et al.

SPEAKER SHARKEY:

The Gentleman seeks leave of the Chamber to summarize. Is there objection? Is there objection? Seeing none you may proceed with summarization, Sir.

REP. MILLER (36th):

Thank you, Mr. Speaker. What this bill does is it makes some changes from the original bill. We're going from a compact clause which had four other states and 15 million to -- excuse me, three other states to one that has five states plus Connecticut, essentially a six state trigger and 25 million in population to make the bill work.

And two of those states must be contiguous and that could possibly include New Jersey, Mr. Speaker. And the stand alone clause of the earlier bill is now gone.

SPEAKER SHARKEY:

Thank you for summarization, Sir.

REP. MILLER (36th):

I urge adoption, Mr. Speaker.

SPEAKER SHARKEY:

The question before the Chamber is adoption. Will you remark further on the bill -- on the amendment? Representative Miller.

REP. MILLER (36th):

Thank you, Mr. Speaker. Yes. The amendment is the result of a lot of discussion and compromise. Each of the other proponents and -- and all -- everyone involved had to perhaps give some ground a bit to have a -- a bill that we could pass and that will hopefully put us on the road to becoming among the first states in the nation to have this labeling law which as the Representative from Stonington mentioned would require the labeling of genetically modified foods so that our consumers would know what we're buying with better clarity, Mr. Speaker. I urge passage.

SPEAKER SHARKEY:

Thank you, Sir. Would you care to remark? Would you care to remark further on the amendment?

Representative Shaban of the 138th.

REP. SHABAN (138th):

Thank you, Mr. Speaker. I rise in support of this amendment. The two previous speakers I think hit the nail on the head. This effort's been kind of bouncing around. I had the -- the pleasure to serve on the GMO taskforce last -- I think it was last summer after this initial form of the bill came through environment.

The -- the result of the amendment that's before us has solved a number of economic issues that were problematic in the bill, a number of constitutional issues that were problematic in the bill and a number of practical issues that were problematic in the bill but at the same time does put us out in the forefront of this effort.

We're going to pull other states with us. We're going -- it will be a truly regional response and get -- and a truly at least in this part of the country it will probably grow into a nationwide response. So I appreciate everyone's work on this and I urge my colleagues support.

SPEAKER SHARKEY:

Thank you, Sir. Do you care to remark further on

the amendment that's before us? Representative Steinberg of the 136th. You have the floor, Sir.

REP. STEINBERG (136th):

Thank you, Mr. -- thank you, Mr. Speaker. It is on. Thank you. I attempt to rise in support of this amendment. It's a little late at this hour. This is a very important bill for the State of Connecticut and I'm just commenting in that many of us may not be perfectly satisfied with all the elements in the bill but this is what being in a leadership position often represents is that you have to put something out there that establishes a precedent and an example to others.

So I urge my colleagues to support this bill. And I look forward to other states adopting our example and getting to the point in which this becomes the law of the land and not just the law of the State of Connecticut. Thank you.

SPEAKER SHARKEY:

Thank you, Sir. Do you care to remark further on House Amendment A? Do you care to remark further on House Amendment A? If not, let me try your minds. All those in favor of House Amendment A please signify by saying aye.

REPRESENTATIVES:

Aye.

SPEAKER SHARKEY:

Those opposed, nay. The ayes have it. The
amendment is adopted. Would you care to remark
further on the bill as amended? Do you care to remark
further on the bill as amended? If not -- if not,
staff and guests to the well of the House. Members
take your seats. The machine will be opened.

THE CLERK:

The House of Representatives is voting by roll.
The House of Representatives is voting by roll. Will
members please return to the Chamber immediately.

SPEAKER SHARKEY:

Have all the members voted? Have all the members
voted? Will members please check the board to make
sure your vote is properly cast. If all the members
have voted the machine will be locked and the Clerk
will take a tally. Clerk, please announce the tally.

THE CLERK:

Substitute House Bill 6527 as amended by House A.

Total Number Voting 121

Necessary for Adoption 61

Those voting aye 114

Those voting nay 7

Absent and not voting 29

SPEAKER SHARKEY:

The bill as amended passes. Are there any announcements or introductions? Representative Noujaim.

REP. NOUJAIM (74th):

Mr. Speaker. Mr. Speaker, for an announcement. The regulation review committee will meet on Tuesday, May 28, one hour before the beginning of the first session in room 1E of the legislative office building. Thank you, Mr. Speaker.

SPEAKER SHARKEY:

Thank you, Sir. Are there any announcements or introductions? Representative Grogins.

REP. GROGINS (129th):

Good morning, everyone. Just a quick announcement. Good morning. Just a reminder next Friday, a week from today is dress down day and DebraLee Hovey and I are hosting that.

We are -- the donations will benefit the Oklahoma victims of the tornado and it's \$5 to dress down and we are going to punish if you dress up. It's \$10 to dress up. So please give your donations to either DebraLee or myself. And have a good night's sleep.

H – 1175

**CONNECTICUT
GENERAL ASSEMBLY
HOUSE**

**PROCEEDINGS
2013**

**VOL.56
PART 26
8708 – 9049**

pat/gbr
HOUSE OF REPRESENTATIVES

57
June 3, 2013

Necessary for Passage	70
Those voting Yea	138
Those voting Nay	0
Those absent and not voting	12

DEPUTY SPEAKER MILLER:

The bill passes in concurrence with the Senate.

SPEAKER SHARKEY:

Will the Clerk please call Calendar Number 172.

THE CLERK:

Yes, Mr. Speaker, on Page 46, Calendar Number 172, Favorable Report of the Joint Standing Committee on Judiciary, Substitute House Bill Number 6527 AN ACT CONCERNING GENETICALLY ENGINEERED BABY FOOD.

SPEAKER SHARKEY:

Representative Urban, the distinguished Chair of the Children's Committee.

REP. URBAN (43rd):

Thank you, Mr. Speaker. Mr. Speaker, I move acceptance of the Joint Committee's Favorable Report and passage of the bill in concurrence with the Senate.

SPEAKER SHARKEY:

The question is acceptance of the Joint Committee's Favorable Report and passage of the bill. Will you remark, madam?

REP. URBAN (43rd):

Mr. Speaker, the Clerk has in his possession an amendment, LCO Number 8508. I ask that he call it and I be allowed to summarize.

SPEAKER SHARKEY:

Will the Clerk please call LCO 8508 which has been previously designated Senate Amendment "A".

THE CLERK:

Senate Amendment "A", LCO 8508 offered by Senator Williams et al.

SPEAKER SHARKEY:

The gentle woman seeks leave of the Chamber to summarize. Is there objection? Seeing none, you may proceed with summarization, madam.

REP. URBAN (43rd):

Thank you, Mr. Speaker. Mr. Speaker, this pertains to a very important public health issue. It allows the citizens of Connecticut the opportunity to know more about the food we eat.

After much grass roots activism, and multiple GMO labeling bills moving through our Chamber, I am proud

and honored to bring forth this strike-all Amendment and I move adoption.

SPEAKER SHARKEY:

The question before the Chamber is adoption of Senate Amendment "A". Will you remark, madam?

REP. URBAN (43rd):

Yes, Mr. Speaker, the crafting of this language was truly a collaborative effort for the Senate and the House and the Democratic and the Republican Caucuses and our Governor.

Sixty-two countries enact labeling laws or outright bans of GMO foods. Connecticut, Mr. Speaker, will be the first state in the nation to activate this labeling law. With this, we will expect other states to follow us.

Maine, Vermont, Washington and New York are not very far behind, and I will briefly tell you, Mr. Speaker, the differences from the last bill that we saw in front of this Chamber are simply that the trigger has been changed, so it is now not an obstacle, but determines a pathway for enactment, requires four states other than Connecticut to enact mandatory GMO labeling. One of the four needs to

border Connecticut, New York, Massachusetts, New
Hampshire.

The aggregate population of the New England states that enact the legislation has to exceed 20 million and an act refers to final passage of the bill not implementation, and I urge my colleagues to vote for this.

SPEAKER SHARKEY:

Thank you very much, madam. Would you care to remark further on Senate Amendment "A"?
Representative Shaban.

REP. SHABAN (135th):

Thank you, Mr. Speaker. I rise in support of the Amendment. We were talking about this a couple of nights ago and the new Amendment irons out a couple more of the legal and market obstacles that we were talking about a couple of days ago and actually tackles some of the practical problems, so I'm happy to support it and happy we're able to work together to get it done.

Thank you, Mr. Speaker.

SPEAKER SHARKEY:

Thank you, sir. Do you care to remark further on Senate Amendment "A"? Representative Brenda Kupchick of the 132nd.

REP. KUPCHICK (132nd):

Thank you, Mr. Speaker. I also rise in support of the GMO labeling bill. One of the largest, or our biggest proponents of this bill, Tara Cook Lipman is a resident of Fairfield, and if I hadn't had the opportunity to have her in my town I wouldn't know much about GMOs.

And I think it's really amazing how a group of individuals came together and really advocated so strongly to bring this legislation forward to us and I'm really, I really admire them and I admire this group and I'm really excited that we'll be passing this legislation today.

Thank you, Mr. Speaker.

SPEAKER SHARKEY:

Thank you, madam. Will you remark further on Senate Amendment "A"? Representative Phil Miller.

REP. MILLER (36th):

Thank you and good afternoon, Mr. Speaker.

SPEAKER SHARKEY:

Good afternoon, sir.

REP. MILLER (36th):

I also advocate strongly for this and I'd like to thank so many of the proponents who have made this a possibility and I would like to especially thank the administration and the leaders of our four caucuses for hammering out an agreement, which will truly uphold the best interests of our state and will truly be beneficial to our public health.

Thank you, Mr. Speaker.

SPEAKER SHARKEY:

Thank you, sir. Would you care to remark further on Senate Amendment "A"? Representative Srinivasan.

REP. SRINIVASAN (31st):

Good afternoon, Mr. Speaker.

SPEAKER SHARKEY:

Good afternoon, sir.

REP. SRINIVASAN (31st):

Through you, Mr. Speaker, just a question to the proponent of the Amendment.

SPEAKER SHARKEY:

Please proceed, sir.

REP. SRINIVASAN (31st):

Through you, Mr. Speaker, in this Amendment that we see now, is there any time factor involved that

these neighboring states that they also need to agree to have the GMO labeling by a certain date?

Through you, Mr. Speaker.

SPEAKER SHARKEY:

Representative Urban.

REP. URBAN (43rd):

Through you, Mr. Speaker, there is no date certain, but as I said, there are states that are very close to passing this legislation. Through you, Mr. Speaker.

SPEAKER SHARKEY:

Representative Srinivasan.

REP. SRINIVASAN (31st):

Through you, Mr. Speaker, my final question is, so this would, the passage of this bill would depend on the detail, on the criteria that we've established of a) 20 million people and b) four other states?

Through you, Mr. Speaker.

SPEAKER SHARKEY:

Representative Urban.

REP. URBAN (43rd):

Through you, Mr. Speaker, absolutely.

SPEAKER SHARKEY:

Representative Srinivasan.

pat/gbr
HOUSE OF REPRESENTATIVES

64
June 3, 2013

REP. SRINIVASAN (31st):

Thank you, Mr. Speaker.

SPEAKER SHARKEY:

Thank you, sir. Would you care to remark further on Senate Amendment "A"? Would you care to remark further on Senate Amendment "A"?

If not, let me try your minds. All those in favor of Senate Amendment "A", please signify by saying Aye.

REPRESENTATIVES:

Aye.

SPEAKER SHARKEY:

Those opposed, Nay. The Ayes have it. The Amendment is adopted.

Would you care to remark further on the bill as amended? Would you care to remark further on the bill as amended?

If not, staff and guests to the Well of the House. Members take your seats and the machine will be opened.

THE CLERK:

The House of Representatives is voting by Roll.
The House of Representatives is voting by Roll.

Will the Members please report to the Chamber immediately.

SPEAKER SHARKEY:

Have all the Members voted? Have all the Members voted? Will the Members please check the board to make sure that your vote is properly cast.

If all the Members have voted, the machine will be locked and the Clerk will take a tally. Will the Clerk please announce the tally.

THE CLERK:

In concurrence with the Senate, Substitute House Bill 6527 as amended by Senate "A".

Total Number Voting	137
Necessary for Passage	69
Those voting Yea	134
Those voting Nay	3
Those absent and not voting	13

SPEAKER SHARKEY:

The bill as amended passes.

The Chamber will stand at ease.

(CHAMBER AT EASE.)

DEPUTY SPEAKER MILLER:

The Chamber will be called back to order. Will the Clerk please call Calendar Number 651.

S - 666

**CONNECTICUT
GENERAL ASSEMBLY
SENATE**

**PROCEEDINGS
2013**

**VOL. 56
PART 15
4473 - 4802**

gdm/cah/meb/gbr
SENATE

230
June 1, 2013

Madam President -- or Mr. President -- Mr. President, if the Clerk would call as the final item of the evening, Mr. President, Calendar Page 662, Substitute for House Bill 6527.

We -- as we said, this will be our -- our final action item for today's session.

Thank you, Mr. President.

THE CHAIR:

Thank you, Senator Looney.

Mr. Clerk.

THE CLERK:

Page 24, Calendar 662, Substitute for House Bill Number 6527, AN ACT CONCERNING GENETICALLY-ENGINEERED FOOD, Favorable Report of the Committee -- Select Committee on Children.

THE CHAIR:

Senator Bartolomeo.

SENATOR BARTOLOMEO:

Thank you, Mr. President.

Mr. President, I move acceptance of the Joint Committee's Joint Favorable Report and I urge passage of the bill.

THE CHAIR:

On acceptance and passage, will you remark?

SENATOR BARTOLOMEO:

Yes, Mr. President.

The Clerk is in possession an amendment, LCO Number

gdm/cah/meb/gbr
SENATE

231
June 1, 2013

8508. May the Clerk please call that amendment and I be given leave to summarize.

THE CHAIR:

Mr. Clerk.

THE CLERK:

LCO Number 8508, Senate "A" offered by Senators Williams, McKinney, et al.

THE CHAIR:

Senator Bartolomeo.

SENATOR BARTOLOMEO:

Thank you, Mr. President.

Mr. President, this amendment pertains to a very important -- Mr. President, yes, thank you, sir. I do move adoption of this amendment.

THE CHAIR:

On adoption, will you remark?

SENATOR BARTOLOMEO:

Thank you, Mr. President.

This amendment pertains to a very important public health issue. We are talking about the -- allowing citizens of Connecticut the opportunity to know what -- more about what is in the food that they are eating.

After much grassroots activism and multiple GMO bills moving through our Chambers, I am proud and honored to bring forth this strike-all amendment. The crafting of the language of this was a collaborative effort between the Senate and the House and the Democratic and the Republican caucus and is supported

gdm/cah/meb/gbr
SENATE

232
June 1, 2013

by our Governor.

Sixty-two countries have enacted labeling laws or an outright ban of GMO food products. And with this, Connecticut will be the first state to pass a GMO labeling bill.

By the leading the way, we have reason to expect that other states will follow suit very quickly. Maine, Vermont and Washington and New York, we expect will not be far behind. The differences from this bill -- this amendment, I should say, and a previous bill that came through this Senate almost two weeks are primarily spelled out in Section 3, the major differences.

First of all, there is a trigger in this bill which is different from the previous -- this amendment, which is different from the previous bill. And we should view this trigger not as an obstacle, but it will determine the pathway for the enactment of GMO labeling.

It requires that four states other than Connecticut enact mandatory GMO labeling. One of these four states needs to border Connecticut. And the aggregate population of the northeast region states that enact legislation needs to exceed 20 million people in the population for their state. And I do need to point out that when we say "enact" we are referring specifically to final passage of a bill, not implementation of that bill.

We also have a few other differences regarding the labeling. The label is specified where it needs to be located. And in this version, this amendment, we have a bit of a change when we're talking about raw agricultural commodities. This could be things like apples or produce in bins or barrels in the grocery store. And for this, we're requiring that labeling be accompanied -- be on the bill of sale that accompanies the product.

We also are -- have an exemption here that food

gdm/cah/meb/gbr
SENATE

233
June 1, 2013

consisting of or derived from an animal that was not genetically engineered, even if the animal was fed or injected with a genetically engineered food product, that would be exempt.

And then we have some additional retail exemptions. Retailers may not be penalized for failure -- excuse me -- for failure to label a GMO product unless, one, that retailer produced the product and sold it under a brand of -- a product with its own branding or the retailer's failure to label was knowing and willful.

I would like -- because this is a very important public health issue, as I previously stated, I would now like to yield, with your permission, Mr. President, to Senator Gerratana, as she is the Chair of the Public Health Committee.

THE CHAIR:

Senator Gerratana, do you accept the yield?

SENATOR GERRATANA:

Mr. President, I do accept the yield. Thank you very much.

This bill is back again, and of course, I spoke and brought the bill out that we did here in the Senate, Senate Bill 802, last week. I thank Senator Bartolomeo for the yield.

That -- at that time, I did talk about many of the concerns that our citizens have, and indeed, most of the world has, at this point, about the health risks of genetically engineered food. It is important that we notice here in the Chamber that these foods can cause allergic reactions. That sometimes they are made and produced with seeds that have toxins and many other ailments that I delineated at the last time.

At this point, I am so pleased that our Chamber, and of course, the House, and then the Governor will sign the bill into law, that our Chamber is taking it up.

gdm/cah/meb/gbr
SENATE

234
June 1, 2013

It is good public health policy. It is good policy for all of our residents.

As I have proclaimed, we should all know what we are eating. We are what we eat. And this will assure us -- and I hope, in the very near future, that it will assure us that we will be protecting our community and our citizens.

Thank you very much.

THE CHAIR:

Thank you, Senator.

Will you remark further on the amendment?

Senator Markley.

SENATOR MARKLEY:

Thank you, Mr. President.

You know, the level of self -- self-congratulations in this Chamber is something that one becomes accustomed to in the course of time, and I don't have anything against it particularly, but I think we ought to be honest about what we're doing here tonight. The idea that we're saying we're the first state in the nation to pass GMO labeling, when the labeling is dependent on other states passing it in order for it to go into effect, strikes me as kind of an Orwellian accomplishment in terms of -- if -- if it's -- we're only going across the finish line first in a very narrow sense.

I have to say, if the need for GMO labeling is as critical as has been indicated to us, I think we ought to just go ahead and do it. And I'd say that the advocates that I've been in contact with for this bill, I supported it in its previous form, have now contacted me and told me to vote against it. I don't honestly know whether I'm going to vote against it or vote for it, at this point. I'd like to see the labeling. I

gdm/cah/meb/gbr
SENATE

235
June 1, 2013

think that what we're doing is pretending to address something and passing the buck to the other states.

And in the -- in the terms of Connecticut setting it's own course and having the courage to go ahead and make a decision, I think we're failing rather badly on this bill.

Thank you, Mr. President.

THE CHAIR:

Thank you, Senator.

Will you remark further on the amendment? Will you remark further on the amendment?

If not, I'll try your minds. All those in favor please signify by saying aye.

SENATORS:

Aye.

THE CHAIR:

Opposed, nay?

The ayes have it.

Will you remark further on the bill as amended? Will you remark further on the bill as amended?

Senator Williams.

SENATOR WILLIAMS:

Thank you, Mr. President.

Since there will be no Consent Calendar, I wanted to rise and just say a brief word. I know that this is the last bill of the evening, but I did want to thank, once again, the proponents of this legislation, including Senator Bartolomeo who brought out the bill

here this evening.

But I very much wanted to thank our allies, Democrats and Republicans. This has been a bipartisan effort in this Chamber and downstairs for working so hard on this. I want to thank the Senate for leading the way on this and the House and the Governor who have come to the table with us to resolve this, in what I believe is a fair and very progressive piece of legislation.

Most of all, I want to thank the citizen advocates. Citizen advocates have made a tremendous difference this session on a number of a different issues, and I think this is an issue where they're standing up and letting their voices be heard really did turn the tide.

I would like to -- to say to Senator Markley, I have talked with those advocates. I have talked with those who lead the groups pursuing the legislation that we have here before us. They have worked with us in fashioning this legislation and are very excited about Connecticut taking the lead and taking this action in adopting this today.

Thank you, Mr. President.

THE CHAIR:

Thank you, Senator.

Mr. Clerk, please announce the pendency roll call vote. The machine will be open.

THE CLERK:

Immediate roll call has been ordered in the Senate.
Senators please return to the Chamber. Immediate roll call has been ordered in the Senate.

THE CHAIR:

Have all members voted? If all members have voted, please check the board to make sure your vote was accurately recorded. If all members have voted, the

gdm/cah/meb/gbr
SENATE

237
June 1, 2013

machine will be closed and the Clerk will announce the tally.

THE CLERK:

House Bill Number 6527, as amended,

Total Number Voting	34
Necessary for Adoption	18
Those Voting Yea	34
Those Voting Nay	0
Those Absent and Not Voting	2

THE CHAIR:

The bill passes.

Senator Looney.

SENATOR LOONEY:

Thank you, Mr. President.

Mr. President, I would move for immediate transmittal to the House of Representatives of Calendar 662, Substitute for House Bill Number 6527.

THE CHAIR:

So ordered.

SENATOR LOONEY:

And, Mr. President, would move for immediate transmittal to the House of Representatives of any other bill acted upon in the Senate today requiring additional action by the House of Representatives.

THE CHAIR:

So ordered.

SENATOR LOONEY:

**JOINT
STANDING
COMMITTEE
HEARINGS**

**CHILDREN
PART 4
978 - 1270**

2013

Fawcett. It's a pleasure to work with you.

REP. URBAN: Thank you, again, Jamey. If there aren't any more questions, thank you for your testimony.

The first hour on these public hearings is always devoted to public officials. Once we complete that first hour, we do start to go back and forth between the public and public officials. So I will leave the public official list for a moment and go to the first person who wants to testify from the public. And that is Val Giddings.

Welcome.

VAL GIDDINGS: Thank you, Madam Chair. I very much appreciate the privilege and honor of appearing before this distinguished committee today. My thanks to you, Madam Chair, Madam Vice Chair, Senators and Representatives.

I am here today to speak to you on Bill 6527, which would require all baby food sold in the state to carry process-specific labels to alert consumers to the presence of ingredients derived from crops improved through certain techniques of modern biotechnology. I've read this proposal carefully and, though, it is obviously well-intended, I am concerned that because it is based on a series of misunderstandings, I fear that if implemented it would achieve the opposite of the results that it would hope to accomplish.

I'm here today at the invitation of a friend of mine from the biotechnology industry organization who asked me to speak to you on the basis of my experience with the subject matter. I have for 29 years been working as a scientist. I am a geneticist by training and I

have advised Congress on these issues as a member of the staff of the Office of Technology Assessment. I worked for ten years for the U.S. Department of Agriculture performing risk assessments of crops improved through biotechnology. And I am now an independent consultant. And I advise government agencies and NGOs and clients in the United States and around the world on these issues.

I have prepared some written testimony in a variety of supporting materials that I've submitted. Rather than read that, what I'd like to do today is make sure that my written testimony is part of the record. And I'd like to talk to you just briefly about an example of a crop improved hereby a biotechnology that is consumed as feed and food to try and eliminate some of the issues of interest.

One of the most common improvements that biotechnology is used to visit upon modern crops is to make them resistant to insects and pests. The use of the *Bacillus thuringiensis* protein, a common protein which acts as a pesticide. The use of this in biotech-improved crops has removed millions of pounds of pesticides sprays from agriculture. This protein is so widely used and so safe that it is the most commonly used pesticide employed by organic growers around the country. When certain insect pests eat it, it kills them by disrupting their -- their digestive systems. When we, as humans, eat, it is for us nutrition, just like any other protein.

The reason that this protein has been added to modern corn varieties is to repel a number of insect pests, and particularly the European corn borer. When the European corn borer, a caterpillar, when it eats corn plants, it brings with it when it comes into the corn

plant and eating it spores from a variety of fungal diseases. When the corn plant is thus infected, fall victim to the diseases that these fungal spores produce, a residue, a contamination is the result and the compounds that are produced through this disease process are well known for a variety of negative impacts on human health.

These compounds cause a variety of cancers of the digestive system and they also cause a number of developmental defects in infants, neonates, small children, neural tube defects and a variety of associated birth defects.

The correlation between the presence of these compounds in corn that is not protected from these insect pests and these diseases is absolute and very clear. And there is a long history of recalls of foods that contain unacceptable levels of these compounds. There's never been a recall of a biotech-improved corn ingredient containing food because of this, because these biotech-improved varieties virtually eliminate the source of contamination. This type of contamination is however found very frequent in organic foods and has been the subject of repeated recalls.

REP. URBAN: Mr. Giddings, or do I assume it's Dr. Giddings, that was the bell. Would you please summarize your testimony?

VAL GIDDINGS: Yes, ma'am.

Crops and foods improved through biotechnology have been subjected to more scrutiny in advance and in-depth and detail than any others in human history. There's an abundant and unmatched record of safety from these foods. The Food and Drug Administration and the U.S.

regulatory system is robust and detailed. And it builds upon the foundation that with a preponderance of opinion by scientists and authoritative organizations around the world which have found these foods derived from these crops to be at least as safe and often safer than others. I have supporting material for all of this in my testimony and related documents and I'd be happy to take any questions.

REP. URBAN: Thank you.

Are there any questions?

Representative Betts.

REP. BETTS: Thank you very much, Madam Chair.

And thank you, Dr. Giddings.

I just want to understand the process a little bit as it relates to the FDA. What is their process for evaluating food safety and, in particular, with GMOs?

VAL GIDDINGS: The FDA review of the safety of foods derived from crops improved through biotechnology is part of an overarching regulatory system that the federal government has put in place since 1986. The FDA is particularly responsible for making sure that foods that are put on the market in the United States are safe. The FDA does not have a requirement for specific safety reviews for biotech-improved -- for what they call bioengineered foods, but they do have a series of points to consider that they have laid out so that those who wish to put these foods on the market can ask themselves these questions and provide FDA with the data to answer these questions.

And all this takes place under the context of a regulatory requirement administered by the FDA, which is that all food placed on the market must be safe. So the process that the FDA does is they have these -- a list of questions they have posed. Companies or people seeking to put these foods on the market must answer these questions. FDA takes the answers from those questions, the data they provide and subjects those answers to -- those data to critical internal review. They then invite a series of outside independent experts to review their reviews. They all look at the answers to these questions to see if there are any holes in the data, any flaws in the methodology used to produce the data.

At the end of the process, they tell the applicant that they have no more questions, which is their signal that the data provided has satisfactorily answered the questions that have been posed and this food is sufficiently safe to be placed on the market. It's a process that is vastly more detailed and in-depth than that which is applied to conventional or organic foods. And that's one of the reasons that crops and foods improved through biotechnology have a spotless safety record.

I know that some of you may have heard a whole number of allegations about various negative health consequences from eating so-called "GMOs." I have looked at all of those examples in detail and none of them stand up under scrutiny. And I'd be happy to talk about any of those in specifics if you'd like.

REP. BETTS: So if I'm hearing you correctly -- and I don't want to put words in her mouth -- but are you saying that GMOs have not caused health

problems or allergies or the like in children?

VAL GIDDINGS: Yes, sir. That is absolutely the case. There is no data which support claims of health -- of negative health consequences from eating bioengineered foods, foods derived from crops and food through biotechnology. There are no data to support those claims.

REP. BETTS: And how long have we been doing the GMOs for, the biotech?

VAL GIDDINGS: They have been -- well, in one sense, they've been on the market since 1996, but in other senses, these foods are very similar to those that humans have been producing through history of genetic modification that stretches back ten thousand years. If I were to hold up for you an example of what natural corn looks like, not one of us would recognize that without expert knowledge as being the ancestor from which our foremothers derived what we think of today as modern or natural corn through a process of artificial selection over 10,000 years.

REP. BETTS: Well, it's funny you should mention that because I have a farm that does grow corn. I saw what was like to do organic and I saw what it was like to use the new seeds. And let me tell you, you wouldn't buy the organic, some of the ones that I saw at some of the farmers markets.

How about studies dealing with the study of organic food? I mean, a lot of us are very interested in having healthy, organic food. It doesn't have any so-called pesticides associated with it. Does the FDA do any studies on it? And if so, have they found any health problems or hazards with this?

VAL GIDDINGS: Sir, there have been many studies that have looked at organic food and compared organic food and organic crops with conventional or biotech production. The preponderance of opinion among scientists who have looked at this is that the data do not support many of the claims that are made for organic food as to superior nutrition or sustainability and so forth. They -- those sorts of claims for superiority in a variety of ways are simply not supported by the data. I have a number of studies I'd be happy to provide which summarize the scientific analysis of these issues. But, you know, I say that as someone who is a backyard organic gardener himself.

I think that -- I'm a passionate environmentalist. I'm concerned about the food that my children eat. I am the main preparer of food for my family, but because of what I know about the potential for foods to be contaminated with the results of plant disease and so forth, that do cause health problems, because of the frequent recalls that we have seen of organic food associated with plant -- with foodborne pathogens and because of the higher cost and a lack of nutritional superiority, I tend to prefer foods produced through conventional methods wherever I can by foods that have been produced through biotechnology, I have absolutely -- and without hesitation buy that first because it has a superior and unmatched safety record. But I can provide additional materials to support these points if you'd like.

REP. BETTS: I guess my last question is I'd like to know little bit more about your background. You said you've advised or you've been involved with the FDA process. You've been involved in the environmental organizations and regulations

governing food and I understand you've been doing the same on an international level.

When people hire you, I mean, that at least on paper is very impressive. You've obviously been doing this for several decades. The proponents of -- do you have -- what kind of relationship do you have with the proponents of organic foods versus GMOs?

VAL GIDDINGS: Well, there's several questions there. I'm not sure how to respond, but let me try and take them in the order.

REP. BETTS: Well, let me just say I'm impressed with your background. I'm impressed with your background and I'm just wondering if they have approached you or you had meetings where you can reach common ground on what is healthy and what is not.

VAL GIDDINGS: The answer is yes and no. Up until about 15 years ago I would have called myself a pretty strong proponent of organic foods because I like the idea of -- I like the idea of making natural principles work with the farmer in producing food. I like the idea of local and sustainable growing. I buy food from my local farmer's market.

You know, there's just lots about the philosophy that underpins organic food that I can't -- find personally as a "foodee" who prepared the meals for my family, that I find attractive. But about 15 years ago the organic industry adopted an approach that we hadn't seen before and it was approach through which some members of that community have sought to advance their own organic brand by denigrating crops and foods produced through biotechnology by casting unsupportable aspersions on the safety records of these crops and foods and so

forth.

I am by training and by my career a scientist and a professional skeptic. And I really do not approve of those or misleading claims and marketing a product. And so my enthusiasm for the organic industry, when they adopted this approach really took a serious hit, but there are elements in the organic industry, in the organic community that do not think that this split makes sense, that do see a great deal of commonality between what biotechs is trying to do and what organic seeks to do. There's a school of thought which think that one of the reasons that the organic community elements of it have attacked biotechnology in agriculture is because biotech agriculture is trying to take some of the things from organic that works and adapt them so that they can be used by farmers more broadly in conventional agriculture and this is what we've seen with the BT protein for pest control.

As I said, that's the most common organic pesticide. What biotech industry has made done is is made accessible to conventional farmers across the United States and around the world and in so doing by the biotech industry has removed millions of pounds of pesticide from the air that we breathe and the water that we drink.

I do have a very good friend, Dr. Pamela Ronald from the University of California at Davis and she and her husband together co-authored a book called *Tomorrow's Table*, and they seek to build bridges between the biotech community and the organic community. Dr. Ronald does genetic engineering research on rice to try to improve more nutritional and environmentally-sustainable varieties of rice, the most important food grain on the planet.

Her husband teaches organic farming at UC Davis and they together both this book together which makes the case that biotech and organic are, in fact, in their core aimed at the same thing and are, in fact, compatible.

And that is, in fact, much closer to my own point of view and I do hope that the -- that this paradigm will in time triumph, but that's not what we're seeing at the moment.

REP. BETTS: Thank you very much and that certainly would be desirable goal because I think for many of us, we get confused at times about the pros and cons of each side.

But thank you very much.

And thank you, Madam Chair.

REP. URBAN: Thank you, Representative.

Representative Vargas.

REP. VARGAS: Dr. Giddings, I've been listening carefully to your testimony and over hundreds of years we've developed a series of knowns and unknowns with agriculture. We know many of the problems that organic crops face and we know some of the solutions can be addressed -- some of the problems could be solved through hybridization, through soil conversation, through crop rotation. This whole thing of pesticides, the increased use of pesticides is like escalating a war with nature. Needing stronger pesticides, creating stronger bugs, leading to more chemical solutions, creating a series of unknowns and you've expressed a lot of confidence in the FDA process, but all I heard was that there was a questionnaire and that people answer the questions, they are reviewed and then outside person reviews it.

In terms of longitudinal studies of the effects of these organically-modified organisms, we really don't know -- I don't believe there's any study that has really -- in your testimony you said that this was introduced in 1996. That's not a very long period of time. I'm very concerned about this, but I have a question for you. If these GMOs are so great, why don't you support labeling? I mean, wouldn't you want to promote the fact that these are such great products?

VAL GIDDINGS: There are, I think, Representative, a number of excellent questions embedded in your statement. One of the questions -- one of those that I would like to address has to do with you refer to pesticides being used in what you described as a war against nature.

REP. VARGAS: Instead, let's say 10 percent of the crops are lost in an actual environment. Couldn't we build an economic model to say okay we'll build our profit margin on the 90 percent that is not consumed by insects? It seems that the more pesticides we use, the harsher the pesticides, the harsher the herbicides, we create super weeds. We create super bugs. This is like an escalating war.

VAL GIDDINGS: Representative, nothing would please me more than to talk for hours about this, but let me try and give you a succinct response. To me, the core aspect of your question is what is the best way to produce crops in a sustainable manner, as well as Stegners put it, you know, how do we learn to tread more gently on the land.

My own personal inspiration comes from-- Rachel Carson's *Silent Spring*, the last chapter of the book is titled "The Other Path" and I think

it's the third paragraph in that chapter and she talks about, she spent the entire previous portion of the book talking about just exactly the problems that you mention, you know, the problems of relying on synthetic chemistry to, in her description, to bludgeon nature into submission. And what she talks about in the last chapter "The Other Path" is what she saw as an emerging new paradigm that instead used the principals of biology and our growing understanding of those principals to produce crop varieties and to grow them in ways that make the principals of nature work for us.

And that is what the biotech -- agricultural biotech researcher are trying to do. They're trying to take examples of how insects and plants interact in nature and to harness them for use in production of agriculture to help farmers tread more gently on the land. And with biotech, we have been enormously successful in doing this.

But -- and I'd love to talk about this, you know, for as long as you would like, but I want to answer the other excellent question that you finished with. You know, this stuff is so good, why not just label it? Why am I opposed to labeling? And I want to clarify my position on labeling.

Speaking for myself as an expert and no one else, I am a very strong supporter of sunlight. I am a very strong supporter of giving consumers as much information as they want and then some. I don't think consumer should be denied access to information. But you know, labels are not that big and whenever you ask a consumer, do you want this, that or the other on a label? Their answer is invariably yes, you know, if there's a question put to them about what they want on a label, they want

everything on a label. So you can't put everything on a label and have a label that you couldn't read without a microscope. So the question becomes, how do we decide what we put on a label and what we provide to consumers through some other means?

And what the food and -- and I think the Food and Drug Administration who has the primary responsibility in this area, I think they have done about as good a thing -- and they've come up with about as a good a system you can imagine. What they have done is they have said, we are going to make sure that the information that is on a label has to be as a matter of law -- it must be accurate information. It must be informative. It must tell the consumer something that is relevant to health, safety organization and the label cannot be misleading.

And what the FDA has decided with regard to genetic modification is that following the conclusions of every authoritative scientific body around the world that has looked at this, what the FDA has said is that scientists are in almost unanimous agreement, that there is nothing about the process of genetic engineering, as we call it, that tells you anything about the safety or otherwise of the end product.

The safety of the food is not determined by the method through which it was produced. It's determined by the characteristics of that food in its final form. And the fact that genetic engineering or classical hybridization or some other technique was used to produce the crop from which the food was derived doesn't necessarily tell you about anything about safety, and therefore, we will not require that GM or non-GM status be indicated on a label.

The situation takes on another color of importance when you realize that there are people who have been very clear in their intention to use GM labels to mislead consumers, to suggest to the minds of consumers that GM-containing food is less safe. So they can stimulate boycotts to help consumers find ways to avoid these foods. That's misleading. It's fraud and the FDA refuses to do it.

REP. VARGAS: Well, one last thought, Dr. Giddings, it may be true that people are looking for natural and organic and they might be put off by seeing that a product contains GMOs. You're right about that. But that's a decision the consumer should make that that's in my mind a decision that a consumer can't make right now because the labeling process is so complex, so difficult for the consumer to have information.

I represent the south end of Hartford, the 6th Assembly District. There's a lot of poor people in the city depending on dollar stores, a lot products coming in from China and I believe there's a lot of ignorance about nutrition out there. I'd like to see more information, not less. Let the debate start between organic and GMO. I think it's a healthy debate.

You've made a lot of good points here. I think you're a person that is trying to do the best. You said you believe in organic farming and I believe you and I believe many of the scientists working for these corporations are trying to find safe alternatives. I don't doubt that for a moment but while I think this is process is taking before really the facts are not in. Questionnaires, sounds like self-regulation to me. And you've talked about how the FDA has done a responsible jobs.

Everything I've read shows they've been very lax in terms of food labeling. But anyway, thank you for your testimony.

REP. URBAN: Thank you, Representative.

And now, my cochair, Senator Bartolomeo has a question.

SENATOR BARTOLOMEO: Thank you. I don't know if it's a question or more of a statement and you can choose at the end if you'd like to respond or not. I stated in a press conference earlier that I grew up on a farm, fourth-generation farming family and we used pesticides like they were going out of style, and at the time, it was thought that that's, you know, what you do. That was the best way to improve your crop.

I have a cancer -- a grandfather who died having cancer and I have a father who currently has two forms of cancer and luckily is in remission right now and he believes and attributes it very much so to an organic, vegan diet that he's currently on and that's the man who used to get the milk right out of the tank. And, you know, we consumed our own -- our own beef and all of that. So it's a huge change for him to get to that point.

I also have an uncle, who is a geneticist, and I think that hearing so much of your stance as a geneticist, I think it's really important for me, anyway, and hopefully for others on the committee. I always like to look at both sides of an issue and I think that there is hardly any issue that is every clear cut, black and white. It's a lot of pluses and minuses and weighing that list and look at both sides.

But you have someone emphatically presented your opinions as those are the opinions of the

responsible scientists or the, you know, the most notable scientists. Well, you know, my uncle happens to fall on the other side of it and he has worked for, not only the U.S. government, but the French government. He's done cancer research and all of that and he currently resides in Washington state and owns a company which he does research on and consulting for agricultural and animal feed products.

I asked him about this. I reached out to him about the GMO because after sitting down with actually many farmers in an association, I started to get concerned that maybe we would be looking at something that wasn't really based upon science and that was what I was hearing from them. There's no real science on this. How can you legislate?

Well, his opinion -- and, you know, I certainly am presenting this as there are more than one side of this, even from notable scientists. His opinion -- and I will quote from an e-mail -- "There's an abundance of information concerning the safety risks of GMO technology applied to the food industry. Technical notes on antibiotic resistance increase, increased the of chemicals for GMO field crops, problems with monoculture growth, reduced yield and that genetic elements do not target species can be found in the literature."

I would like to point out that our bill is simply aimed at GMO labeling and disclosure and very narrowly towards baby food. So I think that if, you know, we're not even going towards the adult products here in this committee right now and the most vulnerable of our society, the most delicate as far as, you know, our babies and our children and what their systems can tolerate, that's all that we're looking at

right now. And I think that I personally would really err on the side, especially when we have competing opinions by people with similar, I suspect similar credentials, I really do think that we need to look in a very cautious manner and what we're doing here.

I also will quote one more thing from his e-mail and that was, "Although many consumer groups feel that labeling should be easily achieved, the recent defeat of the California Proposition 37 proves otherwise. For instance, only weeks before the vote in last November, polls had the vote strongly in favor of a requirement to label, but spending of about \$40 million by a list of companies" -- which he has noted below -- "turned the tide resulting in a sound defeat. In fact, the anti-label backed spent about five times more than the pro-labeling group possessed in funding. I suspect the big ad companies worry about customer preference."

You know, I think it's important because I've been listening to your opinion and I certainly respect your education, your knowledge, your background and your opinions, but there's -- there are other points of view that I think are equally credible and I just felt the need to put that out. And if you'd like to comment, both feel free.

VAL GIDDINGS: Thank you, Senator. I really regret that your uncle is not here today. I would love to have a conversation in front of all of you to talk about the things that you said he relayed to you because I am familiar with each of those specific sorts of claims and as I said, they don't stand up to scrutiny. I do also, as a father -- sorry.

SENATOR BARTOLOMEO: (Inaudible.)

VAL GIDDINGS: Okay. Sorry. I do also as a father absolutely share your concern about what our children are exposed to. This is particularly important to me in a way that it is not too many parents because when my son -- before my son learned to walk, we discovered that he has a life-threatening allergy to peanuts and I can't recall hearing news that had a more negative impact on me in my life personally. I mean, it wasn't just my blood that ran cold when we learned this, but my bone marrow. You know, knowing that, you know, he could bubble and bounce out the door in the morning and not come back in the evening because of a playmate on the school playground, you know, shared a cookie that had a peanut in it that could kill him.

I am extremely concerned about the things to which our children are exposed as foods. With the crops that have been improved through biotechnology we know exactly what changes we're making to those foods. We know new proteins they are exposed with and each and every one of those new proteins that are in foods that are derived from crops that have been approved by technology, each and every one of those goes through screening that is vastly in excess of the safety -- the premarket safety reviews that are applied to any other food source.

We know these proteins are not endocrine disruptors. We know they are not carcinogenic. We know exactly what happens when people, what mammals eat them. When mammals eat them, they are within minutes broken down into their constituent amino acids in our digestive system. We know -- we know that these foods are safe. And the premise -- the premise --

SENATOR BARTOLOMEO: And I thank you for your opinion. And my point was we have scientists on both sides of it. So certainly, it's a challenging for us to sit up here and make some of these decisions, but putting into perspective, we are simply looking at baby food most vulnerable of our society.

So thank you very much.

REP. URBAN: Thank you, Senator.

And Representative Fawcett has a question.

REP. FAWCETT: Thanks. Just a quick question actually. I'm just struggling, you know, as I'm listening dialogue and the testimony, and what I have known and heard and learned over the past couple of years working on this issue. I'm struggling with this idea that these seeds that are genetically altered to basically have -- we call them Round-up seeds, they have this known chemical in their DNA so that we don't have to put down as much pesticide, that's great, but it's inherent in what the seeds are. Right?

So I guess I'm having a hard time or I'm struggling with the idea that that would impact human health. If they know that they impact bugs, if we know that they are damaging to animals if they eat them, but it's okay for humans. So I'm having a problem making that leap.

And I'm also having a problem understanding or hearing that you're saying there's no scientific research and yet most -- I think every country in Europe has banned GMOs. They are not labeling, they are banning them as well as around the world. So they are taking a way stronger stance on just outright bans of

GMOs. And are they doing that with no science?

VAL GIDDINGS: Let me answer the second question first and then if you remind me of the prior question I'll be happy to try to address that.

The European Union has not banned foods derived from crops through biotechnology. What they have actually done is taken to court a number of European countries like Austria who have not sought to ban these, these crops because the scientific data does not support that.

Let me read to you a quote from something I cited in my testimony. The European Commission has conducted -- has funded more than 130 research projects covering a period of more than 25 years involving more than 500 independent research groups and their conclusion is that biotechnology in general and particularly GMOs are not per se more risky than for example crops produced to conventional plant breeding technologies. What they have said about the safety of these crops and foods derived from them is that the use of more precise technology and greater regulatory scrutiny probably make them even safer than conventional plants and foods, and if there are unforeseen environmental effects, none have appeared as yet. These should be rapidly be detected by our monitoring requirements. On the other hand, the benefits for these plants and products for human health and the environment become increasingly clear.

I will be happy to provide you with the document from which that conclusion was taken.

REP. FAWCETT: Thank you. I do appreciate it and I think like all of us up here, you know, we are eager to learn both sides of the issue and certainly look forward to that looking more at

that information.

REP. URBAN: Thank you, Representative.

And with that, we will have some questions for the record for you and if you're not familiar with that we ask questions for the record.

VAL GIDDINGS: It's a great thing.

REP. URBAN: Thank you. Dr. Gidding, I think I'm going to wrap it up here. My training is in economics. I am a former professor of economics. So I'm going to ask you a few questions based on some of the other questions that have been put forward here and based on some of the things that you have already said.

First of all, when you say that the labeling is inappropriate because the consumer, there will be too many things on the label for the consumer to understand exactly what's going on, I would first of all point out to you that this container that I'm drinking out of says "BPA free." There is nothing out there to tell me what BPA is. There is nothing on there to tell me I should only buy this because it's BPA free, it merely tells me that it's BPA free, which obviously for me as a consumer is an incentive to buy that because I don't want to be exposed to hormone disruptors, et cetera.

In labeling, we're talking about labeling for babies. That's what we're talking about and you're telling me that consumers are incapable of understanding or reading that the label will be too complex. I would introduce to you what is called the rational expectations model in economics. And that rational expectations model says indeed consumers are smart. Consumers are not stupid. And if consumers are given the information, they will indeed use it

to their advantage.

Now, let me take that one step further. It's my understanding that the baby food industry is dominated by two major companies. In economics, we call that a duopoly, if there are more than two and there's some fringe companies, oligopoly. Oligopolies tend to behave very much like monopolies.

Organic farmers and people who are on the market and putting these goods out as organic goods are more often than not -- and this is in response to your, you don't like the new approach -- more often than not are as close to what is called perfect competition in an economic model as there is.

When you have perfect competition on one side of the equation and the oligopoly on the other side, I would tell you that the oligopoly always wins. And I would go back to the good Senator's observation as to what happened in California. The oligopoly were the ones that got the incredible amounts of money to, in essence, fight the David, the Goliath fights the David, so I could put this in terms that people, you know, find a little more familiar.

So the approach of the organic industry that you object to, what they have done is they are now organizing themselves like an oligopoly so it's a fair fight. So again, I'm an economist. I can show you that on a market model, I can draw it for you and show you exactly where the profit maximizing point exists, and at the margin, what can be done to level the playing field. It's why I'm such a big supporter of labor unions because you have an oligopoly on one side and a monopoly on the other, and when those two go at, you can usually arrive at a fair market price for labor. So in this

instance, I applaud the organic industry for saying we're going to organize so that we have the same market clout that the oligopoly that we're trying to fight on the other side.

But I would go back to -- and it's what my cochair said -- this is very narrowly drafted. We are being extraordinarily cautious here. We are just saying that when there is a young baby, my son weighed eight pounds at birth, I mean you could get a chicken for dinner that's eight pounds, we want to be sure that anything that is introduced to that child's body were the cells are multiplying extraordinarily rapidly and I'm sure as a geneticist that you appreciate that that. There isn't any -- and it's called cautionary principle -- any possible that we would be disrupting that cell growth. So we have really, you know, gone to the nth degree here to question you.

So I'm going to stop there and all I'm going to ask you is for the record we would like that questionnaire that you believe totally covers the safety issues for genetically-modified organisms from the FDA. And then without my going into it and getting into a little (inaudible) with you how the genetic material is introduced to the cell. How the DNA that changes that cell allows it to be BT corn or BT whatever, how that gets into the cell.

So my clerks, do you have those questions for the record? Thank you.

And with that, I do not believe there are any more questions. We appreciate your coming today. And as you can see, this is going to be quite a significant issue to bring forward.

So thank you for your testimony.

75
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

apologize for the traffic you had.

MEG GARDINER: No problem.

REP. URBAN: Thank you for your testimony.

At this point in time, we're don't use our Chair's prerogative. We do have a mom here with a young child and we're going to ask her to come up so that her child doesn't have to stay here for the entire day. So thank you, Theresa and your son's name?

THERESA WALSH-VELENDEZ: Can you tell them your name?

PHILIP VELENDEZ: Philip.

THERESA WALSH-VELENDEZ: Philip.

REP. URBAN: Vala -- sorry, Philip, I haven't had a little one around for a while. Welcome.

THERESA WALSH-VELENDEZ: Thank you. Madam Chair and committee members, thank you for having me here today. I am here to support Raised Bill 6527, AN ACT CONCERNING GENETICALLY ENGINEERED BABY FOOD.

I don't know that I'm going to get to go through my whole testimony, but I really appreciate you giving me the chance to bring Philip here today because -- thank you -- because I think that what we're having this discussion we really need to have the face of our future generation here. It's easy for us to talk about theory, but we have to have that face and we have to turn and look at that face every once in a while when we're having this conversation.

I want to thank you for introducing this bill.

And as a mom, trying to navigate the supermarket, I have to say that it's a terrifying proposition and not because there are a lot of labels, because I heard that noted earlier, but because the labels contain -- show me that the foods that I'm looking at buying for my children have terrifying ingredients.

My point is -- excuse me -- my point is that there are a lot of foods out there on the market that has a mom, trying to get my by -- my child the best possible healthy food options possible, it just becomes very difficult. We have our own vegetable garden. We make everything from scratch. We avoid processed foods, yet there are still things that today we think are safe and tomorrow we find out that they weren't safe. When the GMOs were introduced the nineties, I had no idea and I loved my junk food. I was in college back then. Well, guess what? I got married and decided to have a family and had undiagnosed, unexplained fertility issues. Now, looking at -- looking at foods and trying to figure out what was wrong because I had so many tests and no explanation as to why I have these fertility issues, I started looking at possible nutrition and I changed my diet drastically and those problems eventually subsided.

In recent years trying to become my family's nutritionist, I've been -- I've been learning so many things about preservatives and additives and things that are in foods. And more recently about GMOs. I find the prospect of giving something to my child that has not been thoroughly tested terrifying. At the very least, if we have labeling, we're going to force transparency. Those people who claim that GMOs are safe are going to have to prove it. They're going to have to do the research and they're going to have to show us that it's

safe. I'm not sure, as a mom, whether or not they are safe. I have a sense that they probably aren't which explains why they were given the generally regarded as safe status.

I heard the bell. I know I took more time than I wanted to. I do have my contact information here. I want you to know that I am meeting in my community with other parents and other moms and I'm trying to facilitate informational sessions and I'm urging them to call you. I'm urging them to write you letters and urging them to tell you that they support this because it's a wonderful bill. I think it needs to pass and I'm here to thank you for looking at it and doing all this hard work. Thank you.

SENATOR BARTOLOMEO: Thank you, Theresa. Have you submitted or given your testimony and your contact information to our clerks yet?

THERESA WALSH-VELENDEZ: I have. It's on my testimony and I made sure it was posted.

SENATOR BARTOLOMEO: Okay. So they will make sure that we get it and I'm wondering do you have other children.

THERESA WALSH-VELENDEZ: I do.

SENATOR BARTOLOMEO: How old?

THERESA WALSH-VELENDEZ: This is second. My first is six and she's in kindergarten. As a matter of fact, she's really bummed that she didn't get to come to the capital today and we're going to come back for the other GMO labeling bill and she wants to take the day off from school for that.

SENATOR BARTOLOMEO: Well, I always tell my kid's teachers that it's an educational experience to

come up here. So they usually authorize it.

THERESA WALSH-VELENDEZ: Yes.

SENATOR BARTOLOMEO: Well, I was going to say as they get older, I have a 16-year-old and an 11-year-old, trying controlling what they eat them. It's much easier now.

THERESA WALSH-VELENDEZ: Yes, and already when my daughter goes to get lunch in the cafeteria, she says to me, Mommy, other kids have Lunchables and other kids have foods that I would never dream of buying. And I have to work with her and teach her that it's not healthy. Sometimes you just have to let them have it and they will tell you themselves that it doesn't feel good.

SENATOR BARTOLOMEO: Well, I share your pain, but every now and then I'll say -- I'll give in to the one regular cereal instead of the organic, and they love the regular. So it does -- it has backfired in my case, but I thank you very much. And Philip, thank you for being here today. I really appreciate you coming to visit us.

THERESA WALSH-VELENDEZ: Can you say thank you for having me.

PHILIP VELENDEZ: Thank you for having me.

SENATOR BARTOLOMEO: You're welcome.

So do we have questions from committee?

Representative Urban.

REP. URBAN: You just brought up -- my son who is actually an attorney in D.C. and if he ever heard me say this, he would come in the here

and throw things at me, but he says it to his friends all the time. He had organic bread, organic peanut butter and it was in the beginning, it was why can't I have what everybody else has, but then when he tried it, much as you were saying, he said I don't want any of this. You've got to keep making my lunch, mom. That was right through high school. So if you give them the food that is good for them, they will respond.

So thank you so much and thank you so much for bringing Philip.

THERESA WALSH-VELENDEZ They will. And thank you and thank you for hearing is and thank you for this wonderful work. We need the labeling. We need to be informed. And as consumers, we will -- we do understand. We don't need to be geneticists.

REP. URBAN: Yes, that is the rationale.

THERESA WALSH-VELENDEZ: Thank you.

REP. URBAN: Thank you. Okay. Thank you, Madam Chair.

SENATOR BARTOLOMEO: Okay. So next I'm our list we have Sheila Millar who will be followed by Gretchen Raffa.

SHEILA A. MILLAR: Oh, sorry. Can you hear me now? Okay.

I'm here representing the Fashion Jewelry and Accessories Trade Association. The jewelry industry respectfully opposes H.B. 6498. I have some extensive testimony for the record. It looks like you're going to have a very long CHafternoon ahead of you so let me try to briefly summarize the basis for our opposition.

SENATOR BARTOLOMEO: All right. He just lost a minute off of his time.

TIMOTHY PHELAN: I'm the president of the Connecticut Retail Merchants Association. CRMA is a statewide trade association representing retailers throughout Connecticut. Our membership includes some of the worlds largest retailers as well as the state's Main Street merchants. I'm here today to testify in opposition to Raised Bill 6527, AN ACT CONCERNING GENETICALLY ENGINEERED BABY FOOD. We have a little different take on this issue than what you've heard from previous speakers and what you may hear from speakers after me.

Our message is from a business perspective this bill makes it very difficult for retailers in Connecticut to sell certain products. It essentially, by putting a Connecticut specific label on food products, in this case, baby food, it places our members out of step with the rest of the country, and therefore, places us at a competitive disadvantage. No other state in the union has such labeling requirements and for Connecticut to be the only state would be a distinction that we would rather not have.

In addition to having us as the only state that with this labeling comes the -- with that -- the cost of doing business and doing business includes our supply chains which would be impacted and some suppliers may choose to pass those costs on to us which could lead to higher cost to consumers or some suppliers may simply choose not to sell those products.

And I'll close by saying, again, that we've come from -- we come at this issue from a slightly different perspective.

Labeling raises lots of questions. We're direct to consumers. I think Representative Urban earlier had referenced a questioning by clerks in stores who are associates at stores on another matter. Lots of our folks are not going to be qualified to answer some of these questions that your committee and others, the full General Assembly is still debating as well as the scientific community, still debating the pros and cons. So that's it.

SENATOR BARTOLOMEO: So it's your lucky day because you're not the first to testify on this topic so you've heard our rant, and we won't likely give you as much difficulty.

TIMOTHY PHELAN: Yeah.

SENATOR BARTOLOMEO: I do have to say, though, that if we talk about Connecticut would be the first and the only -- I don't think that's a bad thing. I think it's clear that it's been attempted in other places and that money seems to have prevailed. So I don't know that -- I would respectfully disagree with you and I think it might actually be the precipitous to other states coming forward.

Do we have questions from committee?

Yes, Representative Candelaria.

REP. CANDELARIA: Just a quick question. In your testimony you talked about this would be a disadvantage competitively.

TIMOTHY PHELAN: Yes, right.

REP. CANDELARIA: Could you just expand a little bit of that?

TIMOTHY PHELAN: Sure. If you go to require a label

on a product and Connecticut is the only state that's going to require a label, then it sets us part of the rest of the region, first of all, people that -- our costs will go up. Those costs, as I mentioned in my testimony, we could pass those costs on to our consumers which may have -- lead to higher prices. That would -- may force customers to find other alternatives to shop. They may go across the borders to buy those same products where the cost is slightly lower. And there are consumers and there our citizens that are where of the issue that we feel like, you know, that they don't want to necessarily take on that cost for an issue that is still being debated.

REP. CANDELARIA: Now, when you talk about at a cost, have you done any studies on what would be that additional cost?

TIMOTHY PHELAN: Well, no. I have not and I would have to research to find out what the cost would be.

But I can tell you that, you know, logistics in a retail business is an extremely detailed and comprehensive part of the business and it's up and down the supply chain this would be impacted. So you know, it would certainly have an impact and it would raise costs. So I would have to try to find out how much that is. I don't know exactly what it is.

REP. CANDELARIA: Thank you.

TIMOTHY PHELAN: May I just comment, Senator?

SENATOR BARTOLOMEO: Yes.

TIMOTHY PHELAN: There have been -- this issue has been debated and there are lots of other legal questions about whether or not, you know,

forcing state-specific labeling and so it may not be a good thing for us. There are instances of course in which states taking a lead on products or in issues is a good thing. I think in some cases I think you have to take that on a case-by-case basis. On the issue of labeling because of where products are coming from, where they are sourced from, all different places, it is more of a cost and it would make us, in our opinion, stand out. So I don't think it in this case, it would be a good thing for us to go first.

SENATOR BARTOLOMEO: Thank you for that opinion. So I do have I guess two things for that. One is we certainly do have a process here so when this moves forward, leadership decides if it needs to go through judiciary and look at all of that kind of thing.

TIMOTHY PHELAN: Absolutely.

SENATOR BARTOLOMEO: So certainly that is something we all take into account there.

TIMOTHY PHELAN: Right.

SENATOR BARTOLOMEO: The other thing is that yes, it would be wonderful if it was started at the federal level, but, you know, it's got to start somewhere. Everything has to start somewhere. And the third is that if you could please, if you'd like to, if you choose to, if you want to follow up to Representative Candelaria's question and make the question for the record, if you have any way of -- any way of quantifying for us what the cost would be to those represent, we welcome you to submit that ASAP for the record and we certainly will make sure that everyone does get a hold of that and that's certainly up to you.

98
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

TIMOTHY PHELAN: Sure. Thank you.

SENATOR BARTOLOMEO: Senator Linares.

SENATOR LINARES: Thank you for coming in today. I just have a question about the supply chain. Could you give us an example of what would happen if a retailer had to ship X amount of product to the rest of the 49 states in our country and then what happens when they get to Connecticut and how will they handle that?

TIMOTHY PHELAN: Great question. Food and other products are in this case, you're talking about food -- folks that are following the to testify are a lot more knowledgeable about this process, but I'll just give you a general overview of it.

Food is sourced from different places. Where does it get labeled is the first question and so it's in a warehouse. Do we segregate out the Connecticut piles and is the label done there? Or does the food get shipped into a distribution center, let's say in Connecticut, there's a distributor in Cheshire. I think it's a Rizzuto Foods. Does Rizzuto then take the food that's shipped? They may ship out to New York or to Massachusetts, and at that point, do they segregate out the Connecticut stuff that has to go? Or do they -- or is it decided that it gets shipped directly to the store and then the store itself has to take additional steps to have the Connecticut label put on the label. Then the label is put on. It gets on the store shelf and the consumer reads the label and say I'm not really sure. I'm going to ask a person who works here. Now, we're getting into a level of training. We're getting into a level of additional times spent with employees to train on an issue that still unclear to scientists as to the benefits of or

the problems.

SENATOR LINARES: Well, hypothetically if this was to pass and become a law; do you think that the burden would be placed on the actual -- on the retailers and small businesses to place these labels on the product?

TIMOTHY PHELAN: You know, it's hard to say. It's a relationship between the retailer and the vendor, and oftentimes, those are done on a case-by-case basis. I could see a scenario both ways. I could see a scenario in which the vendor says we'll place the label, but it's going to and your cost or the vendor says we'll ship it to you and then it's up to you to put the label on. It may also ultimately down, as the Senator mentioned, what the final version of the bill looks like and what -- and who that burden is placed on as well.

But at this point, I think, again, there may be folks that follow me that are more qualified to answer exactly how that relationship will work, but I can see a scenario in which both cases would take place where the supplier or vendor would say that they will put the label on it but pass along the cost to us or force us to put a label on it in which case we have to incur additional costs ourselves.

SENATOR LINARIS: But either way, there will be a cost and we will wait and see what that cost is.

TIMOTHY PHELAN: I can't see a scenario, Senator, where there isn't an additional cost.

SENATOR LINARIS: Well, what if -- have you looked -- has anyone looked into using the Internet just making people more aware, you know, via online and websites what foods are genetically

100
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

modified? And do you think that there is an avenue there to reach a consensus instead of using physical label and, you know, adding an additional cost to using some type of online source where, you know, it's available for people?

TIMOTHY PHELAN: Sure. I think retailers are actively using online and web-based communication to customers. So I think that's an excellent idea.

SENATOR LINARIS: Excellent. Okay. Thank you.

SENATOR BARTOLOMEO: Representative Vargas.

REP. VARGAS: It's hard for me to believe that labels are such an expensive part of the food process. Companies are changing their labels all the time. They are changing the ingredients they use. They are changing the format of their labels. And in many instances, when states pass regulations like this, their distribution center for that region, they just put the label on even in states that may not require it. So Northeast distribution, they might decide, if for example this product contains GMO ingredients, that could be something that even though not required, let's say by Massachusetts, or other New England states, they might decide to go and spare themselves the headache of trying to segregate. That's happened before without the legislation where they've just decided to comply -- this is not a big state. Connecticut is not one of the larger states, but wouldn't it be great if the industry itself were open and transparent and just let people know what the ingredients are in there products and spare us all these hearings?

TIMOTHY PHELAN: Representative Vargas, I think the

industry is. I think the industry has worked on the federal level with the FDA. I think the FDA is still undecided on this issue. And I think to suggest somehow that we're trying to promote some sort of product that would be harmful to our consumers isn't necessarily fair. I think we're always trying to make sure that we're doing right by our customers and I think this issue in particular, I think that there was a healthy dialogue that took place with a scientist and this committee earlier before I came to testify. I think it demonstrates that these questions have not been answered yet.

So I think until such time we're faced with a business decision about whether or not, you know, do we add an additional -- do we place ourselves out there for an issue that may or may not -- that is yet to be settled. So I know it's a different perspective for this committee to -- to hear from and I appreciate that, but, you know, we all participate in the legislative process so we wanted to come here and let you know from a business perspective where we're coming from.

SENATOR BARTOLOMEO: Thank you.

And, you know, I think you're right. It is important for us to hear from a business perspective and I think it does come down to, you know, this is a business decision. It's not for some of us. For some of us, it's a safety decision, a decision about our children and so that doesn't make one or the other right or wrong, but we all have to decide where we are on that and, you know, I appreciate hearing from you. I appreciate logistically as you've described how difficult it can be. I do agree with Representative Vargas that the easiest thing would be just to have it on at the first

102
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

stop that you make on that label and then just let it go all the way through and you don't have any additional challenges, but certainly that's not my decision to make. That's whomever makes the product.

Any other questions?

Okay. I thank you very much for your testimony, Tim.

TIMOTHY PHELAN: Thank you.

SENATOR BARTOLOMEO: Next we have Sarah Evans. Sarah will be followed by Beth Beisel.

SARAH F. EVANS: Good afternoon. My name is Sarah Evans. I'm a neuro scientist and a postdoctoral research fellow at Mount Sinai School of Medicine in New York City and I'm here to speak on behalf of my colleagues at Mount Sinai in the Children's Environmental Health Center. We are a World Health Organization collaborating children's environmental health center and we're collective of research scientists, pediatricians, epidemiologists and industrial hygienists whose common goal is to ensure -- -- health environments for children.

HB 6526

In addition to being a researcher at Mount Sinai where I studied the effects of endocrine disrupting chemicals on brain development, I'm also a lifelong resident of Connecticut and I have a four-year-old daughter. And so we chose to raise our family here because we feel that Connecticut has an environment where we can ensure that health of our family; however, it's becoming increasingly clear that we need to help of legislation to be able to do so. So as pediatricians and research scientists at Mount Sinai we have first-hand knowledge of the

SARAH F. EVANS: This is a great question and actually the EPA has identified this is an area that really needs further exploration so what you're talking about is the cumulative effect of exposure to small amounts of chemical. So the thing that's very concerning is that a number of these chemicals, including salites, BPA, flame-retardant chemicals, chlorinated chemicals, they can all converge on the same system so many of them for example interfere with the thyroid hormone system. So if you have small amounts of individual chemicals that all act to reduce thyroid hormone, this can have very detrimental affect on, for example, neuro development of the child. So the thyroid hormone is absolutely critical for proper development of nervous system. So we feel that historically, the practice of looking at one chemical at a time and what, you know, low or high levels of exposure may do during development has completely missed the fact that these chemicals are actually acting together and we're not exposed to just one at a time so there is recognition that that's a very important area of study. It's just very challenging to do the science, but there will hopefully will be a lot of evidence emerging to support that.

SENATOR BARTOLOMEO: Further questions?

Well, thank you very much. We appreciate your testimony.

SARAH F. EVANS: Thank you.

SENATOR BARTOLOMEO: We are -- let's see. Hi, Beth. After Beth, we are going to have Sheila Cohen.

BETH BEISEL: Good afternoon. I'm here in support of House Bill 6527 for the labeling of

genetically-modified foods in baby formula and food. My name is Beth Beisel and I'm a registered dietician and the mother of three children. Over the last year, I have significantly decreased my income-producing consulting business to help educate people about the health risks of GMOs for a grassroots campaign called GMO Free Connecticut.

As a health care professional, I have seen the effects of what our changing food supply has done to my clients. Gastrointestinal disorders, food allergies, autoimmune disorders, diseases I never learned about in school have reached epidemic proportions. I have friends and relatives who worry every day about the mortality of their children with fatal food allergies. This was unheard of 15 years ago.

Labels today with calories, sodium content and trans fat, but not genetically modified organisms. Why? Even more outrageous is that even infant formula has GMOs, but it's unlabeled. Parents have the right to know what is in the food that they feed their babies. If a woman can't or won't nurse her baby, the alternative is formula. Formula is chemically-developed substance made primarily from derivatives of corn and soy. This means that the first food many infants ingest comes from a plant that has its own pesticide number. yes, that's right. Every kernel of genetically engineered corn is made to express a deadly toxin which causes a rootworm's stomach to explode.

Each type of genetically engineered corn is registered with the EPA. This is similar to the number on any chemical pesticide that you would find on the shelf on the hardware store and it's in baby formula. That doesn't sound

112
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

like nutrition to me. Infants do not have a fully developed immune system nor is their blood brain barrier established.

Can I have one more minute please?

SENATOR BARTOLOMEO: We'll give you just a little bit to wrap up and there may be questions.

BETH BEISEL: Okay. Bacteria resistant Round Up is also used in the genetic engineering of soy, corn, canola and sugar beets. This hardwires them to withstand unprecedented saturation with chemicals like Round Up which contains glyphosate and is geno-toxic.

Because I didn't know my babies ingested some of these chemicals in chemically-modified foods and I have to live with that guilt and concern for the rest of my life, I hope you will support this bill by affirming it and encouraging House and Senate leaders and the Governor's office to support it. Thank you so much for this beatifical bill and thank you for letting me testify today.

SENATOR BARTOLOMEO: Thank you.

Questions from committee?

REP. VARGAS: I feel your pain and I think we should not allow any -- we should not allow parents to feed their children uninformed. We should give them all the tools they need to make the right choices so I really appreciate your testimony and I know that you already know most of us -- how much most of us feel on this committee on this issue.

BETH BEISEL: I just think if they see the label, they can make the decision for themselves. And I don't believe that everybody is going to

care, but for those that do, they'll have it.
It will be transparent.

SENATOR BARTOLOMEO: Thank you.

Representative Candelaria.

REP. CANDELARIA: I agree with you 100 percent about labeling, but this should be taken a step further. I mean, if we're adding these -- these chemicals to baby products, that shouldn't be allowed at all. I mean, we need to start a campaign on this because this is very serious. People are not educated. Even if we do the labels -- and I have to be serious about this -- even if we do the labels, the likelihood for a lot of the parents to really understand what that means, that's just another problem that's created so we need to focus on how do we control from these chemicals to really be included -- these chemicals be included in children products. That's what we need to stop and I think that's the fight where we need to head. So I think there is a lot to be done, but I think this is just the right decision in the beginning for us to address the issue.

So thank you for testifying.

BETH BEISEL: You're welcome. Thank you.

SENATOR BARTOLOMEO: Thank you, Representative.

Senator Linaris.

SENATOR LINARIS: Yes. I just had a question. What are mothers and what are parents doing now not that you -- I'm sure you do know because of your research, which foods do have GMOs, so I'm asking what are mothers doing to provide baby food that they believe doesn't have

genetically-modified organisms.

BETH BEISEL: There are now organic baby formulas and baby foods available, but I always encourage mothers to nurse their babies for as long as they can.

SENATOR LINARIS: So there are products that are available?

BETH BEISEL: Yes.

SENATOR LINARIS: Okay. And I'm sure that they're labeled because they're advertising the fact that they don't have GMOs.

BETH BEISEL: Yeah. And I just teach them to look for USDA organic or non-GMO project verified.

SENATOR LINARIS: Okay. All right. My sister is expecting in August and she's been paying close attention to this bill, as well, so I'll let her know.

BETH BEISEL: Great. Great. Yes, and just to make that clear, organic cannot have GMO.

REP. URBAN: Just very briefly listening to what Representative Candelaria said there and in listening to your testimony and I talked about the rationale expectation theory of economics which says that the consumer actually make these deliberations --

BETH BEISEL: That's right.

REP. URBAN: -- regardless of whether they have an PhD in economics. It doesn't matter. And so what Representative Candelaria said was very well taken and this is a good first step and they are totally capable of seeing something that says GMO and making that decision for

themselves and their families so thank you very much for your testimony.

Thank you, Madam Chair.

BETH BEISEL: I think the people in Connecticut are smart enough not be confused by those three letters.

SENATOR BARTOLOMEO: Okay. Thank you very much for your testimony.

Next we have Sheila Cohen followed by Tara Cook-Littman.

SHEILA COHEN: Good afternoon, Senator Bartolomeo, Representative Urban and members of the Children's Committee. My name is Sheila Cohen. I'm the president of the Connecticut Education Association. We represent 43 active and retired teachers across the state and I am testifying this afternoon in support of H.B. 6501, parental engagement.

Teachers support this bill because it is innovative way to reconnect parents to the work being asked of their children in school. While many employers are tolerant of employee's request to attend school activities, there are many who are not. H.B. 6501, would allow parents to take up to 20 hours a year of their own time without penalty from their employer. It does not require employers to increase the amount of leave that an employee can accumulate. It simply requires employers to let employees use their existing leave, such as vacation or personal leave or take unpaid leave. The bill is not about creating divisiveness with regard morale in the work place. It is not about accumulating time that is not earned and it is not about disregarding the staffing needs of the employer.

SENATOR BARTOLOMEO: Okay. Next we have Tara Cook-Littman followed by Greg Costa.

TARA COOK-LITTMAN: Good afternoon. I am here to testify in support of H.B. 6527. My name is Tara Cook-Littman and I am a former New York City prosecutor and one of the leaders of the grassroots movement that has come together to demand our right to know what is in our food. I am above all else a mother of three children and I am passionate about having the right to choose for myself what to feed my children.

But today I want to speak why we cannot rely on our federal government to mandate GE labeling and why even if a lawsuit is brought challenging the constitutionality of the state-mandated labeling bill, the law would be upheld as constitutional. First all, despite what many Americans believe genetically-engineered foods have never been proven safe by the FDA. Why has the burden been shifted from the FDA to prove something is safe on to us, the consumer, to try to prove that they're actually dangerous. Our government has failed to protect us.

In fact, GMOs were exempt from testing because they deemed generally recognized as safe or GRAS. Many would say illegally. GE foods never met either of criteria required to be granted GRAS status. Even the FDAs own scientists warned their superiors that GMOs required additional testing before ending up on our dinner plates. Secondly, it is clear that there will be no action from our federal government at this time because the industry that benefits from the sale of GMOs has too much power in Washington. States should not wait for the federal government to act, but rather must protect its citizens today.

In addition, Connecticut is working with 37 other states to pass unified GE labeling laws throughout the country. Connecticut will not stand alone. And in addition, labeling has not added any cost to food in countries where labeling is mandated. It has been suggested that GE labeling laws in the states of unconstitutional when, in fact, there have actually been no such definitive rulings. One of the arguments from those that oppose GMO labeling is that state-mandated labeling would violate the First Amendment by infringing on the merchant's commercial free speech rights. In plain English, the industry that benefits from the sale of GMOs thinks that's their right to keep us in the dark about what we are eating, trumps our right to know what we are feeding our families.

Do the legislators of the Constitution State actually believe that the Framers intended the First Amendment to afford corporations such protections. To the contrary, our Framers intent in writing the Constitution was to protect the American citizenry from the very abuses of power evidenced in the lack of transparent labeling of our food. As long as the Connecticut Legislature can show that GE labeling is reasonably-related to numerous legitimate state interests including health of its citizens and protecting the environment, the law would be upheld as constitutional.

My children are past the age of baby food and baby formula, but for the sake of all those mothers wanting to make the best choices for their own children and for the sake of all those children, please mandate the labeling of all baby food and baby formula containing GMOs. Thank you.

121 March 5, 2013
rd/mb/ch/gbr CHILDREN COMMITTEE 11:00 A.M.

SENATOR BARTOLOMEO: Thank you very much.

Questions?

REP. VARGAS: I just want to thank you for your testimony and I agree with you that state governments have a role to play, where the federal government hasn't played an aggressive enough role and we're closer to our constituents just like town halls are closer to their constituents and some time these movements for people's rights have to start at the grassroots level and work their way up before our federal bureaucracy takes note. So thank you for all you're doing..

SENATOR BARTOLOMEO: Thank you. Anyone else from the committee?

Senator Linaris? No? Okay.

Thank you very much. I appreciate it.

TARA COOK-LITTMAN: Thank you.

SENATOR BARTOLOMEO: Next we have Greg Costa followed by Karim Ahmed.

GREG COSTA: Thank you very much, Madam Chairman. I appreciate the opportunity to come before you. I'm actually here on two bills, both the 6526 and 6527. I'll start with 6526, the ACT CONCERNING TOXICS DISCLOSURE AND INNOVATION FOR HEALTH CHILDREN. On behalf of the Grocery Manufacturers Association, I would like to take this opportunity to register our opposition to 6526.

The Grocery Manufacturers Association and its member companies support the intent of the legislation to ensure that consumer products with which citizens in the state of Connecticut

122
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

come in contact are safe and free of unnecessary risk to health and well-being; however, we believe that this legislation falls short of that intent by creating an undersupported state-based process which ignores the existence of the comprehensive protocols that already exist at the federal level. The legislation would unreasonably insubordinate Connecticut businesses and consumer interest through the legislative and regulatory processes actually of other states in kind of ad hoc interstate agency.

The Grocery Manufacturers Association is based in Washington, D.C. We're the voice of more 300 leading food, beverage and consumer product companies and so we wanted to come before you to explain our position on the legislation. We hold the safety and integrity of products that we make and the ingredients used to make them as most important and GMA supports the rigorous science-based federal regulatory framework and we believe that the federal government best handles the study and evaluation of chemicals for approval for use in food and consumer products. The products by this legislation, whether made in Connecticut or elsewhere, are generally manufactured for use and sale in all 50 states, that's what makes this process so difficult.

I know I'm very limited on time. I'm going to submit these comments to you in writing as well, but I just want to touch on a couple of things real quickly both on this bill and the 5627 -- excuse me -- 6527. This toxics legislation also fails to address the process to help relatively chemical and product use for further consideration.

It's very difficult to wrap up especially since I kind wanted to go on to other bill, as well.

SENATOR BARTOLOMEO: I've been a little lenient so I'll give you 30 seconds. That's the best I can do. That's the most I've given everybody.

GREG COSTA: Well, the Grocery Manufacturers also agrees with the U.S. Food and Drug Administration and numerous scientific bodies in the regulatory agencies, the World Health Organization, Food and Agriculture, and so forth, that foods and beverages that contain genetically-engineered ingredients are safe and they are materially no different than the products that do not contain genetically-modified ingredients.

I'd like to touch on one other thing in that bill and that is that there is also a section in there that deals with natural foods. And as much as I understand that this legislation is directly targeted baby food, infant formula, that section of the bill would actually apply to, as we read, as I read, would apply to everything. So you would really be taking anything that's genetically modified or genetically engineered and taking it outside the realm of natural. That would include a fresh ear of corn harvested from a field could not be called natural. We have some difficulty with that as well.

I know that -- I appreciate all the time you have given me. I could answer any questions, and again, will follow up with written testimony.

SENATOR BARTOLOMEO: Okay. Yes, please do. We definitely will take a look at all of that so that would be important.

I guess I'm wondering -- and I'm hoping this doesn't spur anything adversarial -- but how do

you -- your testimony is directly in contradiction to the testimony we just previously heard about -- and I am trying to look for it right now so I could -- about genetically-engineered foods have never been proven safe by the FDA. Am I gathering that you're saying that that's an incorrect statement, and if so, how?

GREG COSTA: You know, I don't want characterize someone else's statement as incorrect. We're confident that the process that was described earlier today by a geneticist is an effective process and that it is peer reviewed and there are avenues through which there has been testing. If someone believes that that testing is inadequate, then certainly they're entitled to that opinion and I don't mean to damn that with faint praise. I sincerely mean that. We believe that the federal process is -- is a stringent one and that these foods are examined are very closely.

And the other thing that I would add is that genetic engineering is also process and it's a process just like any manufacturing process and so less an ingredient in many ways than a process. The FDA has found and the American Medical Association backs this up -- and I know you have testimony from them on the record as well -- that there is no substantial difference between genetically-engineered foods and other foods. There is no difference in safety. There is no difference in nutrition. That's what we base this one. And again, I wouldn't --

SENATOR BARTOLOMEO: Before you get too far, I just want jump in there. So as my cochair has said before, one of the things we're trying to do here is that when anybody presents a statement and makes a statement as fact that if you would

125
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

please just, you know, give us the back up to that. So a question for the record -- our clerk would like if you were able to follow up to show us and give us the information that you're stating as far as the FDA having tested and I know that you mentioned --

GREG COSTA: No, ma'am, that's not -- I didn't that they had tested. I said that the process by which the FDA has arrived at its conclusion that there is no difference between genetically-modified foods and other foods, we feel is adequate. That is certainly an opinion --

SENATOR BARTOLOMEO: Okay. What I would like you to do --

GREG COSTA: That is certainly an opinion of --

SENATOR BARTOLOMEO: You know what, I'm given you leeway, but not if you cut me off. So what I would like you to do then is to provide with something that illustrates that process and if you can do that, then we will take that testimony and we'll give it due consideration, but it is in contradiction to other things we have heard. So if you would like your testimony to be given that same weight as the other testimony, then we would ask you to follow up and get us that.

GREG COSTA: I will see the clerk and ask for the question on the record.

SENATOR BARTOLOMEO: Thank you.

Do we have any other questions from the committee?

Thank you very much.

138
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

yes, the previous testifier is a Ph.D. researcher at a reputable institution so it would be helpful.

CHRISTINA FRANZ: I would be happy to submit that.

SENATOR BARTOLOMEO: Okay. Thank you very much.

CHRISTINA FRANZ: By what deadline would you like that.

SENATOR BARTOLOMEO: You know what? If you could speak to our clerk, she would better know.

CHRISTINA FRANZ: Okay. Thank you very much. Thank you.

SENATOR BARTOLOMEO: What my colleague is saying is that we have a process by which we screen the bills and decide further action and that is tomorrow on these. If there is anything you can get us, great. If not, Thursday. Thursday? If we could have it by Thursday, that would be ideal. If not and if the bill progresses, there certainly are opportunities for us to make amendments later on, but the best opportunity is by Thursday.

CHRISTINA FRANZ: I'll get you something by Thursday. Thank you.

SENATOR BARTOLOMEO: Okay. Thank you very much.

Marty Mador followed by Anne Hulick.

MARTIN MADOR: I'm Martin Mador, the legislative chair for the Sierra Club, in three very short minutes on three of our top priority bills for this year. Some of this you've heard before. I'm not going to speak to the scientific merits, but something on the perspective on the bills. On the expansion on the pesticide ban

SB981
HB6526
HB6527

up to high school, I have a series of questions in my written testimony. I'm not going to do that now. I don't have the time, but I'll just ask one of the first questions: What are pesticides? They are chemicals created for the express purpose of killing living things. Insects will die immediately, humans may take decades to die, but there certainly an effect of these pesticides and the bottom line is we want to use them only when absolutely necessary. And I don't have enough time to go on so I'll leave it at that.

Okay. The chemicals with concern to children, why is 6526 an important piece of legislation? Because it establishes an appropriate and effective framework for us to deal with these. In the past, we have come to the legislature, bill after bill, year after year, and done this one bill at a time which is not an efficient process and it's a process which really relies primarily on the Legislature which is a difficult way to do this so what this bill sets up as a framework for identifying the chemicals we're most concerned with that really relies on the expertise of the state agencies and people in other states that have already done this. It's a far more appropriate way to do this and that's really why we encourage this. Plus, it sets up a framework which businesses could take advantage of to remain competitive because it helps them identify the toxics in their chemicals which are going to hurt their business, especially in Europe.

And -- so let me -- the last one is the GMO-engineered baby food. Keep in mind what this bill is not about. It is not about regulating agricultural practices. This is not about disadvantage to our farmers. It's only about giving people the ability to recognize that there's something in what their about to

HB 6527

140
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

buy which could be harmful to their family. And you've heard this from other people. That's all this particular bill is about. One of the most important points, though, is that yes, maybe we would be better off if we had federal legislation which was uniform across the state so the manufacturers could have a federal set to go by. We don't have one. We have no expectation of getting one in the very near future so we have to rely on the state to set this up.

You need to know that we are working with colleagues in 37 states to try to pass essentially the same bill in every state in the country which would provide for labeling. Right now, we know of 56 labeling bills which have been introduced in 24 states. So we are trying to establish sort of a de facto standard across the country using the state legislatures and you are the folks that are going to have to do this because it's not going to come from the feds not in the very near future.

SENATOR BARTOLOMEO: Thank you, Mr. Mador. I think that's a good place to wrap up.

Any questions?

Thank you very much.

MARTIN MADOR: Thank you.

SENATOR BARTOLOMEO: Next we have Anne Hulick followed by Susan Eastwood.

ANNE HULICK: Good afternoon, Senator Bartolomeo, Representative Betts, honorable members of the Committee on Children. My name is Anne Hulick. I am the coordinator for the Coalition for a Safe and Healthy Connecticut. I'm also a nurse with many years of experience in environmental

HB6526

157
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

SENATOR BARTOLOMEO: Next we have Robert Rankin followed by Paul Pescutello.

ROBERT RANKIN: Good afternoon. My name is Robert Rankin. I'm the associate director of the International Formula Council. The IFC is an association of manufacturers and marketers of formulated nutrition products including infant formulas. And I am I here because we respectfully oppose House Bill 6527, which would require labeling on all infant formulas containing genetically-engineered materials.

Based on some of the testimony and opinions that we have heard today, I decided to kind of expound on a couple of points that I wanted to make for this committee here. So first of all with regards to the FDA, the Food and Drug Administration is responsible for evaluating all the scientific about foods and determining safety, quality, labeling issues. And so they have that responsibility and in our opinion they are the ones who should be doing that and they are doing that and so we believe that they haven't taken any action with regards to GMOs suggests that there is not an issue there.

In regards to infant formula, infant formula has its own specific law and regulations which govern the nutrition -- nutritional, quality and labeling requirements for those products. So every infant formula that comes to market has to be reviewed by the FDA before it gets on the market. That includes a safety review of all the ingredients in the product as well as a premarket notification review which is required by the U.S. Infant Formula Act, which is specific to infant formula, so in that regard, the formula is the most highly regulated food in the world and we believe that it shouldn't -- it shouldn't carry this label that's being

158
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

proposed.

In regards to the FDA, as has been said, they've determined there is no difference between GMOs and nonGMOs ingredients and so there is no reason to label those products. In my opinion and I believe in industry's opinion, a GMO label would imply there is some sort of an issue. There is a reason why that label is there and based on the determination by the FDA that there is no difference, we don't believe that that's necessary.

Do you mind if I just make a couple more points? Thank you.

So in requiring a label that says that this product contains GMOs when there is not an apparent safety issue in our opinion is false and misleading which is not -- which is against what the FDA has as far as labeling requirements. The FDA established voluntarily labeling guidelines for manufacturers or manufacture and consumers who wish to purchase products that do not contain GMOs so there is that in place. There is also the certified organic label which has been discussed. So consumers do have a choice when they go to the store and they can pick products that do not contain GMOs.

And just finally, just one last thing, our manufacturers, we follow federal regulations and so we oppose state laws, especially labeling laws that could create different labels for different states. We believe that's burdensome for manufacturers. It's confusing for consumers, especially those in the northeast where there are consumers traveling across states to purchase products and they could be faced with a situation where there are different labels and potential confusion. So

159
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

thank you.

SENATOR BARTOLOMEO: Thank you.

Questions?

Senator Linaris.

SENATOR LINARIS: Thank you.

Now you -- you mentioned in your testimony that -- that baby food is the most highly regulated food.

ROBERT RANKIN: Infant formula, I'm sorry, not baby food.

SENATOR LINARES: I'm sorry, baby -- baby food.

ROBERT RANKIN: Infant formula is --

SENATOR LINARES: Okay, formula. Oh okay so it's not all baby food then.

ROBERT RANKIN: I'm not here representing baby food. I'm here representing infant formula, the -- the only safe and nutritious alternative to breast milk.

SENATOR LINARES: Okay, all right, thank you. That's all I have.

SENATOR BARTOLOMEO: You'll learn too when you become an uncle.

ROBERT RANKIN: Exactly, yes. I have two young children so I fully appreciate all these little dis -- all these little nuances.

SENATOR BARTOLOMEO: Okay well I thank you very much for your testimony.

160
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

ROBERT RANKIN: Okay, thank you.

SENATOR BARTOLOMEO: Paul Pescatello and -- followed
by Stan Sorkin.

PAUL PESCATELLO: Good afternoon. Thank you for
this opportunity to testify in opposition to
House Bill 6527, AN ACT CONCERNING GENETICALLY
ENGINEERED BABY FOOD.

CURE, the organization of which I'm President,
it's mission is to represent and foster the
growth of the Connecticut Life Sciences
research and Life Sciences technology transfer
world. Perhaps our most important job is to
support the growth of the cluster of
biotechnology and BioPharma companies that CURE
and all of you in the General Assembly have
worked so hard to build.

As we try to underscore every opportunity,
biotech is first and foremost about cures and
treatments and better ways of reducing energy
in food but it is also about economic
development.

There are many ways to measure the important
economic impact of biotech but the most telling
is its economic multiplier effect. CURE's own
studies, as well as those of many other
organizations and government agencies,
consistently show biotech has about the
greatest multi -- economic multiplier of any
industry.

Simply put the investment in biotech, whether
by private investors or governments like
Governor Malloy's recent recruitment of Jackson
Labs to Connecticut, will have the greatest
ripple effect across the Connecticut economy in
terms of jobs and employment than any other
industry.

161
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

That's why I'm here to oppose 6527 on many grounds. Most are stated in the many letters and other information provided to the Committee. There are two key facts.

One the existing rules, regulations and oversight of the FDA make the bill unnecessary. Pages and pages of audited sci -- scientific studies are submitted to the FDA as part of its regulatory dossier.

Two the organic label option means by definition that no genetically engineered seeds or crops were used in organic food production. 6527 would only confuse rather than enlighten consumers.

If you -- if I could I'll just wrap it up very quickly.

But the most important reason for CURE's opposition to H.B. 6527 is that it undermines the foundation, the hospitable environment for biotech we worked so hard to build in Connecticut. As we and you did so astutely with stem cell research, we looked beyond the confusion and anti-science rhetoric that our opponents sought to create and crafted legislation that broadcast to the world Connecticut's openness to science rational analysis and the high technology job opportunities of the 21st century.

There are many things to be said about genetically engineered or modified food but their essential quality is they are nutritionally identical to non-GE derived foods. Biotechs -- biotech helps us produce more food using less land, fewer pesticides with much lower carbon -- with a much larber -- lower carbon footprint but the food itself is in no way different from food produced

162
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

quote/unquote the old fashion way.

To the extent food is modified in such a way that it is nutritionally different or has the potential to expose consumers to allergen, existing law requires that it be labeled as such.

Today biotechnology, as it is applied to food production, is part of a centuries long continuum -- continuum of using science from monks employing Medelian genetics to Nobel Laureate --

SENATOR BARTOLOMEO: We need to ask you to wrap it up now.

PAUL PESCATELLO: -- Okay -- to -- to -- anyway to the green revolution which is all based on biotechnology. We've built an amazing biotech cluster in this state. We need to nurture it, foster it and not send the wrong message which this bill would.

Thank you.

SENATOR BARTOLOMEO: So I have a question. So you -- you would -- in your testimony then you think that even though we're just -- have a very narrow focus on baby foods, that this would jeopardize the work that the Governor has done to bring bioscience to Connecticut?

PAUL PESCATELLO: Yeah I do. I mean it -- it's -- it's about as I said rational analysis and -- and science and -- and I've heard all sorts of testimony today. I've heard that there's science on both sides. I urge this Committee to weigh the science on both sides. It's not a -- it's a false equivalency. There's not -- there's not equivalent science on both sides.

It's overwhelmingly in favor of GMOs and that -
- and -- and that there is no need for -- for
labeling and in fact labeling is -- is
providing misinformation to consumers.

SENATOR BARTOLOMEO: And correct me if I'm wrong but
is there not an entire kind of bioscience
industry aimed at being able to have
sustainable crop production that is non-GMO?

PAUL PESCATELLO: I -- I wouldn't characterize it
that way. I mean I -- I -- I've also heard
today a lot of confusing information. GMO --
the -- the -- biotechnology allows us to use
fewer pesticides not more. I mean so -- there
was some misinformation I heard today as if
GMOs were pesticides.

The whole biotechnology industry is about using
fewer pesticides. I've seen -- you know there
are lots of moms and dads here today worried
about their -- their babies and their
children's health. I'd be way more worried
about pesticides and I'd be thankful to the
biotechnology industry for what it's done to
reduce the amount of pesticides in our
environment.

SENATOR BARTOLOMEO: Well we are clearly worried
about both. So I guess I would -- I was
wondering if you could just comment on this
then. So would you find this statement to be
false, true, somewhere in the middle that with
GMO technology applied to food that there is
research out there that shows that there is an
antibiotic resistance increase, an increase
speed of chemicals for GMO field crops over
time, problems with monoculture growth, reduced
yields over time. Are you finding that that's
not accurate?

PAUL PESCATELLO: There's a lot in that but I would

164
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

probably say false to all of that yeah. I mean
GMO is allowed -- use of fewer pesticides,
fewer chemicals in the -- in the production in
the -- in the farming of crops.

SENATOR BARTOLOMEO: Then I guess the -- the over
time is kind of the key.

PAUL PESCATELLO: And the -- and the antibiotic -- I
-- I don't know what the antibiotic --

SENATOR BARTOLOMEO: Okay.

PAUL PESCATELLO: It has nothing to do with
antibiotics. In fact -- well it has nothing to
do.

SENATOR BARTOLOMEO: Okay. Well I thank you very
much.

You have questions?

Thank you for your testimony.

PAUL PESCATELLO: Thank you.

SENATOR BARTOLOMEO: We now have Stan Sorkin
followed by Eric -- Eric you're going to have
to help me out on this one -- CBIA.

STAN SORKIN: Good afternoon. My name is Stan
Sorkin, President of the Connecticut Food
Association. We're the trade association that
conducts programs and public affairs for
Connecticut's grocery industry. I'll limit my
comments to those specific issues which affect
the grocery industry.

First of all labeling of products sold on an
interstate basis should be regulated on a
national basis, not on the state-by-state
business -- basis. The CFA supports voluntary

HB 6527

labeling of genetically modified foods. Voluntary labeling and marketing ensures consumer choice.

Individuals who make a personal decision not to consume foods containing GMOs can easily avoid such products. They can purchase products that are certified as USDA organic and I have some samples in front of me. These are readily available. Connecticut supermarkets currently stock these brands which are labeled USDA organic, Gerber Organics, Earth's Best, Sprout, Ella's Kitchen and Plum Organics.

Second has the effect of this bill on the WIC program been considered? By law Connecticut's WIC vendors must have these products on hand at all times or else the vendor will lose their WIC license. The last date of sale wording on Section 2, paragraph b states that July 1, 2015 is the last day of sale for a non-labeled product. This date seems to conflict with the existing inventory sell date by -- of July 1, 2016 provided it was purchased before October 1, 2013 which means you're going to let it sell product that's two and one half years old.

The problem is that this law burdens the grocery retailer to be the watchdog on every label on every baby product from manufacturers to our stores.

A VOICE: (Inaudible).

STAN SORKIN: Okay. We're also concerned that the bill will change the definition of natural food which goes beyond the scope of the legislation affecting only baby food. Again we'd have a more restrictive definition of the word natural affecting almost every other product on the shelf that makes the claim that it is natural which means we have to watch those foods to

make sure they'll have to be sold.

Where do we get the information to monitor all these products? We have to rely on manufacturer's information. It's a lot easier for people to take an aggressive approach and label products that are organic under the USDA Organic Program than put other labels on there that are negative in connotation which does not have 100 percent scientific proof that they are safe -- they are unsafe, excuse me.

SENATOR BARTOLOMEO: Thank you very much. I'm sorry I'm sneaking a little lunch in here at quarter to four.

Representative Urban.

REP. URBAN: Thank you, thank you, Madam Chair.

And I'm not -- no I'm -- I'm -- I apologize I've been at a meeting with a speaker and I'm not going to belabor -- I'm not going to belabor this because we have a ton of people to -- to testify.

STAN SORKIN: Sure.

REP. URBAN: But I would merely repeat the comments that I've already made about labeling and to point out that this is a BPA label here and the rational expectation model tell us very clearly that consumers want labels, they understand labels and that a market works most efficiently, the perfectly competitive market model which is allocatable and productively totally efficient that's called Pareto Optimality, is the more information that the consumer has the better the market works.

Perfect information it's based on. Obviously there is no such thing as perfect information

but it is a model so we try to get as close to that as we possibly can.

Thank you, Madam Chair.

SENATOR BARTOLOMEO: Thank you very much for your testimony today.

Next we have Eric from CBIA and Eric you're going to have to tell me your last name please.

ERIC W. GJEDE: Good afternoon. My name is Eric Gjede from -- the assistant counsel with CBIA. I'm here today to testify in opposition to Bill 6501, AN ACT CONCERNING PARENTAL INVOLVEMENT -- or ENGAGEMENT, excuse me.

This is a difficult bill for the business community to testify on because while we do believe that parental involvement in a child's education is important, we don't believe than imposing a mandate contemplated in this bill is the solution.

This bill creates an additional entitlement of 20 hours per year to attend child -- a child's qualified school-related activities. Some of the problems that we found with this bill is that it creates a morale issue within a business between employees with children or grandchildren and those without.

It also disregards staffing needs of employers as well as the policies for requesting and approving time off that are implemented to provide fairness. It is silent on whether an employee is still required to provide this leave to employees that have exhausted their vacation, personal or compensatory leave.

Also the definition of school-related activity is pretty vague and also it provides 20 hours

205
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

And Autism has increased more than 10 times in the last 15 years. Asthma incidence has doubled - - doubled in prevalence.

So in closing I just wanted to say that this would be a good opportunity for Connecticut as a whole. A healthier community would equate to a more productive community. Healthcare is a huge issue in our country and a -- a huge number in our gross domestic product.

And there was a recent study that I put in my written testimony called Driving Innovation: How Stronger Laws Can Help Bring Safer -- Safer Chemicals to the Market. So I think you would find that very interesting as well.

SENATOR BARTOLOMEO: Thank you very much.

Questions?

One -- one question, your critical care unit is it adults, children, combination?

PAMELA MANN: It's adults.

SENATOR BARTOLOMEO: Okay, well thank you. I'm sure that's not easy work. Thank you very much.

PAMELA MANN: Thank you.

SENATOR BARTOLOMEO: Next we have Martha Kelly and Noelle Kidney.

MARTHA KELLY: Good afternoon. Thank you very much, Senator Bartolomeo and other members of the Children's Committee. Thank you for the opportunity to speak here today. I'm Martha Kelly of 57 Curtiss Street, Hartford. I work for the Connecticut Coalition for Environmental Justice. I'm also a grandmother.

SB981
HB6527
HB6526

And thank you for this opportunity to make comments. I've prepared testimony on H.B. 6526, which I'm strongly in favor of, and in respect to Representative -- former Representative Dick Roy who reminded me about S.B. 981 and H.B. 6527, I'd just like to say that although I didn't prepare testimony, I support them as well, all things that are towards prevention.

I thank the Children's Committee for raising AN ACT CONCERNING TOXICS DISCLOSURE AND INNOVATION FOR HEALTHY CHILDREN. We are all exposed to thousands of chemicals in our air, water, food, and everyday products around us daily. Most of us have not -- most of these have not been adequately studied for their impact on human health, individually, let alone in combination, as we experience them in our lives.

The timing of exposures is often critical to their impact on us and I'm saying things I know that you've just recently heard. Children and babies, and those unborn, are the most vulnerable to environmental exposures, when their organs are in rapid development.

Our federal system of regulation, the Toxic Substances Control Act, seems to be stalled in the 1970's, the past century. As a state and as a nation we are staggering under the weight of paying for the diagnosis and treatment of illness yet we put very few resources into prevention.

And this bill is I think a reasonable one aimed at prevention and so I urge you to adopt it and I've made a few other remarks about how we don't have to start from scratch, we can make use of resources that are available to us from whether it's the European Union that's in active reach or other states that have already

207
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

started on this process.

Thank you.

SENATOR BARTOLOMEO: Thank you very much.

Do we have questions from Committee?

Well thank you very much.

MARTHA KELLY: Okay, thank you.

SENATOR BARTOLOMEO: Next we have Noelle Kidney followed by Diana Reeves followed by Colleen O'Connor.

DIANA REEVES: I'm Diana Reeves.

SENATOR BARTOLOMEO: Oh Diana, thank you.

DIANA REEVES: Thank you.

Thank you for the opportunity to testify in support of H.B. 6527. My name is Diana Reeves. I'm a mother of three, age 18 through 25. My husband, my two daughters and I suffer from autoimmune disease and food allergies.

We were all diagnosed around the same time. My youngest daughter was 14 when diagnosed. A freshman in college now, her food must be prepared separately in an isolated area of the basement in the dining hall. Life is complicated for us. We can't eat out. I can no longer read the newspaper because every time I touch GMO soy ink I develop a blistery rash on my face.

My children have grown up eating GMOs without my knowledge or consent. I have been reading studies that link GMOs and the chemicals they're sprayed with to a very long list of

disturbing health problems including autoimmune disease. Had I known then what I know now, I would have fed my family very differently.

I would like to share a few disturbing things I have learned with you. There's never been an independent long-term safety test done on any of the genetically modified foods in our food supply.

GMO Bt corn, which is being used in our baby formula, is an EPA registered pesticide. It kills insects when they bite into it. Think about it, food shouldn't kill. This is not something I would consider feeding a vulnerable baby. If this corn were on the shelf at Home Depot you would see the pesticide registration numbers on the label. I've attached the EPA pesticide registration information so that you can read it for yourself.

Unfortunately the EPA has no jurisdiction over food labeling so new mothers are unknowingly feeding their babies toxic pesticides.

With the introduction of GMO soy, Monsanto successfully petitioned the FDA to increase the allowable residue level of their chemical herbicide on soy. Glyphosate, the active ingredient in their herbicide, RoundUp, was increased to an acceptable level three times higher than the level that was previously determined to be safe.

Glyphosate is systemically absorbed by the plant and does not wash off. Numerous lab studies have shown that glyphosate is genotoxic, endocrine disrupting, neurotoxic and a carcinogen. Without a label, new mothers are unknowingly feeding glyphosate to their babies in soy-based formulas.

209
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

The chemical companies that are genetically altering and patenting our food will tell you that America has been eating GMOs for almost 20 years and we are fine but doctors now say that this is the first generation of children that are sicker than their parents. America is not fine.

Babies are our future. Mothers need to know if a product -- product contains GMOs so they can have the freedom to choose what they feed their babies. Please vote yes on H.B. 6527 to label genetically engineered baby food. Without labeling there is no accountability.

Thank you.

SENATOR BARTOLOMEO: Thank you. Do we have a copy of your testimony?

DIANA REEVES: Yes you do.

SENATOR BARTOLOMEO: Okay.

DIANA REEVES: I'd like to leave the (inaudible).

SENATOR BARTOLOMEO: I'm sure it's been very hard for you to sit here all day listening to the variety of opinions that we've had and I -- I thank you. I can see it's been very difficult for you.

Do we have questions from Committee?

Thank you very much.

Next we have Colleen O'Connor followed by Tom Nicholas.

Colleen, Tom.

Jonathan Leviok?

210
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

JONATHAN LEIBOVIC: Leibovic.

SENATOR BARTOLOMEO: Leivovic -- say it one more
time for me.

JONATHAN LEIBOVIC: Leibovic.

SENATOR BARTOLOMEO: Leibovic, thank you.

JONATHAN LEIBOVIC: Thank you, Senator Bartolomeo --

SENATOR BARTOLOMEO: You did well.

JONATHAN LEIBOVIC: -- and other honorable members
of the Children's Committee who have stuck with
us. I admire your stamina.

So I came here primarily to support H.B. 6526
but obviously there are a lot of bills on the
docket today and I want to spend a little bit
of my time also on -- on some of those other
ones as well.

I'm not going to read through my testimony.
You all have heard plenty of the arguments.
You probably have a good sense of what I'm
going to say since I worked for Toxics Action
Center about H.B. 6526 to dispose toxics in
children's products and create a comprehensive
chemical reform policy.

HB 6527

Obviously we're in strong support of it. As --
the only think I want to say on that is -- is
to repeat the words of Bob Sump who is
Republican State Representative from Washington
State. In 2008 they were debating a similar
bill and Representative Sump said voting
against this bill is like voting against brakes
on a school bus. So I think that's about all I
have to say on that.

On S.B. 981, regarding pesticides on school

211
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

grounds, this is another bill that -- that we support strongly and I want to clarify one -- one point that was made previously. I don't remember the name of the man who made this point but he was talking about the GMO labeling bill and mentioned pesticides but then the pesticides are what we should really be concerned about not genetically engineered foods.

Interesting point there because there's a lot of misconception around what the word pesticide means. Some people think it just means insecticides. But actually the word pesticide refers to insecticides and fungicides are identified and -- in a whole suite of different chemicals that are designed to kill biological organisms from mammals to rodents to -- sorry from mammals to -- to funguses and -- and --

So yes it's true that -- that the use of insecticides to kill insects has decreased as a result of genetically engineered crops but the use of pesticides, including herbicides like glyphosate, also known as RoundUp, has increased by about 404 million pounds since 1996, so just wanted to make that point as well.

And in addition to that obviously the -- the bill to label genetically modified foods, for instance, is -- is a wonderful, wonderful bill.

I think that's about all I have to say. I don't want to take anybody's time because all the points have sort of been made at this point but I'd be happy to take any questions you have.

SENATOR BARTOLOMEO: Thank you.

Questions from Committee?

212
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

Representative Fawcett.

REP. FAWCETT: Just a quick comment. I just wanted to thank you for lasting the entire day and -- and not ditching on us and taking the time to put your testimony on the public record. We very much appreciate it as well.

JONATHAN LEIBOVIC: No problem, thank you.

SENATOR BARTOLOMEO: I have one and I don't know if you're -- if you're aware of this or not but I figured I would just try.

JONATHAN LEIBOVIC: Yup.

SENATOR BARTOLOMEO: Is there any truth to the fact that when the GMO helps to lessen the need for pesticides initially supposedly but over time -

JONATHAN LEIBOVIC: Right.

SENATOR BARTOLOMEO: -- that effect wears off and --

JONATHAN LEIBOVIC: Pesticides (inaudible).

SENATOR BARTOLOMEO: -- and they're equally, you know -- right exactly.

JONATHAN LEIBOVIC: Yeah, yeah there is lots of evidence of -- of pests growing resistant to bacillus thuringiensis or the BT toxin that has been so frequently mentioned in testimonies today. I could -- I would be glad to forward you a number of studies if you're interested in looking at those.

SENATOR BARTOLOMEO: I would appreciate that even if it's just a couple or -- or you know one study --

213
rd/mb/ch/gbr CHILDREN COMMITTEE

March 5, 2013
11:00 A.M.

JONATHAN LEIBOVIC: Sure.

SENATOR BARTOLOMEO: -- or two or studies and a link. When I mentioned that earlier the gentleman who has so knowledgeable about many things seemed to not know anything about that.

JONATHAN LEIBOVIC: Yeah based -- I mean there's resistance to every pesticide obviously but in addition to that the -- the BT toxins has -- has recently been found in -- in some breast milk in Canada I think. So unclear what exactly the health effects of that are on the mother or on the baby but it's there, it's persistent, it bioaccumulates and there's also resistance to it, yeah.

A VOICE: (Inaudible).

SENATOR BARTOLOMEO: So if -- Jonathan if you would get us some kind of information or studies about resistance.

JONATHAN LEIBOVIC: Sure.

SENATOR BARTOLOMEO: And if you would like to go ahead and forward us that study since you're clearly aware of it we would accept that as well. Thank you very much.

JONATHAN LEIBOVIC: Thank you.

SENATOR BARTOLOMEO: Next we have Joseph Wasserman who will be followed by Richard Parmalee.

JOSEPH WASSERMAN: (Inaudible) empowering those communities to deal with the additional environmental burden that's placed on poor communities, communities of color. I'm here to testify in favor of R.B. 6526, TOXICS DISCLOSURE AND INNOVATION FOR HEALTHY CHILDREN.

**JOINT
STANDING
COMMITTEE
HEARINGS**

**CHILDREN
PART 5
1271 - 1562**

2013

Dear Sir or Madam:

I am writing to insist that all food products sold in the United States be labeled to inform consumers whether or not they contain genetically-modified ingredients of any kind.

HB6527

American consumers pay for food with our money. We do not want to pay for it with our health. We have the right to know what we are putting in our bodies.

Thank you.

Marie-Therese Hemon
7 Tulip Lane
Shelton, CT 06484



TESTIMONY OF ERIC J. BROWN
ASSOCIATE COUNSEL, DIRECTOR OF ENERGY & ENVIRONMENTAL POLICY
CONNECTICUT BUSINESS & INDUSTRY ASSOCIATION
before the
COMMITTEE ON CHILDREN
March 5, 2013

Good morning. My name is Eric Brown and I serve as director of energy and environmental policy with the Connecticut Business & Industry Association ("CBIA"). On behalf of our 10,000 large and small member companies throughout Connecticut, we are pleased to have this opportunity to provide comment in opposition to two bills on today's public hearing agenda related to chemical labeling and disclosure.

CBIA is often asked, "What can Connecticut do to become a more attractive place to do business?" One thing we can do is avoid enacting laws and regulations that exist in few if any other states in the nation. Secondly, we should be cautious, if not skeptical, when measures that have been brought before the legislature in the past and failed, are repackaged and remarketed as being needed to protect children. Third, we should avoid measures that make it harder for businesses to invest in our state and grow jobs.

These two bills fall short in all three of these areas and therefore we urge rejection.

H.B. No. 6526 AN ACT CONCERNING TOXIC DISCLOSURE AND INNOVATION FOR HEALTHY CHILDREN.

and

H.B. No. 6527 AN ACT CONCERNING GENETICALLY ENGINEERED BABY FOOD

H.B. No. 6526 AN ACT CONCERNING TOXIC DISCLOSURE AND INNOVATION
FOR HEALTHY CHILDREN.

CBIA OPPOSES THIS BILL

This bill is a rehash of previous proposals attempting to create a “hit-list” of chemicals to present to the Connecticut legislature for regulation or banning – generally in the absence of similar measures in other states or federal action. The outcome of those previous efforts was the creation of the Connecticut Chemical Institute – an organization housed at the University of Connecticut and tasked with acting as a liaison between the chemical research community, national and international regulators, and Connecticut’s business community with the primary goal of assisting them in implementing green chemistry products and practices into their workplace.

Unfortunately, this was not the intent of the original bill which also called for the creation of “chemicals of high concern” lists that would explicitly be presented to the legislature each year. But H.B. No. 6526 goes much further than that previously ill-fated measure. Section 3 of the bill requires manufacturers to provide biannual “Disclosure Notification Reports” and a “Product Innovation Plan” to the Department of Public Health. This “plan” requires a timeframe for removal of the identified chemical from the manufacturer’s product within three years, together with an affidavit as to the “inherently less hazardous” nature of a substitute material to children’s health. Failure to meet the requirements requires the DPH commissioner to recommend labeling, forfeiture of sale proceeds or civil penalties.

It would be hard to conceive of a more adversarial, anti-business approach to dealing with the issue of chemicals and green chemistry than this bill. It is precisely the type of heavy-handed, expensive (to government and industry), anti-business measure this legislature should be loath to approve.

We appreciate this opportunity to provide testimony on H.B. 6526 and for your consideration of our comments.

CBIA respectfully urges your committee to reject this bill.

H.B. No. 6527 AN ACT CONCERNING GENETICALLY ENGINEERED BABY FOOD

CBIA OPPOSES THIS BILL

This bill is another attempt to make Connecticut "first-in-the-nation" for a measure that will hurt our businesses and our competitiveness.

Other organizations with greater expertise than ours in the area of genetically engineered foods will present detailed arguments against this proposal. They will speak to the issue of Constitutional problems, of the choice consumers already have to avoid using these products if they wish by purchasing products with the "USDA Certified Organic" label, of how those who market foods without genetically engineered materials are free to add their own label as such if they believe there is a market advantage for doing so, and you will hear of the impact on Connecticut businesses of the bill's proclamation that "no person shall manufacture, sell, offer for sale or distribute . . ." these materials under penalty of up to \$1,000 per day per product.

What CBIA wishes to emphasize is that this is precisely the type of bill that makes businesses across the nation look at Connecticut and ask themselves, "Why would I ever want to start or move a business to a place so hostile to businesses?"

We appreciate this opportunity to provide testimony on H.B. 6527 and for your consideration of our comments.

CBIA respectfully urges your committee to reject this bill.

HB 6527

I am a resident of Fairfield and I'm writing to ask for your support on GMO labeling. I believe we have a right to know what's in our food! Our generation should not be guinea pigs for Monsanto in what will ultimately be an experiment that went wrong. This is likely the tobacco, lead and DDT of our time. There is too much indication through early research that links GMOs to disease and cancer. Because of my passion for health and nutrition, I stopped eating trans fat long before the issue hit the New York Times. That's what it took for many companies to remove trans fat and now the same type of publicity is doing the same for the chemical BVO as it is being removed from gatorade. We shouldn't have to wait for the next news headline because someone finally decided to fund enough research on GMOs.

We're not asking companies to eliminate GMOs but simply wanting the right to know what we're eating. When research now reveals that our genes are not a fixed predetermined program but can be turned on and off by our environment and experiences, we all care a lot more than ever about the quality of our food, and the environment!

Sharon Schendel
Fairfield CT

Hello

My name is Walter Grant and I live at 13 Alden Street Mystic Ct. I wish to submit written testimony concerning HB 6527 , An Act Concerning Genetically Engineered Baby Foods and HB 6519 , An Act Concerning the Labeling of Genetically Engineered Food.

Originally, genetically engineered foods appeared to have great promise. They were advertised as being drought resistant , increased yields and enhanced nutrition, None of these promises have come to fruition. Instead we find ourselves consuming foods grown with unheard of amounts of pesticides. The leading manufacturers of Genetically Modified Foods have refused to submit their products for independent testing. Over 60 countries mandatory GMO labeling or outright bans.

More independent testing should be required (or labeling). The children of Connecticut should not be guinea pigs.

Walter Grant
13 Alden St.
Mystic Ct. 06355

First & foremost, I wish to thank everyone in advance for entertaining the idea of passing legislation on this very important issue (the GMO debate) They say timing is everything, guess what ? The time is now. time to pass legislation on this very serious issue. I Patrick Kelley, strongly support HB 6527 An Act Concerning Genetically Engineered Baby Food. It is very obvious to me that our federal government missed the ball here on this GMO stuff from the get go. I hope the great state of Connecticut will be a leader & pass legislation that will keep us (the consumers) better informed, specifically in this case about what is in our Baby Food. The GMO Labeling movement is for real in our state, in our country, globally. I repeat again I hope the great state of Connecticut will be a leader.

Regards, Patrick

Kelley

Patrick Kelley
co founder ECCGA
Eastern Connecticut Community Gardens Association
GetGrowingCt.org
pk65@aol.com
860-941-7891

Re: HB 6527, An Act Concerning Genetically Engineered Baby Food

I used to work with kids with very complicated medical histories. Multiple diagnoses, mostly birth defects and other developmental issues. Most of these kids had food allergies/sensitivities. It is crucial for patient's like this to have all the information they can get to make sure that they do not consume things they aren't supposed to.

Gabrielle Riola

Statement of Opposition to HB 6527
An Act Concerning “Genetically Engineered” Baby Food
COMMITTEE ON CHILDREN
March 5, 2013

The Food and Drug Administration’s (FDA) longstanding scientific judgment is there is no significant difference between foods produced using bioengineering, as a class, and their conventional counterparts. FDA’s scientific evaluation of bioengineered foods continues to show that these foods are as safe as their conventional counterparts. Moreover, mandatory labeling to disclose that a product was produced through genetic engineering does not promote the public health in that it fails to provide material facts concerning the safety or nutritional aspects of food and may be misleading to consumers. Requiring labeling for ingredients that don’t pose a health issue would undermine both our labeling laws and consumer confidence.

We are all concerned with the health and well being of infants and children and support parents having access to truthful, non-misleading information that is important to their family’s health. We are parents and food consumers too. While HB 6527 appears well intended, it provides no increased safety or health benefit to infants but, instead, would serve to deliver a confusing message if not an outright product warning to the most sensitive of consumers: mothers, fathers and other caregivers responsible for making real important nutrition decisions for babies and small children.

Foods derived from plants and crops improved through the use of biotechnology are just as safe as foods developed from non-genetically engineered crops at any level for any human or animal. There is no data, studies or experience to suggest a potential harm to infants and children.

- The **U.S. Food and Drug Administration** has consistently held that *“...there is no significant difference between foods produced using bio-engineering, as a class, and their conventional counterparts.”*
- Further, the **American Medical Association** stated: *“AMA believes that as of June 2012, there is no scientific justification for special labeling of bioengineered foods, as a class, and that voluntary labeling is without value unless it is accompanied by focused consumer education.”*
- The **American Association for the Advancement of Science** released a statement in October 2012: *“It is the long-standing policy of the Food and Drug Administration (FDA) that special labeling of a food is required if the absence of the information provided poses a special health or environmental risk. The FDA does not require labeling of a food based on the specific genetic modification procedure used in the development of its input crops. Legally mandating such a label can only serve to mislead and falsely alarm consumers....”*

No Health & Safety Difference Between Organic Food and Conventionally Produced Food

- In 2012, The American Academy of Pediatrics published a report of after reviewing the available studies on organic and conventionally produced foods and found there were no differences in safety and health. “There does not appear to be convincing evidence of a substantial difference in nutritional quality of organic versus conventional produce” and “One major concern with organic food is its higher price to consumers”. Organic food and consumer health products typically cost 10% to 40% more than similar conventionally produced products. *“Organic Foods: Health and Environmental Advantages and Disadvantages”, Pediatrics, Nov. 2012, Vol. 135, Number 5, The American Academy of Pediatrics.*
www.aap.org

HB 6527 Would Hurt Consumers, Small Business and Farmers!

- While HB 6527 targets baby food, it is subject to the very same challenges that have made larger (and more comprehensive) genetically engineered food labeling proposals unworkable, unenforceable, unnecessary, and potentially unconstitutional.
- Mandatory labeling of foods derived from biotech-improved crops would unnecessarily result in higher food costs for consumers – especially those least able to afford it. The Connecticut-only labeling requirement could result in a decrease in the overall availability of baby food products including infant formula resulting in increased prices as competition lessened.
- The Connecticut-borne costs to enforce mandatory state labeling would be costly. If HB 6527 became law, ensuring such baby food labeling in Connecticut is accurate would put a huge burden on state regulatory agencies. This is unnecessary given the opportunity for all food producers to voluntarily label their products as “non-GMO.”
- Costs to the state and therefore taxpayers could include: Increased state administrative costs to monitor and enforce baby food labeling requirements and potential state capital outlay costs for the construction of facilities to test baby food products.
- Connecticut farmers could be denied access to new technologies that would allow them to compete effectively in the marketplace now, and in the future.

Voluntary Labeling and Marketing Ensures Consumer Choice

- Parents who make the personal decision not to feed their children food that may be derived from crops improved through biotechnology can easily avoid such food products. They can purchase food and consumer products that are certified as organic under the USDA National Organic Marketing Program. They can also buy products which companies have voluntarily labeled as non-GMO. The FDA has published guidance to industry that voluntary labeling and marketing claims are permissible so long as the information is accurate, truthful and avoids misleading consumers about the food they are consuming.

HB 6527 May be Unconstitutional

- Requiring baby food companies to label their products when there is no health or safety reason to do so fails the substantial state interest test, undermines commercial free speech, most likely violates interstate commerce and is unconstitutional. In INTERNATIONAL DAIRY FOODS ASS'N v. AMESTOY, 92 F 3d 67 (1996) the court held food manufacturers could not be compelled to label dairy products as being made from the use of rbST (genetic engineering):

“Consumer interest alone was insufficient to justify requiring a product's manufacturers to publish the functional equivalent of a warning about a production method that has no discernable impact on a final product.”...Accordingly, we hold that consumer curiosity alone is not a strong enough state interest to sustain the compulsion of even an accurate, factual statement.”

The undersigned groups respectfully urge The Children Committee to reject this bill.

THIRD PARTY RESOURCES

- Position Statements and Reports
 - American Association for the Advancement of Science (AAAS) Statement by the AAAS Board of Directors on Labeling of Genetically Modified Foods (2012)
 - American Medical Association (AMA) (2012) [or <http://www.ama-assn.org/assets/meeting/2012a/a12-refcomm-e-report.pdf>]
 - European Commission report: A decade of EU-funded GMO research (2001-2010) (2010)
 - European Food Safety Authority (EFSA) report. Safety and nutritional assessment of GM plants and derived food and feed: The role of animal feeding trials (2008)
 - Institute of Food Technologists (IFT) Expert Report: Biotechnology and Foods (2000)
 - Food and Agriculture Organization (FAO)/United Nations (UN) Report: The State of Food and Agriculture 2003-2004: Agricultural Biotechnology Meeting the Needs of the Poor? (2004)
 - National Research Council/U.S. National Academy of Sciences (NAS) report on the Safety of Genetically Engineered Foods: Approaches to Assessing Unintended Health Effects (2004)
 - National Research Council/U.S. National Academy of Sciences (NAS) report on the Impact of Genetically Engineered Crops on Farm Sustainability in the United States (2010)
 - Society of Toxicology (SOT) Position Paper: The Safety of Genetically Modified Foods Produced through Biotechnology (2002)
 - World Health Organization (WHO). Modern food biotechnology, human health and development: an evidence-based study (2005)

 - Expert Videos on Frequently Asked Questions about Food Biotechnology, including labeling
 - Center for Food Integrity (CFI)
 - International Food Information Council (IFIC)
-

Biotechnology Industry Organization (BIO), Connecticut Food Association, Connecticut Retail Merchants Association, Connecticut United for Research Excellence (CURE), Grocery Manufacturers Association and International Formula Council

HB 6527

Good evening. My name is Matthew Went. I live in Meriden, Connecticut.

While genetically engineered foods appeared to have great promise when they were first developed, none of the promises of increased yields, drought tolerance, enhanced nutrition, or other benefit have panned out. Instead we find ourselves consuming foods grown with historically unheard of levels of herbicides, and are faced with the prospect of foods developed with genes from other species, creating potential allergic reactions in those who are sensitive.

In addition to the environmental risks associated with GMOs such as the creation of herbicide-resistant "superweeds", we are also faced with human health consequences. For example, research has found that an "inert" ingredient in an herbicide usually paired with GMO crops can kill human embryonic, placental, and umbilical cord cells. In one study, scientists found that inert ingredients in the herbicide amplified the toxic effect on human cells—even at concentrations much more diluted than those used on farms and lawns. One specific inert ingredient, POEA, was more deadly to human embryonic, placental and umbilical cord cells than the herbicide itself – a finding the researchers called "astonishing." "Moreover, the proprietary mixtures available on the market could cause cell damage and even death [at the] residual levels" found on herbicide-treated crops, such as soybeans, alfalfa and corn, or lawns and gardens. The research team suspects that this popular herbicide might cause pregnancy problems by interfering with hormone production, possibly leading to abnormal fetal development, low birth weights or miscarriages. Health consequences definitely need more study. But these have been difficult as the companies holding the patents on the seeds have not been willing to release them for research purposes.

In summary, while research might not be 100%, and may never be, the health risks that are POSSIBLE are not worth feeding to our infants. Should these harmful effects turn out to be true, the consequences will be on all of us for allowing GMOs to get into our children's food in the first place.

Matt Went
203-464-0467
mattgone@aim.com

March 4, 2013

TESTIMONY IN SUPPORT OF CT HB 6527, An Act Concerning Genetically Engineered Baby Food

Submitted by: Michael Donagher, 21 Tall Timbers Dr., Farmington, CT

I have a degree in environmental chemistry from University of Connecticut and soon finishing a master's degree in environmental engineering. I have studied the environment extensively and have read a lot about genetically engineered (GE) crops (GMOs, genetically modified organisms). I try my best to avoid genetically engineered crops and food made from them which is difficult because there are no labels and at times it is impossible.

Eighty-five to about ninety-five percent of all corn, soy, cotton (cotton oil is used in foods), rapeseed (plant canola oil comes from) and sugar (from sugar beets which is most sugar unless stated otherwise) in this country are now genetically engineered. These crops are engineered in a lab to have a segment of genes imprecisely infected or shot into their DNA, the segment is an artificial combination of an antibiotic resistant gene, bacterial genes and a segment of DNA from a virus. The segment fits into the plants DNA and the plant cells are tricked into synthesizing a new protein.

Most if not all processed food contains these crops or ingredients derived from these crops. Most if not all animals are fed these crops. Most people do not know that these crops are genetically engineered or what that means and are unaware that they are in most food, even the food they feed their newborn babies. Soy and corn or ingredients made from them or the other crops mentioned are found and can even be common in baby formula and baby food.

These genetically engineered crops are made to be resistant to glyphosphate, the herbicide with the commercial name roundup; in addition some corn and cotton plants are also engineered to synthesize a protein referred to as the BT toxin which is an insecticide. All of these crops have mutated DNA with inserted segments from a virus and bacteria and contain proteins that are completely new to food.

The genetic engineering process is uncontrollable and the genetic engineering process itself regardless of what genes and subsequent proteins are added and created was never proven to be safe. Actually Arpad Pusztai showed that a protein when fed straight to the rats was OK but when the same protein was fed to them in a potato that was engineered to synthesize the protein the rats got sick.

In fact several studies have shown health concerns, a recent being Séralini's (*Food and Chemical Toxicology*) which showed an increase in cancer, liver and kidney dysfunction and toxicity, and premature death. Another study in Canada found the BT toxin protein in the blood and fetus of pregnant woman. Netherwood conducted a study published in *Nature* in 2004 which found some of DNA segments that were inserted to the crop's DNA had transferred to the DNA of gut bacteria in humans.

These crops have not been tested by the government for safety. They are approved based on a 90 day rat feeding study performed by the same companies that produce the crops. That is because in 1992 the Food and Drug Administration (FDA), under Michael Taylor an attorney who worked for Monsanto (the largest producer of GE crops) adopted the Generally Recognized as Safe (GRAS) status for these crops. Later from internal FDA documents obtained in a freedom of information request, attorney Steven Druker was able to determine that some FDA scientists did not agree with a GRAS status.

Recently it was discovered in a study published by Nancy Podevin and Patrick du Jardin (Podevin and du Jardin 2012) in the journal, *GM Crops and Food: Biotechnology in Agriculture and the Food Chain* that the viral DNA commonly used in GE crops also has a partial segment which codes for a viral protein. However they did not know if it was or could be expressed.

The companies producing GE crops are not transparent. It seems difficult to access their testing information, data and seeds for independent studies due in part to patents on the seeds.

Two major discoveries involving DNA have been made after this technology was adopted. The Human Genome Project proved one gene does not only create one function. The other is that there are 4 million gene switches that reside in DNA that was initially thought to be "junk".

For lack of proven safety and insufficient regulation and a lot of unknowns this is a large experiment with no monitoring or oversight. Monitoring without labels is not possible. These foods have been on the market for 1.5 decades while some health problems are on the rise including food allergies. People have not been able to choose or vote with their wallets for if they want to eat and feed their babies and children this experimental food. Sixty-two other countries have either labeled the food containing these crops or have banned the growing or import of them. Please vote to label the food so that mothers can choose what to feed their newborns, thank you.



Connecticut Chapter
645 Farmington Ave.
Hartford, Connecticut 06105
www.connecticut.sierraclub.org
Martin Mador, Legislative Chair

Children's Committee
March 5, 2013

Testimony In Favor of
HB 6527 AAC Genetically Engineered Baby Food

I am Martin Mador, 130 Highland Ave., Hamden, CT 06518. I am the volunteer Legislative Chair for the Connecticut Chapter of the Sierra Club. I hold a Masters of Environmental Management degree from the Yale School of Forestry and Environmental Studies.

The Sierra Club feels that the intentional and knowing introduction of toxics into our environment is very much an environmental issue.

The accumulated evidence indicates that GMO engineered foods may pose a significant health threat. Rigorous scientific studies are not available on either humans or animals because the manufacturers of GMO seeds, which are patented, steadfastly refuse to release them for study.

This bill is not about restricting the sale of GMO foods. It is not about agricultural practices, either in Connecticut or nationwide. It is not about disadvantaging our farmers. It is only about giving consumers here the ability, if they so choose, to limit their children's exposure to foods containing GMOs. To do this, they must be able to know what is in food offered for retail purchase. The labeling requirements this bill imposes do exactly that, and only that.

I often hear that GMO labeling should be a federal, nationwide, requirement. And, in theory, I agree. However, we all know about the gridlock in Washington. Until that is resolved, there is virtually no chance of action at the federal level. So, for now, we look to the states. We are working with colleagues in 37 states to pass a state level GMO labeling requirement. As of today, we know of 56 GMO labeling bills introduced in 24 states, including the 3 in Connecticut. We hope that passage of these bills across the country will act as an incentive for the federal government to establish an appropriate and effective national standard, but we have no optimism this will happen soon. So for now we look to the state legislature to protect our children.

It is uncontested that parents must take responsibility for the health and safety of their growing children. This is not possible without the ability to know what is in their food they are bringing home.

The Connecticut Chapter of the Sierra Club voted this winter to make GMO labeling a priority issue for our 2013 agenda. We strongly endorse this bill and praise the committee for raising it.

March 5, 2013

TESTIMONY IN SUPPORT OF CT HB 6527, An Act Concerning Genetically Engineered Baby Food

Submitted by:
Diana Reeves
2 Windsor Court
Farmington

My name is Diana Reeves and I am a mother of 3, aged 18 to 25. My husband, my two daughters and I suffer from autoimmune disease and food allergies. We were all diagnosed around the same time. My youngest daughter was 14 when diagnosed. A freshman in college now, her food must be prepared separately, in an isolated area of the basement in the dining hall. Life is complicated for us. We can't eat out. I can no longer read a newspaper because every time I touch the GMO soy ink, I develop a blistering rash on my face. My children have grown up eating GMOs without my knowledge or consent. I have been reading studies that link GMOs and the chemicals they are sprayed with to a very long and very disturbing list of health problems, including autoimmune disease. Had I known then what I know now, I would have fed my family very differently.

I would like to share a ^{few} ~~couple~~ of things I've learned with you.

There has never been an independent, long term safety test done on any of the genetically modified foods in our food supply.

GMO Bt corn, which is being used in our baby formulas, is an EPA Registered Pesticide. It kills insects when they bite into it. Think about it - food shouldn't kill. This is not something I would consider feeding a vulnerable baby. If this corn were on the shelf at Home Depot, you would see the pesticide registration numbers on the label. I've attached the EPA pesticide registration information to this testimony. Unfortunately, the EPA has no jurisdiction over food labeling so new mothers are unknowingly feeding their babies toxic pesticides.

With the introduction of GMO soy, Monsanto successfully petitioned the FDA to increase the allowable level of their chemical herbicide on soy. Glyphosate, the active ingredient in their herbicide, RoundUp, was increased to a level three times higher than the level that was previously determined to be safe. Glyphosate is systemically absorbed by the plant and does not wash off. Numerous lab studies have shown that glyphosate is genotoxic, endocrine disrupting, neurotoxic, and a carcinogen. Without a label, new mothers are unknowingly feeding glyphosate to their babies in soy-based formulas.

The chemical companies that are genetically altering and patenting our food will

tell you that America has been eating GMOs for almost 20 years and we are fine. But doctors now say that this is the first generation of children that are sicker than their parents. America is not fine.

Babies are our future. Mothers need to know if a product contains GMOs so they can have the freedom to choose what they feed their babies. Please vote yes on HB 6527 to label genetically engineered baby food. Without labeling, there is no accountability. Thank you.

Reference links:

<http://www.co.lake.ca.us/Assets/BOS/GE+Crops+Committee/6.+GM+Crops+and+Pesticide+Use.pdf>

<http://www.national-toxic-encephalopathy-foundation.org/roundup.pdf>

<http://www.epa.gov/oppbppd1/biopesticides/pips/smartstax-factsheet.pdf>

United States
Environmental Protection
Agency

Office of Prevention,
Pesticides
and Toxic Substances
(7501P)

Pesticide Fact Sheet

Name of Plant-Incorporated Protectant(s):

Bacillus thuringiensis Cry 1A.105 protein and the genetic material necessary (vector PV-ZMIR245) for its production in corn event MON 89034

Bacillus thuringiensis Cry2Ab2 protein and the genetic material necessary (vector PV-ZMIR245) for its production in corn event MON 89034

Bacillus thuringiensis Cry1F protein and the genetic material necessary (vector PHP8999) for its production in corn event TCI507

Bacillus thuringiensis Cry3Bb1 protein and the genetic material necessary (vector PV-ZMIR39) for its production in corn event MON 88017

Bacillus thuringiensis Cry34Ab1 protein and the genetic material necessary (vector PHP17662) for its production in corn event DAS-59122-7

Bacillus thuringiensis Cry35Ab1 protein and the genetic material necessary (vector PHP 17662) for its production in corn event DAS-59122-7

OECD Unique Identifier: MON-89034-3 x DAS-01507-1 x MON-88017-3 x DAS-59122-7)

Reason for Issuance: Updated Expiration Date and Additional Terms and Conditions

Date Issued: November 29, 2011

I. Description of the Plant-Incorporated Protectant

- **Pesticide Name:** MON 89034 x TC1507 x MON 88017 x DAS-59122-7
- **Date Registered:** July 20, 2009
- **Registration Numbers:** 524-581 & 68467-7

refuge of non-Bt corn. Refuges produce Bt susceptible insects to dilute any resistance genes in the pest population.

Monsanto and Dow have developed a new Bt corn product (SmartStax) with two Bt toxins (Cry34Ab1/Cry35Ab1 and Cry3Bb1) active against CRW. The use of multiple toxins against the same pest is termed a "pyramid."

SmartStax also contains three Bt PIPs to control different corn borer pests. (Corn borers have separate refuge requirements.)

EPA has previously approved a 5% refuge for corn borer pests where the corn earworm is not a significant pest and a 20% combined refuge in cotton growing regions where the corn earworm is a significant pest. The reduced CRW refuge could result in further reduction in conventional insecticide use, increased crop yields for growers, and increased grower compliance with refuge requirements.

EPA has approved a combined 5% refuge for corn rootworm and lepidopteran pests where the corn earworm is not a significant pest and a 20% combined refuge in cotton growing regions where the corn earworm is a significant pest.

III. Science Assessment

Product Characterization and Human Health Assessment

Current tolerance exemptions in 40 CFR Part 174 applicable to MON 89034 × TC1507 × MON 88017 × DAS-59122-7.

§ 174.502 *Bacillus thuringiensis* Cry1A.105 protein; exemption from the requirement of a tolerance.

- (a) Residues of *Bacillus thuringiensis* Cry1A.105 protein in or on the food and feed commodities of corn; corn, field, flour; corn, field, forage; corn, field, grain; corn, field, grits; corn, field, meal; corn, field, refined oil; corn, field, stover; corn, sweet, forage; corn, sweet, kernel plus cob with husk removed; corn, sweet, stover; corn, pop, grain and corn, pop, stover are exempt from the requirement of a tolerance when the *Bacillus thuringiensis* Cry1A.105 protein is used as a plant-incorporated protectant in these food and feed corn commodities.

§ 174.506 *Bacillus thuringiensis* Cry34Ab1 and Cry35Ab1 proteins in corn; exemption from the requirement of a tolerance.

Residues of *Bacillus thuringiensis* Cry34Ab1 and Cry35Ab1 proteins in corn are exempted from the requirement of a tolerance when used as plant-incorporated protectants in the food and feed commodities of corn; corn, field; corn, sweet; and corn, pop.

Southern Blot Analysis

Southern blot analysis confirmed in the combined trait corn product MON 89034 x TC1507 x MON 88017 x DAS-59122-7 the presence of sequences identical to sequences derived from MON 89034 and MON 88017. Hybridization patterns for the combined trait product were identical to those of the parental lines with *cry1F*, *cry34Ab1*, *cry35Ab1*, and the *pat* gene probes indicating that the TC1507 and DAS-59122-7 insertions were unaffected by combining with MON 89034 and MON 88017 through conventional breeding.

Expression Levels

MON 89034 x TC1507 x MON 88017 x DAS-59122-7 is a combined trait corn that produces lepidopteran-active and coleopteran-active *Bacillus thuringiensis* (*Bt*) proteins, as well as the 5-enolpyruvylshikimate-3-phosphate synthase protein from *Agrobacterium* sp. strain CP4 (CP4 EPSPS) to confer tolerance to glyphosate herbicides and PAT to confer tolerance to glufosinate herbicides. The levels of the lepidopteran-active Cry1A.105, Cry2Ab2, Cry3Bb1 proteins and the CP4 EPSPS protein were determined in tissues from MON 89034 x TC1507 x MON 88017 x DAS-59122-7 plants grown at five US field sites in 2006. The test also included a conventional corn as a negative control and MON 89034 and MON 88017 corns as positive controls. Leaf, root, and whole plant samples were collected over the growing season, as well as pollen and grain samples at the appropriate times. The samples were extracted and analyzed using enzyme-linked immunosorbent assays. The levels of the Cry1A.105, Cry2Ab2, Cry3Bb1, and CP4 EPSPS proteins in MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn were comparable to those in the appropriate MON 88017 or MON 89034 positive control.

The levels of the coleopteran-active *Bacillus thuringiensis* (*Bt*) proteins Cry34Ab1, Cry35Ab1, and Cry1F, and the PAT protein were determined in tissues from MON 89034 x TC1507 x MON 88017 x DAS-59122-7 plants grown at five US field sites in 2006. The test also included a conventional corn as a negative control and TC1507 and DAS-59122-7 parental event corn as positive controls. Leaf, root, and whole plant samples were collected over the growing season, as well as pollen and grain samples at the appropriate times. The samples were extracted and analyzed using enzyme-linked immunosorbent assays (ELISA). The results indicate that the levels of Cry34Ab1, Cry35Ab1, and Cry1F in MON 89034 x TC1507 x MON 88017 x DAS-59122-7 were comparable to the levels produced in the appropriate TC1507 or DAS-59122-7 control corn. The level of PAT in MON 89034 x TC1507 x MON 88017 x DAS-59122-7 was higher in the combined trait products compared to TC1507 and DAS-59122-7, likely due to the presence of multiple copies of the *pat* gene in the stacks (one from each of the DAS parent lines).

Environmental Assessment

At present, the Agency has not identified any significant adverse effects of the Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, or Cry34Ab1/35Ab1 proteins on the abundance of non-target organisms in any field population, whether expressed individually or as MON 89034 x TC1507 x

components) and worst case simulation modeling (as described in the conclusions below). Therefore, additional data have been required to be generated (as described below) to verify and further buttress the current data supporting lower refuge. BPPD intends to conduct a post-registration assessment of the lower refuge within several years of approval once any new data have been submitted and reviewed.

2) Monsanto has previously provided data to support a 5% refuge for lepidopteran target pests of SmartStax corn.

3) Given that SmartStax will likely have different refuge requirements for Lepidoptera and CRW than other registered Bt corn products, BPPD has required that Monsanto/Dow submit a revised compliance plan. This strategy should be specific for SmartStax and the new refuge requirements. Compliance is an area of ongoing concern – recent data have shown that refuge compliance for Bt corn has fallen in recent years.

4) Existing programs for resistance monitoring and remedial action that were established for MON 89054 (Cry1A.105 and Cry2Ab2), MON 88017 (Cry3Bb1), and Herculex Xtra (CryIF and Cry34Ab1/35Ab1) should be applicable to SmartStax corn. In light of lower required structured Bt corn structured refuge for SmartStax, BPPD has required that the CRW resistance monitoring program be expanded (i.e. with additional sampling and collection sites or improved monitoring techniques). Also, a revised definition of “resistance” may be needed for the CRW monitoring and remedial action plans based on recent research and selection experiments (Lefko et al. 2008; Meihls et al. 2008).

Conclusions Regarding Dose, Resistance Allele Frequency, and Modeling Data

5) BPPD agrees with Monsanto/Dow that the methodology used to calculate dose for SmartStax (developed in Storer et al. 2006 and used in Hucakaba and Storer 2008) is a reasonable approach to addressing dose for CRW. There is some conflicting evidence about the effect of density dependent mortality on dose calculations; BPPD agrees with Monsanto/Dow’s use of the data from the Huckaba and Storer (2008) study that was not adjusted for density dependent effects. These more conservative dose estimates (96.17 - 99.96% for Cry3Bb1, 94.20 - 99.18% for Cry34/35, and 98.22 - 99.97% for Cry3Bb1 + Cry34/35 pyramid) were used in a revised model simulation.

6) Although Monsanto/Dow have used the best available dose estimates for CRW, BPPD believes that there is still uncertainty on dose in both the methodology and interpretation of available studies. This is largely due to the biology of CRW -- assessing larval response and behavior in a subterranean environment is difficult and confounding factors such as density-dependent (or independent) mortality must be considered. Storer et al. (2006) is probably the best current approach to evaluating dose, but BPPD notes that limited data have been developed using this technique (e.g. only one year with six locations of data were developed for Cry3Bb1).

particular, model parameters for dose and initial resistance allele frequency could be adjusted to include more conservative estimates (e.g. dose ranges < 94% and RAF > 0.001).

Gould, F., M. B. Cohen, J. S. Bentur, G. C. Kennedy, and J. Van Duyn. 2006. Impact of small fitness costs on pest adaptation to crop varieties with multiple toxins: a heuristic model. *J. Econ. Entomol.* 99: 2091-2099.

Lefko, S.A. et al., 2008. Characterizing laboratory colonies of western corn rootworm (Coleoptera: Chrysomelidae) selected for survival on maize containing event DAS 59122-7. *J. Appl. Entomol.* 132: 189-204.

Meihls, L., M. Hidgon, B. Siegfried, N. Miller, T. Sappington, M. Ellersieck, T. Spencer, and B. Hibbard, 2008. Increased survival of western corn rootworm on transgenic corn within three generations of on-plant greenhouse selection. *Proc. Nat. Acad. Sci.* 105 (49): 19177-19182.

Onstad, D., 2009 (draft). Modeling Evolution of *Diabrotica virgifera virgifera* (Coleoptera: Chrysomelidae) to Transgenic Corn with Two Insecticidal Traits. *J. Econ Entomol.* Draft - to be submitted in 2009.

Roush, R.T., 1998. Two toxin strategies for management of insecticidal transgenic crops: pyramiding succeed where pesticide mixtures have not? *Phil. Trans. R. Soc. Lond.* 353:1777-1786.

Zhao, J., J. Cao, Y. Li, H. Collins, R. Roush, E. Earle, and A. Shelton, 2003. Transgenic plants expressing two *Bacillus thuringiensis* toxins delay insect resistance evolution. *Nature Biotechnology.* 21: 1493-1497.

IV. Terms and Conditions of the Registration

- 1) The subject registration will automatically expire on midnight November 30, 2013.
- 2) The subject registration will be limited to MON 89034 x TC1507 x MON 88017 x DAS-59122-7 in field corn.
- 3) Submit the following data in the time frames listed:

OPPTS Guideline/ Study Type	Required Data	Due Date
Insect Resistance, Management	To address the uncertainty regarding CRW dose and buttress the dose assumptions used in the models, provide additional dose data (using the methods of Storer et al. 2006) for Cry3Bb1 and Cry34Ab1/35Ab1. Further dose studies could also be conducted with varying egg infestation	Report Due 11/30/2010

4) Submit or cite all data required to support the Herculex Xtra and the MON 89034 x MON 88017 stacked plant-incorporated protectant products within the timeframes required by the terms and conditions of EPA Registration Numbers 68467-6 and 524-576.

5) Do the following Insect Resistance Management Program for MON 89034 x TC1507 x MON 88017 x DAS-59122-7.

The required IRM program for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn must have the following elements:

Requirements relating to creation of a non-*Bt* corn refuge in conjunction with the planting of any acreage of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn;

Requirements for Monsanto/Dow to prepare and require MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn users to sign "grower agreements," which impose binding contractual obligations on the grower to comply with the refuge requirements;

Requirements regarding programs to educate growers about IRM requirements;

Requirements regarding programs to evaluate and promote growers' compliance with IRM requirements;

Requirements regarding programs to evaluate whether there are statistically significant and biologically relevant changes in target insect susceptibility to Cry1A.105, Cry2Ab2, Cry3Bb1, Cry1F and Cry34Ab1/Cry35Ab1 proteins in the target insects;

Requirements regarding a "remedial action plan," which contains measures Monsanto/Dow would take in the event that any field-relevant insect resistance was detected as well as to report on activity under the plan to EPA;

Annual reports on units sold by state (units sold by county level will be made available to the Agency upon request), IRM grower agreements results, and the compliance assurance program including the educational program on or before January 31st each year, beginning in 2011.

a) Refuge Requirements for MON 89034 x TC1507 x MON 88017 x DAS-59122-7

These refuge requirements do not apply to seed propagation of inbred and hybrid corn seed up to a total of 20,000 acres per county and up to a combined U.S. total of 250,000 acres per PIP active ingredient per registrant per year. Grower agreements (also known as stewardship agreements) will specify that growers must adhere to the following refuge requirements as described in the grower guide/product use guide and/or in supplements to the grower guide/product use guide.

A common refuge must be planted for both corn borers and corn rootworms. The refuge must be planted with corn hybrids that do not contain Bt technologies for the control of corn rootworms or corn borers. The refuge and MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn should be sown on the same day, or with the shortest window possible between planting dates to ensure that corn root development is similar among varieties. If the refuge is planted on rotated

Region	Refuge size	In-field or adjacent refuge is allowed	Refuge separated by up to 1/2 mile is allowed
Madison, Obion, Rutherford, Shelby, and Tipton) AL, MS, LA, VA (only the counties of Dinwiddie, Franklin City, Greenville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex)			
Cotton growing where CEW is a significant pest and WCRW, NCRW, and/or MCRW are significant: TX (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), OK (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), MO (only the counties of Dunkin, New Madrid, Pemiscot, Scott, and Stoddard).	20% non-Bt corn	Yes	No
Cotton growing where CEW is not a significant pest and WCRW, NCRW and MCRW are not significant: NM, AZ, CA, NV	5% non-Bt corn	Yes	Yes
Non-cotton growing where WCRW, NCRW and MCRW are not significant OR, WA, ID, MT, WY, UT, VA (except the counties of Dinwiddie, Franklin City, Greenville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex), WV, PA, MD, DE, CT, RI, NJ, NY, ME, MA, NH, VT, HI, AK, TN(except the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton)	5% non-Bt corn	Yes	Yes
Non-cotton growing where WCRW, NCRW and/or MCRW are significant: KS, NE, SD, ND, MN, IA, MO (except	5% non-Bt corn	Yes	No

that persons purchasing MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn sign grower agreement(s). A description of the system must be submitted to EPA within 90 days from the date of registration.

6) Monsanto and Dow shall maintain records of all MON 89034 x TC1507x MON 88017 x DAS-59122-7 corn grower agreements for a period of three years from December 31st of the year in which the agreement was signed.

7) Beginning on January 31, 2011 and annually thereafter, Monsanto and Dow shall provide EPA with a report on the number of units of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn seed shipped and not returned, and the number of such units that were sold to persons who have signed grower agreements. The report shall cover the time frame of a twelve-month period. Note: The first report shall contain the specified information from the time frame starting with the date of registration and extending through the 2010 growing season.

8) Monsanto and Dow must allow a review of the grower agreements and grower agreement records by EPA or by a State pesticide regulatory agency if the State agency can demonstrate that confidential business information, including names, personal information, and grower license number, will be protected.

c) IRM Education and IRM Compliance Monitoring Program for MON 89034 x TC1507 x MON 88017 x DAS-59122-7Corn

1) Monsanto and Dow must design and implement a comprehensive, ongoing IRM education program designed to convey to MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn users the importance of complying with the IRM program. The education program shall involve the use of multiple media, e.g. face-to-face meetings, mailing written materials, EPA-reviewed language on IRM requirements on the bag or bag tag, and electronic communications such as by internet, radio, or television commercials. Copies of the materials will be provided to EPA for their records. The program shall involve at least one written communication annually to each MON 89034 x TC1507 x MON 88017 x DAS-59122-7 corn user separate from the grower technical guide. The communication shall inform the user of the current IRM requirements. Monsanto and Dow shall coordinate its education program with the educational efforts of other registrants and other organizations, such as the National Corn Growers Association and state extension programs.

2) Annually, Monsanto/Dow shall revise, and expand as necessary, its education program to take into account the information collected through the compliance survey and from other sources. The changes shall address aspects of grower compliance that are not sufficiently high.

3) Beginning January 31, 2011, Monsanto and Dow must provide a report to EPA summarizing the activities it carried out under its education program for the prior year. Annually thereafter, Monsanto and Dow must provide EPA any substantive changes to its grower education activities

- 4) Compliance Assurance Program: compliance assurance program activities and results for the prior year and plans for the compliance assurance program for the current year, January 31st each year, beginning in 2011;
- 5) Compliance Survey Results: results of annual surveys for the prior year and survey plans for the current year; full report January 31st each year, beginning in 2011;
- 6) Insect Resistance Monitoring Results: results of monitoring and investigations of damage reports, August 31st each year, beginning in 2011.

Additional Terms and Conditions as of November 22, 2011

- 1) The Agency recognizes that large corn rootworm populations, environmental conditions, and protein expression levels can influence corn root damage and may affect the definition of suspected CRW resistance. The Agency plans to work with the registrants to refine the definition of suspected resistance based on these factors. Until such time that the Agency accepts a modified definition of suspected resistance to corn rootworm, resistance will be suspected in cases where the average root damage in the SmartStax field is > 0.5 on the nodal injury scale (NIS) and the frequency of SmartStax with > 0.5 nodes destroyed exceeds 50% of the sampled plants.
- 2) Within 90 days of this amendment, you must submit an enhanced rootworm resistance monitoring plan for SmartStax that accounts for reports of suspected and/or confirmed resistance. The rootworm resistance monitoring plan and the revised definitions for suspected and confirmed resistance for SmartStax must be found acceptable to BPPD by May 1, 2012 and utilized by The registrant beginning in the 2012 season. This enhanced monitoring program should:
 - o Be practical and adaptable, and provide information on relevant changes in corn rootworm population sensitivity to SmartStax;
 - o Be focused on areas where the potential for resistance is greatest for SmartStax and for the corn rootworm active single event components of SmartStax (Cry3Bb1 and Cry34Ab1/Cry35Ab1), based on available information on historical pest pressure, unexpected performance issues, historical suspected and/or confirmed resistance incidents as currently defined or as modified in EPA accepted enhanced monitoring programs, prevailing agronomic practices (e.g. crop rotation versus continuous corn), and academic and

- 6) Should resistance to any of the constituent toxins of SmartStax be confirmed (from target pest populations collected in 2012 or prior growing seasons) in accordance with the existing definition of "confirmed resistance" for the appropriate toxin, EPA will reassess and, if EPA concludes it is necessary, The registrant will revise the refuge/seed blend requirements for SmartStax. The registrants may independently submit updated definitions of confirmed resistance for their respective SmartStax active proteins for EPA's consideration in order to harmonize and/or keep definitions current with scientific standards; any such submission must be found acceptable to BPPD by May 1, 2012. EPA will incorporate all relevant scientific information (including the data required above) in its reassessment of the refuge/seed blend requirements. The revised refuge/seed blend requirements will be effective for the following growing season (after resistance confirmation) in the geographic areas in which resistance was confirmed. The geographic area of confirmed resistance could be less than a single county, a single county, or multiple counties, depending on EPA's analysis of the collected data.
- 7) For the SmartStax block refuge products, submit a revised Compliance Assurance plan by February 28, 2012.

V. Contact Person at EPA

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DISCLAIMER: The information in this Pesticide Fact Sheet is a summary only and is not to be used to satisfy data requirements for pesticide registration. Contact the Senior Regulatory Specialist listed above for further information.

GLYPHOSATE

SUMMARY

Background

Glyphosate, commonly known by its original trade name Roundup™ (manufactured by Monsanto), is the world's most widely used herbicide. Glyphosate-based herbicides are manufactured by many companies in many countries.

Glyphosate is sprayed on numerous crops and plantations, including nearly 80% of genetically modified (GM) crops (canola, corn, cotton, soybean, sugar beet); with relatively high levels permitted as residues in food and animal feed. It is used as a pre-harvest desiccant, and because it is a systemic herbicide it cannot be completely removed from food by washing, peeling or processing. It is widely used in home gardens and public places including roadsides. Human exposure is widespread and constantly recurring.

Very aggressive public relations and marketing by its developer, Monsanto, has resulted in the widespread belief that glyphosate is safe. Registration processes have generally supported this attitude, and there are no national or international bans. However, independent scientific studies and widespread poisonings in Latin America (resulting from aerial application) are beginning to reveal the true effects of glyphosate-based herbicides. Now France's Supreme Court has upheld judgements by two previous courts that "Monsanto falsely advertised its herbicide as 'biodegradable' and claimed it 'left the soil clean'" (Anon 2009).

Poisonings

Glyphosate herbicides have been frequently used in self-poisonings and many deaths have occurred, especially in Asia. There have also been many cases of unintentional poisonings

amongst users and bystanders. Widespread poisonings have occurred in Latin America as a result of aerial spraying of GM soybean crops, and of coca crops in Colombia—effects being recorded as far as 10 km away from the supposed spray zone. The coca spraying (instigated by a US government funded program to eliminate cocaine production in Colombia) has also resulted in widespread animal deaths and food crop losses. Symptoms of poisoning commonly reported from unintentional exposure include vomiting, diarrhoea, abdominal pain, gastrointestinal infections, itchy or burning skin, skin rashes and infections (particularly prevalent in children), blisters, burning or weeping eyes, blurred vision, conjunctivitis, headaches, fever, rapid heartbeat, palpitations, raised blood pressure, dizziness, chest pains, numbness, insomnia, depression, debilitation, difficulty in breathing, respiratory infections, dry cough, sore throat, and unpleasant taste in the mouth. Other effects reported include balance disorder, reduced cognitive capacity, seizures, impaired vision, smell, hearing and taste, drop in blood pressure, twitches and tics, muscle paralysis, peripheral neuropathy, loss of gross and fine motor skills, excessive sweating, and severe fatigue.

Acute Toxicity

Glyphosate has a low toxicity rating (WHO Table 5) despite the substantial evidence of adverse health effects. Surfactants added to formulated glyphosate products may be more toxic: the surfactant POEA in Roundup is 2 to 3 times more toxic than the glyphosate itself. There are a number of other chemicals added to glyphosate formulations or contaminating them; some are known to be harmful, but many are regarded as trade secrets and it is unknown which might be contributing to the health effects.

Glyphosate

caused a significant effect on species that underpin the entire aquatic food chain. Glyphosate and/or Roundup can alter the composition of natural aquatic communities, potentially tipping the ecological balance and giving rise to harmful algal blooms. It can have profound impacts on microorganisms, plankton, algae and amphibia. At low concentrations, one study showed a 70% reduction in tadpole species and a 40% increase in algae. Insects, crustaceans, molluscs, sea urchins, reptiles, tadpoles and fish can all be affected, with vulnerability within each group varying dramatically between species. Effects include reproductive abnormalities, developmental abnormalities and malformations, DNA damage, immune effects, oxidative stress, modified enzyme activity, decreased capacity to cope with stress and maintain homeostasis, altered behaviour, and impaired olfaction that can threaten their survival. Amphibians are particularly vulnerable. Roundup is generally more toxic than glyphosate, especially to fish.

Terrestrial effects

Soil and water quality

As with the aquatic environment, it is the subtle effects causing disruption of the ecosystem that are of greatest concern, particularly effects on the agroecosystem. Glyphosate is toxic to some but not all soil microorganisms, altering microbial community dynamics in ways that are harmful to plants and to ecological balance. It increases microorganisms capable of metabolising the chemical. It can reduce some beneficial organisms such as saprophytic fungi that decompose dead plant material and are important for soil fertility. Numerous studies have shown that glyphosate stimulates the growth of a number of fungal pathogens that cause diseases in many crops. The upsurge in use of glyphosate in no-till agriculture has brought about a resurgence of some diseases. Glyphosate binds micronutrients in the soil and causes micronutrient deficiencies in plants that increase their susceptibility to disease, decrease their vigour, and produce micronutrient-deficient food crops. It can reduce the plant's production of lignin and phenolic compounds, which are also important for disease resistance. It can reduce nitrogen-fixation in legumes such as soybean.

Glyphosate can alter the nutritional composition of foods, for example the protein and fatty acid content of soybeans. It can cause iron deficiency in soybeans, which is a concern for human health as human iron deficiency is widespread.

Earthworms and beneficial insects

Glyphosate has adverse effects on some earthworms; and a number of beneficial insects useful in biological control, particularly predatory beetles, carabid beetles, ladybugs, and green lacewings. It can also adversely affect other insects that play an important part in ecological balance such as springtails, wood louse, and field spiders.

Birds and other animals

Glyphosate use may result in significant population losses of a number of terrestrial species through habitat and food supply destruction. There have been reports of numerous deaths of livestock and domestic animals as a result of the aerial spraying of glyphosate in Colombia.

Environmental Fate

Soils

Glyphosate is relatively persistent in soil, with residues still found up to 3 years later in cold climates. It is less persistent in warmer climates with a half-life between 4 and 180 days. It is bound onto soil particles, and this was once thought to mean that glyphosate is not biologically active within soil, nor will it leach to groundwater. However, it is now known that it can easily become unbound again, be taken up by plants or leach out, indicating a greater risk of groundwater contamination. It can reduce nitrogen and phosphate fertility of soils.

Water

Glyphosate is soluble in water, and slowly dissipates from water into sediment or suspended particles. Although it does break down by photolysis and microbial degradation, it can be persistent for some time in the aquatic environment, with a half-life of up to nearly 5 months, and still be present in the sediment of a pond after 1 year.

Residues of glyphosate have been found in a wide range of drains, streams, rivers, and lakes, in many countries including Canada, China, France, Netherlands, Norway, USA, and the UK. Urban use on road and rail sides is contributing significantly to this contamination, with residues being found in sewage sludge and wastewater treatment plants. Contamination of 'vernal pools'—pools that are shallow and disappear in dry weather—are a concern for amphibia, for which these water sources are critical.

Glyphosate

Chemical Profile**Common name**

Glyphosate

Common trade name

Roundup

Chemical names and form*N*-(phosphonomethyl)glycine

Glyphosate is a weak organic acid that consists of a glycine moiety (part of a molecule) and a phosphonomethyl moiety

Technical grade glyphosate is a colourless, odourless crystalline powder, formulated as water-soluble concentrates and granules.

Most formulations contain the isopropylamine ammonium salt of glyphosate (glyphosate-isopropyl ammonium)

Molecular formula $C_3H_8NO_5P$ **Chemical group**

Phosphinic acid

Other related chemicals

Glyphosate, diammonium salt
 Glyphosate, dimethylammonium salt (glyphosate dimethylamine)
 Glyphosate, ethanolamine salt
 Glyphosate, monoammonium salt (glyphosate sel d'ammonium)
 Glyphosate, potassium salt
 Glyphosate, sesquisodium (or sodium) salt
 Glyphosate, trimethylsulfonium salt (glyphosate-trimesium)

CAS numbers

Glyphosate	1071-83-6
Isopropylamine salt	38641-94-0
Monoamine salt	114370-14-8
Diammonium salt	69254-40-6
Sesquisodium salt	70393-85-0
Glyphosate-trimesium	81591-81-3
(Aminomethyl)phosphonic acid	1066-51-9

Trade names

Because glyphosate is so widely used and is off-patent, there are now very many generic formulations—Malaysia alone had 311 registered formulations containing glyphosate in February 2009—so there is a very large number of trade names

In many cases glyphosate formulations can be identified by the word G360, G450, G510, or G580, preceded by a trader's name. The number indicates the concentration of glyphosate in the formulation, i.e. G360 has 360 g/l of glyphosate

In some cases only the term 'Herbicide' is used, preceded by a variety of names such as Farmers Own, Growers, Harvest, etc

Others make a play on the original product 'Roundup' by including 'up' in the name (Bright Up, Conto-Up, Dry-Up, Farm Up, Foldup, Ken-Up, Kleenup, Klin-Up, Move-Up, Set-Up, Sunup, Take-Up, Touch Up, Wes-Up, Zap Up), or the opposite, 'down' (Touchdown, Turndown); or 'round' (Myround, Roundsate, Seround)

Some names are variations of the word glyphosate (Glifosate, Glifosato, Glyfo, Glyfosaat, Glyfosat, Glymax, Glyphogan, Glyphosat, Glyphotis), use the last syllable of glyphosate (Ancosate, Envisate, Farmfosate, Gofosate, Herbisate, Ken-phosate, Masate, Megasate, Narscosate, Pilarsate, Sulfosate, Sulfosato, Supresate, Tecforsate, Vefosate); or use the chemical constituent glycine (Glyacid, Glycel, Glycin). Many more trade names are in local languages

Many other trade names bear no distinguishable relationship to Roundup or glyphosate. Some of these attempt to present a benign image (Aglow, Ecomax, Esteem, Granny's Herbicide, Lotus, Spirit, S-Star, Vision); but many more do just the opposite (Ammo, Armada, Arrow, Assassin, Avenger, Challenge, Decimate, E-Kill, Fire, Frontier, Harass, Hatchet, Knockout, Monster, Mustang, Pounce, Punch, Q-Weapon, Raider, Rival, Rodeo, Salute, Samurai, Scud, Sentry, Shoot, Siren, Slash, Smash, Squadron, Stampede, Sting, Swing, Thunder, Tomahawk, Trounce, Turbo, Typhoon, Wallop). Others just try to indicate the product kills weeds (Weedact, Weedcut, Weed-go, Weed Hoe, Weedo, Weego)

Some formulations combine glyphosate with other herbicides such as aminopyralid (Broadnet), 2,4-D (Bimasta, Campaign, Evo, Hat-trick, Kontraktor,

Glyphosate

be more acutely toxic than the glyphosate itself. Others are clearly capable of causing serious chronic effects.

Metabolites

The main metabolite of glyphosate is (aminomethyl) phosphonic acid (AMPA).

N-acetyl-glyphosate (also called *N*-acetyl-*N*-(phosphonomethyl)glycine) is a metabolite formed when glyphosate is applied to genetically modified 'Optimum Gat' soybean (FR 2006). It is assumed by the US EPA (2006) to be "toxicologically equivalent to glyphosate".

N-acetyl-glyphosate is in turn metabolised to *N*-acetyl (aminomethyl)phosphonic acid (*N*-acetyl-AMPA)—which is considered by the US EPA to be of low toxicity and "of limited concern" (FR 2008).

Mode of action in weeds

The commonly accepted explanation of glyphosate's mode of action is as follows. Glyphosate inhibits the enzyme 5-enolpyruvylshikimate 3-phosphate synthase, which is essential for the formation of aromatic amino acids (phenylalanine, tyrosine, tryptophan) in plants, by what is commonly referred to as the shikimic pathway. Without amino acids the plants cannot make protein; growth ceases, followed by cellular disruption and death. The shikimic pathway is not found in the animal kingdom, hence glyphosate was thought to be "relatively non-toxic to mammals" (Anadón 2009).

However, there may be more to it than that: after glyphosate is absorbed through the foliage, it is translocated within the plant, down to the roots and released into the rhizosphere (soil surrounding the roots) (Kremer & Means 2009), where it disrupts the soil and root microbial community. As much as 80% of glyphosate absorbed after foliar application is translocated to the shoot apex and root tips (Cakmak et al 2009). Glyphosate's herbicidal action is now suggested to be in part due to, on the one hand stimulation of soil-borne pathogens which colonise the roots of the plants, and on the other hand the reliance of many plant defences on the shikimic acid pathway—so that the combination of increased pathogens and increased susceptibility to them is an important element in the death of the plant (Johal & Huber 2009). As far back as 1984 Johal & Rahe demonstrated that the death of bean

plants treated with glyphosate resulted from parasitisation by fungal root rot pathogens in the growth medium (refer to section on Plant diseases for more on this).

Uses

Glyphosate is believed to be the world's most heavily used pesticide (Duke & Powles 2008b), with over 600 thousand tonnes used annually (CCM International 2009b).

It is a broad spectrum (non-selective), systemic, post-emergence herbicide used to control annual and perennial plants including grasses, sedges, broadleaf weeds and woody plants. It is used for crops, orchards, glasshouses, plantations, vineyards, pastures, lawns, parks, golf courses, forestry, roadsides, railway tracks, industrial areas, and home gardening.

It is used for pre-harvest desiccation of cotton, cereals, peas, beans, and other crops; for root sucker control; and for weed control in aquatic areas.

The sodium salt (Quotamaster) is used as a growth regulator on sugar cane—to hasten ripening, enhance sugar content, and promote earlier harvesting—and on peanuts.

Glyphosate is also used to destroy drug crops grown in Colombia. Since 2000, the USA has been funding the Colombian government to aerial spray crops of coca and opium—in 2006 alone 171,613 hectares were sprayed. The area sprayed has increased every year since 2000, with a 24% increase from 2005 to 2006 (Leahy 2007). The product used is Roundup-Ultra containing 43.9% glyphosate, POEA, and another adjuvant, Cosmo-Flux 411 F.

Weak solutions of the Roundup formulation are used to devitalise some plant material before importation into Australia and New Zealand to reduce biosecurity risks by preventing propagation of the plant material. For example, the New Zealand biosecurity authority requires that the stems of cut flowers and foliage are immersed to within 50 mm of the flower in a 0.5% solution of Roundup for 20 minutes—this reputedly prevents propagation but allows about a week of shelf life (MAF 2002).

Glyphosate is patented as a synergist for mycoherbicides (natural fungi used for biological control of weeds), as it enhances the virulence of the fungi (Johal & Huber 2009).

Glyphosate

multiple health complaints. The ban now applies to all fields within 1,000 metres of residential areas in the province of Córdoba (Misculin 2009; Trígona 2009).

International regulatory action

None taken to date.

Toxicological Assessment

The toxicity database for glyphosate is considered by the US EPA (2006) to be "complete and without data gaps". However the US EPA did not require developmental neurotoxicity studies; neither did it require studies of its impact on hormones, or studies of inhalation toxicity

Most of the studies used for registering glyphosate-based herbicides have been carried out on laboratory animals, often using high levels of exposure to demonstrate visible effect. More recent advances in testing using cell cultures have enabled toxicity of low levels of glyphosate to be determined with much higher sensitivity, eliciting the subtle effects that can be of profound importance to the organism. However, the results of these latter studies have generally not been used for registering the herbicides, and therefore registration outcomes do not reflect the potential and actual effects of glyphosate. Both types of studies are reported here.

Absorption and distribution

About 30-36% of glyphosate is absorbed through the gastrointestinal tract in laboratory animals, with 97.5% excreted unchanged in the faeces and urine together with small amounts of the metabolite AMPA. Less than 1% of the absorbed dose remains in the carcass, and this is primarily in the bone according to the US EPA (2006).

Absorption through the skin is said to be "low" (US EPA 1993), less than 3% (EC 2002)

Small amounts of glyphosate can be absorbed through the skin from contaminated clothing: one study showed that absorption from cotton fabric was 0.74%, half of that absorbed from an aqueous solution (1.42%) in the same study (Webster et al 1996).

Glyphosate is poorly metabolised in animals (<0.5%), to AMPA, according to the US EPA (1993). More recently, Anadón et al (2009) found 6.49% metabolism

Poor absorption and rapid elimination of glyphosate are the reasons usually given for the assumption that normal exposure (i.e. not intentional self-poisoning) to glyphosate is unlikely to result in systemic effects (e.g. Williams et al 2000, an often-cited review).

However, recent independent work has shown that both glyphosate and AMPA were eliminated slowly from plasma and, although bioavailability was only 23.21%, it is likely that glyphosate is distributed throughout the body by the blood's circulation and there may be considerable diffusion of it into tissues to exert systemic effects (Anadón et al 2009).

Although Williams et al (2000) state that glyphosate does not bioaccumulate, recent findings by Professor Carrasco of Argentina indicate that glyphosate might be accumulating in cells (Valente 2009; Trígona 2009; Ho 2009)

Acute toxicity

The International Programme on Chemical Safety (IPCS) regards glyphosate as having very low acute toxicity to laboratory animals (IPCS 1994). However the commonly used surfactant, POEA, is at least four times more toxic than glyphosate.

US EPA (2006) toxicity categories for glyphosate:

- oral = category IV
- inhalation = category: none
- dermal = category IV
- eye irritation = category III
- skin irritation = category IV

The World Health Organisation Recommended Classification by Acute Hazard for glyphosate (WHO 2005):

- Class 5

Lethal doses

The lethal dose, LD₅₀, is the dose that kills 50% of test animals

1. Glyphosate

- Oral LD₅₀ rat = >5,000 mg/kg
- Dermal LD₅₀ rabbit = >5,000 mg/kg
- (US EPA 1993; IPCS 1994)
- Inhalation LC₅₀ rat = >5 mg/l (EC 2002)

2. Roundup

- Oral LD₅₀ rat = >5,000 mg/kg
 - Dermal LD₅₀ = >5,000 mg/kg
 - Inhalation LC₅₀ rat = 3.18 mg/kg
- (Williams et al 2000)



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Testimony of Jonathan Leibovic, Community Organizer, Toxics Action Center
Before the Children's Committee
In support of HB 6526, AAC Toxics Disclosure and Innovation for Healthy Children
March 5, 2013

Senator Bartolomeo, Representative Urban, and members of the Children's Committee:

My name is Jonathan Leibovic and I am a community organizer at Toxics Action Center. Toxics Action Center is a non-profit organization that partners with communities across New England to clean up and prevent pollution. We believe every person has the right to clean air, clean water, and a healthy environment. Since 1987, we have worked with over 700 grassroots groups to curb pesticide spraying, clean up leaking landfills, modernize our region's power plants, and give ordinary people the tools they need to improve the health of their communities.

You all are on the Children's Committee, so I'll assume that you all have the best interests of children at heart. Obviously, it is in children's interests not to be poisoned when they are drinking from sippy cups, playing on play-grounds, or trick-or-treating. It is in children's best interests to avoid harmful chemicals whenever possible. And the good news is, it is frequently possible. Safer alternatives do exist, and more are being discovered and invented all the time. The scientific capabilities of our toxicologists and our chemists are growing every year. And consumer awareness about product safety is on the rise.

I commend the legislature for passing the ban on BPA in thermal receipts in 2011. That law will help reduce exposure of workers and consumers to this known endocrine disruptor, and it will benefit everyone in this state. It has also served as an example to other states. However, it should not be the job of the General Assembly to pass individual laws every year regulating individual chemicals in individual products. That would be a huge waste of time and taxpayer resources. What we need is a comprehensive framework for chemical safety and reform – and that's what this bill would provide.

Comprehensive chemical reform has not yet passed in Connecticut, in spite of the concerted efforts of groups and individuals including the Coalition for a Safe and Healthy Connecticut, of which Toxics Action Center is a proud member. But the times are changing: Maine, Washington, California, and Minnesota have passed comprehensive chemical reform already. They have begun identifying dozens of chemicals of concern in hundreds of everyday products, and are working to replace them with safer alternatives. Fourteen more states, including our own, are considering bills like this right now.⁹ Bob Sump, a Republican state representative in Washington, said in 2008 that "voting against this bill is like voting against brakes on a schoolbus." I couldn't agree more. That bill passed, and with your support I hope this bill will pass in Connecticut this year.

Thank you for the opportunity to testify today. On behalf of Toxics Action Center and the whole Coalition, we look forward to working with you until this bill is passed.

I would like to thank the members of the Children's Committee for the opportunity to testify today. My name is Joe Wasserman and I am a community organizer with Connecticut Coalition for Environmental Justice. I am here to testify in favor of RB 6526-Toxics Disclosure and Innovation for Healthy Children

Did you know that fewer than 5% of the 80,000 synthetic chemicals in commerce have been reviewed for safety? Did you know that even a small exposure to toxic chemicals during fetal development can cause irreversible long-term damage and that one study found that new born infants carried as much as 200 toxic chemicals? Did you know that the products that contain these toxins are incinerated in Hartford and Bridgeport, thus giving disproportionate and greater toxic exposure to residents of low income communities of color, as these toxins are released into the air?

CT Coalition for Environmental Justice, as part of the Coalition for a Safe and Healthy Connecticut, has been working to protect children's health from unnecessary toxic exposure in every day products. We worked together to pass state legislation banning Bisphenol-A, or BPA, in children's products in 2009. In 2011 we helped pass legislation to phase out BPA out of thermal receipt paper. The vast majority of non-industry funded studies have found BPA exposure, even at very low doses, to be linked with prostate and breast cancer, obesity, attention deficit disorder, hyperactivity disorder, lowered sperm count and early onset of puberty. Yet 93% of Americans have detectable levels of BPA in their bodies.

But BPA is only one of the massive number of chemicals we are exposed that have not been fully tested and may be dangerous to human health, even in small doses. To ban or phase out one chemical at a time would take over a century. Toxics Disclosure and Innovation for Healthy Children would create a process for developing a list of chemicals of concern and a plan to replace these chemicals. Connecticut should follow the example of a number of states that have already created such a process.

The Toxics Disclosure and Innovation for Healthy Children will also help open up the field of green chemistry in our state, putting Connecticut ahead of the curve in terms of job creation in this critical area.

I urge you to pass RB 6526 -Toxics Disclosure and Innovation for Healthy Children

Testimony before the Committee on Children

March 5, 2012

In favor of HB6526 Toxics Disclosure and Innovation for Healthy Children

I would like to thank the Co-chairs and the members of the Select Committee on Children for the opportunity to testify today.

My name is Virginia Gerena. I live in Hartford. I am a member of the **Connecticut Coalition for Environmental Justice and Advocacy Unlimited**. I have been an advocate for more than ten years on many issues, particularly asthma and learning and developmental disabilities.

I am here to testify in favor of **HB 6526 Toxics Disclosure and Innovation for Healthy Children**.

A growing body of scientific research suggests that exposure to toxic chemicals in products in our homes and in our environment is the number #1 suspect for the rise of many serious diseases in the U.S including cancers and learning and developmental disorders.

I am particularly concerned that everyday products contain chemicals that are neurotoxins and endocrine disruptors that can have an impact on brain development. My community suffers from extremely high rates of childhood asthma and learning disabilities. This is very costly in terms of medical treatment, educational disruption, and individual suffering.

When every day products are incinerated in Hartford, the toxins in them are released into our air. These toxins contribute to the high rate of asthma and other problems in our neighborhoods. Thus members of my family and community suffer from exposure to these toxins by the air we breathe as well in the products we use.

Thousands of chemicals were given approval without testing for safety when the federal Toxic Substances Control Act was passed in the 1970's. Many more have been introduced since then; few have been adequately tested and even fewer have been regulated when problems have been found.

With over 80,000 chemicals in use at this time, we can't solve the problem of toxins in everyday products by replacing one chemical at a time. **RB 6526 Toxics Disclosure and Innovation for Healthy Children** creates a process for the identification of toxins of high concern and a way to take action to reduce their use. California, Washington and Maine have developed such a process. We need to get started on this process.

I urge you to take favorable action on **RB 6526 Toxics Disclosure and Innovation for Healthy Children**.

Thank you,

Virginia Gerena
44 Standish St., Apt AA
Hartford, CT

Line 19 Pg 18

**Connecticut General Assembly
Testimony Hearing On This Day of March 5, 2013
Support of Raised Bill 6526 Toxic Disclosure & Innovations for Healthy Children
Joyce Acebo~Raguskus, Chair Diesel Cleanup, Environmental Concerns Coalition
Clean Water Action, Advocate, Coalition for a Safe & Healthy CT
174 Eastern Parkway, Milford, Connecticut 06460**

Draft

Thank you for this opportunity to be heard. My name is Joyce Acebo~Raguskus, 174 Eastern Parkway, Milford, and Advocate: Coalition for a Safe & Healthy CT. I strongly support RB6526 Toxic Disclosure & Innovations for Healthy Children.

Thirty seven years, three decades, the U.S. has allowed industry to bleed untested chemicals into our products, our air and our waters, our bodies...willing un-protective exposures. The well runs high with over 83,000 chemicals streaming into the blood of our children and pregnant women, our families. The Toxic Substance Control Act has not put controls on toxic chemicals, but for so few. We have been left incredibly open... too many years of exposure. TSCA continues business as usual, with no revision and no regulations. They do not require testing before they flood our systems. We continue to be the human test animals.

CT refuses to wait any longer. The wait and see act, wait and see who gets ill provides no caution. Statistics of ill health have been documented and are not far from home. We raise this bill 6526 for immediate protection for the families in our own state.

On a personal note I was not left out of the long term toxic exposure equation.

I grew up in Stratford and, 'unknowingly' played on toxic school grounds of Wooster Jr. High, found contaminated and capped. I walked in neighborhoods close to **Raybestos/Raymark**, (manufacturer of brake linings) with **highly known toxic asbestos exposure**, also capped for future protection. I moved and lived in Europe who practices the "Precautionary Principal" for a bit, and the West Coast, before I found myself back to East Coast/ residing in Rivercliff, Milford, just across the Housatonic River and the Asbestos beast.

**** My mother-in-law, was the secretary to Raybestos President long enough to have her exposure end her life with lung cancer.**

****My neighbor next door, to my left, was Francine, my friend, died of ovarian cancer.**

****My quiet neighbor to my right died of a brain tumor...Anthony.**

****Two houses down is Mrs. Framson, a breast cancer survivor.**

****Across the street from her, another victim of breast cancer.**

No, toxins do not discriminate. I had breast cancer as a single parent when my son was about 13.

What could have been prevented in this small radius of victim's? If we stay silent for another decade, we essentially

volunteer to become victims and volunteer our children. NO we cannot wait for Congress to call for help...We must support this long overdue innovative action and act on 6526. **What are we waiting for?**

Thank you for your wisdom and dedication to help bring safety and health to Connecticut.

Joyce Acebo~Raguskus
174 Eastern Parkway
Milford, Connecticut

March 4, 2013

TESTIMONY IN SUPPORT OF CT HB 6527, An Act Concerning
Genetically Engineered Baby Food

Submitted by Catherine Iaccarino, 430 Savin Ave. West Haven

My name is Catherine Iaccarino. I am an active member of the grass roots movement for CT GMO labeling.

I received an e-mail with a list of some old Monsanto PR notices that had gone out to England. Some of them related to labeling. One such site is <http://www.monsanto.co.uk/highlights/ads/ad4.html>. It is titled: "Food Labelling. It Has Monsanto's Full Backing." There it states:

Recently you may have noticed a label appearing on some of the food in your supermarket. This is to inform you about the use of biotechnology in food.

Monsanto fully supports UK food manufacturers and retailers in their introduction of these labels. We believe you should be aware of all the facts before making a purchase.

Really. Is that what they believe? They do agree to label their products in other countries, many other countries. So why are we, the very country that they are located, being discriminated against? Why are we being denied the same rights that they seem to grant willingly to other countries? Why do we and most importantly our children have to be the science experiment, the test procedure that is not being done in the lab?

We know that corporations have been politically modified to be labeled as people. But, one thing has not changed. The function of a corporation is to provide a service or product that we (the original species of people) purchase. We have the right to know what we are paying for.

Please support HB6527.

Thank you and respectfully submitted,
Catherine Iaccarino

**Testimony of Beth Beisel
in support of
HB 6527, AAC Genetically Engineered Baby Food**

**Before the Children's Committee
Tuesday, March 5, 2013**

Good afternoon, Senator Bartolomeo, Representative Urban, Ranking Members, and members of the committee. Thank you for the opportunity to testify today in support of HB 6527, AAC Genetically Engineered Baby Food.

My name is Beth Beisel. I am a registered dietitian, and the mother of 3 children. I graduated from Villanova University and St. Joseph's College. I am not a hippy, or a bored housewife. Over the last year, I have significantly decreased my income-producing consulting business to help educate people about the health risks of GMOs for a grassroots campaign called GMO FREE CT. As a health care professional, I have seen the effects of what our changing food supply has done to my clients. Gastrointestinal disorders, allergies, auto immune disorders – diseases I never learned about in school have reached epidemic proportions. I have friends and relatives who worry, daily, about the mortality of their children with fatal food allergies; these children can't even sit with their friends at lunch, but instead must be segregated to a peanut free table, or a table for children with food allergies. This was unheard of 15 years ago.

Labels today list peanuts, sodium content, high fructose corn syrup, gluten and trans fat – but NOT genetically modified organisms, WHY? What is even more outrageous, is that even infant formula has GMOs and is unlabeled. PARENTS HAVE THE RIGHT TO KNOW WHAT IS IN THE FOOD THAT THEY FEED THEIR BABIES!

If a woman can't or won't nurse her baby, the alternative is formula. Formula is a chemically developed substance made primarily from derivatives of corn and soy. This means that the first food many infants ingest comes from a plant that has its own pesticide number...yes, that's right. Every kernel of genetically engineered corn is made to express a deadly toxin, which causes a rootworm's stomach to explode. Each type of genetically engineered corn has a pesticide number and is registered with the

EPA. This is similar to the number on any chemical pesticide that you would find on the shelf at a hardware store. And it is in Baby Formula.

Infants do not have a fully developed immune system, nor is their blood brain barrier established. In Canada, BT toxin – used in GE corn, was found in the blood of pregnant women and in their unborn babies. The study was published last year in the Journal of Applied Toxicology.

Bacteria resistant to Round up, is also used in the genetic engineering of soy, corn, canola, and sugar beets. This hardwires them to withstand unprecedented saturation with chemicals like Roundup – which contains glyphosate and is geno- toxic. I am happy to provide peer reviewed medical literature which demonstrates that animals exposed to these foods develop smaller livers and brains, as well as infertility and cancerous tumors. The biotechnology industry claims that these foods are safe – but they have never been tested on humans. Your children – and mine – and you and I are the guinea pigs.

Because I DIDN'T KNOW, my babies ingested some of these chemicals and genetically modified foods, and I will have to live with that guilt and concern for the rest of my life.

We can't depend on the FDA to protect our children's health or tell us the truth. It is up to you, the CT General Assembly, to inform and protect the people who put you here. Over the last year, I have met many caring legislators with humility, who really do care about the people and their rights. I hope you will support this bill by affirming it, and encouraging House and Senate Leaders and the Governor's office to support it.

A coalition of 39 states and Canada is watching CT. We can continue to be leaders and heroes or we can give in to corporate threats and interests. I believe CT will do the right thing, and let parents make informed decisions for themselves.

Thank you for opportunity to address this issue and for doing what is right for your constituents.

February 28, 2013

TESTIMONY IN SUPPORT OF CT HB 6527, An Act Concerning Genetically Engineered Baby Food

Submitted by: Tara Cook-Littman, 160 Stella Lane, Fairfield, CT

My name is Tara Cook-Littman. I am a former NYC Prosecutor and one of the leaders of the Grass Roots Movement, GMO Free CT, that has come together to demand our right to know what is in our food. I am above all else, a mother of three children under the age of ten. Last week I testified at the information hearing for HB 6527 in Fairfield, where I spoke about why, as a mother, I am passionate about having the right to choose for myself what to feed my children. But, today I want to speak from the perspective of a lawyer about why we cannot rely on our federal government to mandate GE labeling and why, even if a lawsuit is brought challenging the constitutionality of a state mandated GE Labeling bill, the law would be upheld as constitutional.

First of all, despite what many Americans may believe, genetically engineered foods have never been proven safe by the FDA. Our government has failed to protect us. In fact, GMOs were exempt from testing because they were deemed generally recognized as safe (GRAS), many would say illegally. GE foods never met either of the criteria required to be granted GRAS status. Even the FDA's own scientists believed that GMOs could pose potential harm to human health and warned their superiors that GMOs required additional testing before ending up on our dinner plates. Secondly, it is clear that there will be no action from our federal government at this time because the industry that benefits from the sale of GMOs, has too much power in Washington. States should not wait for the Federal government to act, but rather must protect its' citizens today. In addition, Connecticut is working with thirty seven (37) other states to pass unified GE labeling laws throughout the country. Connecticut will not stand alone.

It has been suggested that state mandated GE labeling laws are unconstitutional, when in fact, there have been no such rulings. One of the arguments from those that oppose GMO labeling is that state

mandated labeling would violate the First Amendment by infringing on the merchants' commercial free speech rights. In plain English, the industry that benefits from the sale of GMOs, thinks their right to keep us in the dark about what we are eating, so they can continue to profit, trumps our right to know what we are feeding our families. Do the legislators of the Constitution State actually believe that the framers intended the First Amendment to afford corporations such protections? To the contrary, our framers intent in writing the constitution was to protect the American citizenry from the very abuses of power evidenced in the lack of transparent labeling of our food. As long as the Connecticut legislature can show that the GE labeling law is reasonably related to numerous legitimate state interests, including health of its' citizens and protecting the environment, the law would be upheld as constitutional.

My Children are past the stage of baby food and baby formula, but, for the sake of all those mothers wanting to make the best choices for their own children, and for the sake of all those children, please mandate the labeling of all baby food and baby formula containing GMOs.

Thank you.

WHY THE FDA'S POLICY ON GENETICALLY ENGINEERED FOODS IS IRRESPONSIBLE AND ILLEGAL

Steven M. Druker, J.D.
President and Executive Director
Alliance for Bio-Integrity

Although most Americans (including those who serve in government) are unaware of it, genetically engineered foods are on the market *only* because the U.S. Food and Drug Administration (FDA) has covered up the warnings of its own scientists, misrepresented the facts, and violated explicit mandates of U.S. law. The following points provide the details and describe the solution.

1. The Food Additive Amendment of the U.S. Food, Drug and Cosmetic Act institutes a precautionary approach and requires that new additives to food must be demonstrated safe before they are marketed. (21 U.S.C. Sec. 321)
2. An official Senate report described the intent of the amendment as follows: "While Congress did not want to unnecessarily stifle technological advances, it nevertheless intended that additives created through new technologies be proven safe before they go to market. (S. Rep. 2422, 1958 U.S.C.C.A.N. 5301- 2 (*emphasis added*))
3. Although the FDA admits that the various genetic materials implanted in bioengineered organisms are within the amendment's purview, it claims they are exempt from testing because they are generally recognized as safe (GRAS).
4. However, the FDA's regulations state that substances added to food that were not in use prior to 1958 cannot qualify as GRAS unless they meet two requirements. Not only must they be acknowledged as safe by an overwhelming consensus of experts, but this consensus must be based on "scientific procedures" – which ordinarily entails studies published in peer-reviewed journals. (21 CFR Sec. 170.30 (a-b))
5. FDA regulations further stipulate that these scientific procedures must provide a demonstration of safety and that GRAS substances "...require the same quantity and quality of scientific evidence as is required to obtain approval of the substance as a food additive." (21 CFR Sec. 170.30(b)) Thus, it's clear that the GRAS exemption is not supposed to reduce the degree of testing but rather to relieve a producer from performing new tests for substances already known to be safe on the basis of previous ones.
6. Genetically engineered (GE) foods fail both requirements. There is substantial dispute among experts about their safety; and none has been confirmed safe through adequate testing.
7. As the FDA was developing its policy on GE foods during 1991- 92, there was not even consensus of safety among its own experts. The predominant opinion was (a) that these new foods entail unique risks, especially the potential for unintended harmful side effects that are difficult to detect and (b) that none can be considered safe unless it has passed rigorous tests capable of screening for such effects. These scientists expressed their concerns in numerous memos to superiors – memos that only came to light in 1998 when the Alliance for Bio-Integrity initiated a lawsuit that forced the FDA to divulge its files.

8. For example, microbiologist Dr. Louis Pribyl stated: "There is a profound difference between the types of unexpected effects from traditional breeding and genetic engineering" He added that several aspects of gene-splicing "... may be more hazardous . . ." (#4 in the set of photocopies of FDA memos at www.biointegrity.org/list.html Numbers after subsequent quotes from FDA scientists refer to the number in this set.) Similarly, Dr. E.J. Matthews of the FDA's Toxicology Group warned that "... genetically modified plants could ... contain unexpected high concentrations of plant toxicants...", and he cautioned that some of these toxicants could be unexpected and could "...be uniquely different chemicals that are usually expressed in unrelated plants." (2) Citing the potential for such unintended dangers, the Director of FDA's Center for Veterinary Medicine (CVM) called for bioengineered products to be demonstrated safe prior to marketing. He stated: "... CVM believes that animal feeds derived from genetically modified plants present unique animal and food safety concerns." (10) (*emphasis added*) He explained that residues of unexpected substances could make meat and milk products harmful to humans.
9. In light of these unique risks, agency scientists advised that GE foods should undergo special testing, including toxicological tests. (*e.g.* 6, 10)
10. The pervasiveness of the concerns within the scientific staff is attested by a memo from an FDA official who protested the agency was "... trying to fit a square peg into a round hole . . . [by] trying to force an ultimate conclusion that there is no difference between foods modified by genetic engineering and foods modified by traditional breeding practices." She declared: "The processes of genetic engineering and traditional breeding are different, and according to the technical experts in the agency, they lead to different risks." (1)
11. Moreover, FDA officials knew there was not a consensus about the safety of GE foods among scientists outside the agency either. For instance, FDA's Biotechnology Coordinator acknowledged in a letter to a Canadian health official that there was no such consensus in the scientific community at large. He also admitted, "I think the question of the potential for some substances to cause allergic reactions is particularly difficult to predict." (8)
12. This lack of consensus in itself disqualifies GE foods from GRAS status. But even if consensus did exist, no GE food would qualify as GRAS because none has satisfactorily passed the level of testing that the law requires – and that the FDA experts stated is necessary. The agency's files demonstrate that as of 1992, there was virtually no evidence to support safety, with one official's memo to the Biotechnology Coordinator querying: "... are we asking the scientific experts to generate the basis for this policy statement in the absence of any data?"(1). And the evidentiary base is still deficient because the FDA does not require any testing; and the tests relied on by the EU, Canada, and others do not adequately screen for the unexpected side effects about which the FDA scientists warned. The inadequacy of current testing has been pointed out by numerous experts, including the Royal Society of Canada and the Public Health Association of Australia.
13. Despite the ample evidence indicating a lack of consensus about safety, as well as the lack of requisite evidence to confirm it, the FDA's decision-makers (who acknowledge they've been operating under a policy "to foster" the U.S. biotechnology industry) declared it is legitimate to presume that all GE foods are GRAS – and can therefore be marketed without any testing. In doing so, they professed themselves "not aware of any information" showing that GE foods differ from others "in any meaningful way," despite the extensive input from their scientists pointing

out the significant differences and their serious implications. (*Statement of Policy: Foods Derived From New Plant Varieties*, May 29, 1992, Federal Register vol. 57, No. 104 at 22991.)

14. Although many people have been led to believe that the U.S. district court in *Alliance for Bio-Integrity v. Shalala* determined that GE foods are on the market legally, its decision actually highlights the extent to which their presence is contrary to the law.
15. In her written opinion, the judge stated: "Plaintiffs have produced several documents showing significant disagreements among scientific experts." 116 F.Supp.2d 166 (D.D.C. 2000) at 177. *However, she ruled that the crucial issue was not whether GE foods were in fact GRAS at the time of the lawsuit (or were actually GRAS when the FDA issued its policy statement on GE foods in May 1992) but whether FDA administrators had acted arbitrarily in 1992 in presuming that they were GRAS* Therefore, because she held that the case hinged on this narrow procedural issue of whether there had been adequate rational basis for the FDA's presumption, she said that any evidence showing lack of expert consensus at the time of the lawsuit was irrelevant since it was not within the administrators' purview when they formed their policy in 1992.
16. As for the evidence that had been within the FDA's own files in 1992, she ruled that the administrators were free to disregard the opinions of subordinates when setting policy. (p.178) This conclusion seems odd, since the written opinions of the agency's scientists represented far more than mere policy preferences. They constituted solid evidence that a significant number of experts did not recognize GE foods as safe. Further, the judge did not mention the fact that the FDA's biotechnology coordinator had admitted there was not a consensus within the scientific community, even though plaintiffs' briefs had repeatedly cited the relevant document.
17. Moreover, the judge also disregarded the fact (repeatedly pointed out to her) that the FDA's files demonstrated there was insufficient technical evidence about safety to support a presumption that GE foods are GRAS. Although her opinion initially acknowledged that such technical evidence is legally required, she never returned to the issue – a highly irregular outcome.
18. Thus, the judge did not determine that GE foods are (or ever were) truly GRAS. Nor did she determine that any has been demonstrated safe. She merely held that given the evidence before them in 1992, FDA officials had not acted arbitrarily in presuming that the foods were GRAS. Further, she emphasized that their presumption is, as a matter of law, "rebuttable." (p.172)
19. Regardless of whether one agrees that the FDA administrators had reasonable basis in 1992 to presume that all GE foods are GRAS, it's obvious that this presumption has been clearly and continuously rebutted, both by the ever-growing dispute among experts and the ongoing lack of adequate testing.
20. Consequently, the marketing of GE foods in the U.S. is illegal because none of them is GRAS and none has undergone formal food additive approval. To rectify this situation, the FDA needs to acknowledge the truth, admit that GE foods are not GRAS, and remove them from market. And it must not allow any such product to be re-introduced until it has been confirmed safe through the testing required by law. To do so, the agency does not have to reverse any official determinations, because it has never formally determined that any GE food is GRAS or that any has been demonstrated safe. It merely has to acknowledge that its rebuttable presumption has been solidly rebutted. Otherwise, it will remain in violation of the law – and will continue to deprive Americans of the safeguards that Congress has explicitly mandated.

COALITION OF STATES INFORMATION SHEET**STATE:** Vermont**LEGISLATIVE ACTION** X **BALLOT INITIATIVE** **LEADER INFORMATION:**

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Dave Rogers	Northeast Organic Farmers Assoc. of VT (NOFA-VT)	dave@nofavt.org	802-434-4122

UPDATE:

We have begun outreach and research to prepare for introduction of a new GMO Food Labeling bill in January when our legislature convenes for a new 2-year biennium.

We will be building on the work we did last year which led to our House Agriculture Committee passing a pretty strong bill by a vote of 9-1.

Generally Recognized as Safe (GRAS)

"GRAS" is an acronym for the phrase **Generally Recognized As Safe**. Under sections 201(s) and 409 of the Federal Food, Drug, and Cosmetic Act (the Act), any substance that is intentionally added to food is a food additive, that is subject to premarket review and approval by FDA, unless the substance is generally recognized, among qualified experts, as having been adequately shown to be safe under the conditions of its intended use, or unless the use of the substance is otherwise excluded from the definition of a food additive.

Under sections 201(s) and 409 of the Act, and FDA's implementing regulations in 21 CFR 170.3 and 21 CFR 170.30, the use of a food substance may be GRAS either through scientific procedures or, for a substance used in food before 1958, through experience based on common use in food.

- Under 21 CFR 170.30(b), general recognition of safety through scientific procedures requires the same quantity and quality of scientific evidence as is required to obtain approval of the substance as a food additive and ordinarily is based upon published studies, which may be corroborated by unpublished studies and other data and information.
- Under 21 CFR 170.30(c) and 170.3(f), general recognition of safety through experience based on common use in foods requires a substantial history of consumption for food use by a significant number of consumers.

<http://www.fda.gov/Food/FoodIngredientsPackaging/GenerallyRecognizedasSafeGRAS/default.htm>



**TESTIMONY OF THE INTERNATIONAL FORMULA COUNCIL
BEFORE THE CONNECTICUT JOINT COMMITTEE ON CHILDREN
REGARDING HB 6527 – AN ACT CONCERNING GENETICALLY-ENGINEERED BABY FOODS
MARCH 5, 2013**

My name is Robert Rankin, and I am the Associate Director of the International Formula Council. The IFC is an association of manufacturers and marketers of formulated nutrition products, e.g., infant formulas and adult nutritionals, whose members are predominantly based in North America. We appreciate the opportunity to testify on House Bill 6527.

The primary focus of the IFC and its member companies is and will always remain the health and welfare of infants and young children. The product we manufacture, infant formula, is the most highly regulated food in the world and continues to be the only safe, nutritious and recommended alternative to breast milk. To that end, we respectfully oppose House Bill 6527, which would require labeling on all infant formulas containing genetically engineered materials. Labeling of genetically-engineered ingredients is unnecessary, provides no public health benefit and likely will create confusion and alarm – the opposite of the intended effect of this legislation.

Mandatory labeling of infant formulas that contain ingredients produced with genetic engineering may confuse and mislead consumers. The U.S. Food and Drug Administration's (FDA) labeling authority ensures that food labels are not "false or misleading," and the infant formula industry strictly adheres to these requirements. Infant formula labels are consistent throughout the nation, so requiring a certain label statement in Connecticut that is not used elsewhere may create confusion and unnecessary alarm, especially considering the frequency with which citizens in the Northeast travel and shop between states. It is also unrealistic and unnecessarily burdensome to require food manufacturers to produce different food labels based on individual state labeling laws.

The FDA has established voluntary labeling guidelines for manufacturers who wish to label and consumers who wish to purchase foods produced without genetically-engineered ingredients. Consumers also have the option to purchase products that are certified as organic under the US Department of Agriculture's National Organic Program.

As is the case with all other foods, some infant formula ingredients can be derived from widely used genetically-engineered crops. The US FDA has concluded that all genetically-engineered ingredients they have approved for use in human foods, including infant formulas, are the same in composition, nutritional value and quality as ingredients not derived through biotechnology, and that labeling of foods containing genetically-engineered ingredients is unnecessary. This position is supported by numerous regulatory and health organizations, including the American Medical Association.

Infant formula ingredients, which are sourced from the same companies who provide ingredients for all other food manufacturers, are carefully quality-controlled and produced to the highest industry and government standards. U.S. infant formula manufacturers must comply with the U.S. Infant Formula Act and its implementing regulations, which provide robust nutritional, quality and labeling requirements to ensure products are safe and nutritious.

* IFC members are Abbott Nutrition, Mead Johnson Nutrition, Nestlé Infant Nutrition and Perrigo Nutritionals

Mandatory labeling of foods containing genetically engineered ingredients would not improve public health and safety. An extensive body of rigorous national and international scientific evidence supports the safety of these ingredients. US regulatory agencies, including the FDA, the USDA and the Environmental Protection Agency have studied genetically-engineered foods for more than 30 years, in conjunction with individual state governments, to ensure that crops produced with biotechnology are safe to eat and environmentally sound. It is relevant to note that health professional organizations, including the World Health Organization, the National Academy of Sciences, the American Medical Association and the Academy of Nutrition and Dietetics have endorsed the safety of crops enhanced through biotechnology. These positions apply to foods consumed by adults as well as infants and young children.

In summary, mandatory labeling on infant formula products containing genetically-engineered ingredients is unnecessary and does not provide any benefit to the health or welfare of consumers. In fact, such labeling will likely have the opposite effect – creating confusion and alarm. For these reasons, IFC opposes House Bill 6527.

Testimony Presented to the Children Committee of the Connecticut General Assembly

March 5, 2013

Paul R. Pescatello, President/CEO Connecticut United for Research Excellence—CURE

HB 6527—An Act Concerning Genetically-Engineered Baby Food

Good morning Senator Bartolomeo, Representative Urban, Senator Linares, Representative Betts and other members of the Children Committee.

I'm Paul Pescatello, President of Connecticut United for Research Excellence—CURE.

Thank you for this opportunity to testify in opposition to House Bill 6527—An Act Concerning Genetically-Engineered Baby Food.

CURE's mission is to represent and foster the growth of Connecticut life sciences research and life sciences technology transfer.

Perhaps our most important job is to support growth of the cluster of biotechnology and biopharma companies that CURE and all of you in the General Assembly have worked so hard to build.

As we try to underscore at every opportunity, biotech is first and foremost about cures and treatments and better ways of producing energy and food, but is also about economic development.

There are many ways to measure the important economic impact of biotech but most telling is its economic multiplier effect. CURE's own studies, as well as those of many other organizations and government agencies, consistently show that biotech has about the greatest economic multiplier of any industry.

Simply put, investment in biotech, whether by private investors or governments—like Governor Malloy's recent recruitment of Jackson Laboratories to Connecticut—will have the greatest ripple effect across the Connecticut economy in terms of jobs and employment than any other industry.

I am here today to oppose HB 6527 on many grounds.

Most are stated in the many letters and other information provided to this committee.

There are two key facts.

One, the existing rules, regulations and oversight of the FDA make the bill unnecessary. Pages and pages of audited scientific studies are submitted to the FDA as part of the regulatory dossier.

Two, the "organic" labeling option means, by definition, that no genetically engineered seeds or crop were used in organic food production. HB 6527 would only confuse rather than enlighten consumers.

But the most important reason for CURE's opposition to HB6527 is that it undermines the foundation, the hospitable environment, for biotech we've worked so hard to build in Connecticut.

As we—you—did so astutely with stem cell research, we looked beyond the confusion and anti-science rhetoric that our opponents sought to create and crafted legislation that broadcast to the world Connecticut's openness to science, rational analysis and the high technology job opportunities of the 21st century.

There are many things to be said about genetically engineered/modified foods, but their essential quality is that they are nutritionally identical to non-GE derived foods. Biotech helps us produce more food using *less* land and *fewer* pesticides, with a much *lower* carbon footprint, but the food itself is no different from food produced "the old fashioned way."

To the extent food is modified in such a way that it is nutritionally different or has the potential to expose consumers to allergens, existing law requires that it be labeled as such.

Today biotechnology as it is applied to food production is part of a centuries-long continuum of using science—from monks employing Medelian genetics to Nobel Laureate Norman Borlang's post World War II green revolution. The science of food production has allowed us to feed the hungry and free most of us from the need to farm—allowing us to use our time, talents and treasure for other pursuits.

Connecticut is a high cost state but one with much high value added intellectual property to sell to the world. The high living standards we enjoy in Connecticut depend on our creating more of that intellectual property. We must continue to be confidently known as hospitable to science and rational analysis, and as a state that welcomes scientific research and researchers.

HB 6527 would undermine that message and should be opposed.

Thank you for this opportunity to speak before you today. I would be happy to answer any questions you may have or expand on any points I've made.

Government Affairs
State Public Policy
Industry Information

Partnerships
Trade Services
Retailer Services



CHILDREN'S COMMITTEE TESTIMONY

By Stan Sorkin, President
Connecticut Food Association
March 5, 2013

TESTIMONY IN OPPOSITION TO HB No. 6527: AN ACT CONCERNING GENETICALLY-ENGINEERED BABY FOOD

The Connecticut Food Association is the state trade association that conducts programs in public affairs, food safety, research, education and industry relations on behalf of its 240 member companies—food retailers, wholesalers, distributors, and service providers in the state of Connecticut. CFA's members in Connecticut operate approximately 300 retail food stores and 200 pharmacies. Their combined estimated annual sales volume of \$5.7 billion represents 75% of all retail food store sales in Connecticut. CFA's retail membership is composed of independent supermarkets, regional firms, and large multi-store chains employing over 30,000 associates. Our goal is to create a growth oriented economic climate that makes Connecticut more competitive with surrounding states.

The Connecticut Food Association (CFA) is opposed to HB No. 6527: An Act Concerning Genetically-Engineered Baby Food. CFA's members are concerned about the safety and health of children. The CFA agrees with the U.S. Food and Drug Administration (FDA) and numerous scientific bodies and regulatory agencies (World Health Organization, Food & Agriculture Organization of the United Nations, American Medical Association) that foods and beverages that contain genetically engineered ingredients are safe and they are materially no different than products that do not contain genetically modified ingredients. The FDA oversees the use of biotechnology in food in collaboration with the U.S. Department of Agriculture and the U.S. Environmental Protection to ensure its safe use. **Labeling of products sold on an interstate basis should be regulated on a national basis.**

I would like to make the following points:

Mandatory labeling to disclose that a product was produced through genetic engineering does not promote the public health in that it fails to provide material facts concerning the safety or nutritional aspects of food and may be misleading to consumers. Requiring labeling for ingredients that don't pose a health issue would undermine both our labeling laws and consumer confidence.

The CFA supports voluntary labeling of genetically-modified foods. Voluntary labeling and marketing ensures consumer choice: individuals who make a personal decision not to consume food containing biotech-derived ingredients can easily avoid such products. In Connecticut, as well as throughout the United States, they can purchase products that are certified as organic under the USDA National Organic Program. They can buy baby foods which companies have voluntarily labeled as non-GMO. A consumer can assume a baby food product is genetically-modified if it is not certified organic or voluntary properly non-GMO labeled. **Non- GMO baby foods are readily available.** For example, the

Government Affairs
 State Public Policy
 Industry Information

Partnerships
 Trade Services
 Retailer Services

popular brand, Earth's Best's website states that "both genetically engineered ingredients and growth hormones are prohibited practices as enforced by the National Organic Program. Earth's Best organic products do not contain genetically engineered ingredients (GEIs)". Connecticut supermarkets currently stock these brands which are labeled USDA Organic- Gerber Organic, Earth's Best, Sprout, Ella's Kitchen, and Plum Organics.

Some of Connecticut's multi-state grocery retailers sell private label baby food at a considerable price savings- approximately 15-20 %- compared to national brands. The cost to comply with the law could force the chains to remove their store brand from Connecticut store shelves and deprive Connecticut consumers of lower cost baby food. In today's economic climate, this is not the time to increase a consumer's food bill.

Has the effect of this bill on the WIC program been considered? WIC participants are the core consumers of baby food products in CT. WIC baby foods and infant formula are contracted on a long term basis as part of a multi-state contract. Will the current contract holders- Mead Johnson and Beechnut - modify their labels to meet the bill's requirements? By law, CT WIC vendors must have these products on hand at all times or else the vendor will lose their WIC license. The last date of sale wording in Section 2 paragraph (b) states that July 1, 2015 is the last date of sale for a non-labeled product. This date seems to conflict with the existing inventory sell date of July 1, 2016 provided it was purchased before October 1, 2013. Will stores be forced to remove baby foods from the shelves if not labeled and deprive WIC participants of required nutrition and cause the loss of a stores' WIC license?

Costs to the state and therefore taxpayers could include increased state administrative costs to monitor and enforce labeling requirements specified in the bill, potential one-time state capital outlay costs for the construction of facilities to test the genetic material of certain food products, and the potential costs for the courts, the Attorney General, and district attorneys due to litigation resulting from possible violations to the provisions of this bill.

The problem is that this law burdens the grocery retailer to be the watchdog on every label on every baby product from every manufacturer in our stores. We are also concerned that the bill changes the definition of "Natural Food" which goes beyond the scope of legislation affecting only baby food. Again, Connecticut would have a more restrictive definition of what constitutes natural foods and affect every product which has a natural claim on its label. If a label is legal and accurate to FDA or USDA standards and a supplier sells it in 49 other states based on Federal guidelines, how are we as retailers in Connecticut going to screen these products for accuracy on ingredients labeling, and keep them out of our stores.

Have you looked at the size of baby food labels? They are so small that there are difficult to read. Which of the 100's of baby food varieties would require the "produced with genetically modified ingredients"? Each jar or package would have to be visible inspected to see if it was properly labeled. Much of the time the sales force or brokers don't even know if a product is clean, or has GMO's in an ingredient, or is gluten free, or is natural, or is organic from a scientific standpoint; they just read the label like anyone else; trusting the national standards to do this job. If the label is accurate and legal on a national level, but now not legal in Connecticut why is the CT retailer the guilty party?

Moreover, HB 6527 may be Unconstitutional. Requiring food companies to label their products when there is no health or safety reason to do so fails the substantial state interest test, undermines

Government Affairs
State Public Policy
Industry Information

Partnerships
Trade Services
Retailer Services

commercial free speech, most likely violates interstate commerce and is unconstitutional. In INTERNATIONAL DAIRY FOODS ASS'N v. AMESTOY, 92 F.3d 67 (1996) the court held food manufacturers could not be compelled to label dairy products as being made from the use of rBST (bovine growth hormone). "Consumer interest alone was insufficient to justify requiring a product's manufacturers to publish the functional equivalent of a warning about a production method that has no discernible impact on a final product. Accordingly, we hold that consumer curiosity alone is not a strong enough state interest to sustain the compulsion of even an accurate, factual statement."

At the time when the grocery industry is digesting the incremental labor costs of paid sick leave, potential minimum wage increases, the cost of federally mandated country of origin and nutritional labeling, this is not the time to burden the industry with these new costs. Our consumers in Connecticut will ultimately pay the price in the form of higher costs for groceries simply to benefit a few overzealous organic product manufacturers and growers. It doesn't seem right at this time, in this economy, to allow this to happen instead of the legislators seeking a preemptive national guideline that can become a real long term and better thought out solution to this issue.

For the above reasons, we respectfully ask that the Committee vote NO on HB 6527.



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Timothy G. Phelan
President

Sen. Bartolomeo, Representative Urban, Sen. Linares, Rep. Betts and members of the Children's Committee,

My name is Tim Phelan and I am the President of the Ct Retail Merchants Association. CRMA is statewide trade association representing retailers throughout Connecticut. Our membership includes some of the world's largest retailers as well as the state's main street merchants. I am here before you today to testify in opposition to Raised Bill 6527, "An Act Concerning Genetically Engineered Baby Food".

CRMA has a very short and simple message as it relates to this bill. We are concerned that the issue of placing a Ct specific label of food products, in this case baby food would place our members on an Island with respect to the rest of the county and therefore place us as at a competitive disadvantage. No other state in the Union has such a labeling requirement and for Ct to be the only state would be a distinction that we would not look to have.

In addition to having Ct as the only state and along with that comes the raise in the cost of doing business. Supply chains would be impacted and some suppliers may choose to pass on those costs to us, which could lead to higher cost to consumers or some suppliers may simply choose not to sell some products in Ct.

Also, passage of 6527 could lead to confusion and questions on the part of customers that our employees are not necessarily trained to answer. And because our industry is direct to the customer or maybe better put, on the front lines dealing with customers we are ones that have to answer questions by consumers. Labels raise lots of questions and as this committee knows the GMO issue is full of unanswered and hotly debated questions.

We would respectfully ask the committee to consider the impact this bill would have on our industry not pass this bill.

Thank you.

Testimony of L. Val Giddings, Ph.D.¹
The Children Committee
Connecticut General Assembly, Hartford, CT 06106
5 March 2013

Thank you for the opportunity to speak here today. I am here at the invitation of a friend who works for the Biotechnology Industry Organization. She asked me to speak with you because of my experience with the science, policy, and regulation of crops and foods improved through biotechnology.

I have worked as a regulator, prepared environmental assessments of transgenic crops, and supervised and reviewed hundreds of such risk assessments. As an expert and consultant I have advised government and United Nations' agencies, companies, and NGOs around the world over more than three decades.

I understand you are considering legislation (Bill 6527) that would require all baby food sold in the State to carry process specific labels to alert consumers to the presence of ingredients derived from crops improved through certain techniques of modern biotechnology. I have read this proposal carefully. Though obviously well intended, it is based on a number of misunderstandings.

We are all sensitive to the fact that the growing and developing bodies and minds of newborns and small children may be more sensitive than those of adults to certain compounds. While this is true, it is worth noting a number of facts about all foods derived from crops improved through biotechnology. None of them have been changed in any way to alter their composition or content of the kinds of compounds that may have greater impacts on infants and children than adults. In fact, the compound most often added to crops improved through biotechnology is the Bt protein, which is the pest control agent widely used by organic growers because of its superb safety record. This compound is well known, well understood, and has a spotless safety record. Our experience with this protein is documented in the scientific literature and corroborated by a lengthy history of safe use across the country and around the world for many decades by organic, conventional and biotech growers, and widespread consumption by humans and livestock around the world confirm the safety of this protein and the others that have been added to crops improved through biotechnology. There are no data nor any experience to suggest a potential hazard to any mammal, including human children.

Experience has shown that proposals like Bill 6527, when enacted, have a history of delivering results opposite of those supporters claim to seek. Let me mention a few of these claims specifically, and compare them with the actual facts and our historical experience with similar legislation:

FACT: Consumers already have access to abundant information about the foods they buy, whether or not they have been improved through biotechnology, and the information and freedom to choose to avoid them if they wish.

¹ President & CEO, PrometheusAB, Inc Silver Spring, MD.

Historical reality: To put everything anybody has said they'd like to see on a food label would require an encyclopedia. In order to make sure consumers are not denied any information they seek about the foods they consider buying, food companies routinely place toll-free telephone numbers on every label for consumers to call if they have a question not addressed on the label itself.

The U.S. Food and Drug Administration requires information that must be placed on a label be limited to that which is relevant to health, safety, and nutrition. They have not mandated "GMO" content labels *because the only differences related to safety that scientists have ever been able to detect show biotech foods to be safer than other foods*. Labels requiring GMO content to be indicated on the label therefore mislead consumers into thinking there might be some risk involved when there is not. Indeed, it is precisely this confusion proponents of labels seek to exploit to achieve their real objective, which is not to inform consumers, but to scare them into avoiding foods carrying a GMO content label.

- "[R]ather than have two labels, food companies would simply not carry the product, especially if the new label would be the equivalent of a skull and crossbones... This is why we are so committed to this initiative as victory [in California] will likely eliminate genetically engineered foods from the US." Joseph Mercola, March 20, 2012
- "We believe that just like in Europe, consumers will complain to stores, stores will complain to suppliers, and suppliers will go back to farmers. If [Prop 37] passes, it will dramatically reduce the [U.S.] market share of GE foods and ingredients." Ronnie Cummins, Founder and Director, Organic Consumers Association, Oct. 27, 2012

FACT: Consumers already have a readily accessible means enabling them to avoid foods made with biotech derived ingredients if they choose.

HB 6527 would do nothing to increase consumer choice options, because consumers already have a means, in place today, through which they can choose foods grown with methods that did not involve biotechnology improved seeds – the USDA Organic label.

Because farmers have so consistently found that crops improved through biotechnology are so superior to other crops in terms of yield, economics, harvest quality and reduced environmental impact, biotech varieties of corn, cotton, soybeans and canola have rapidly become the predominant varieties of those crops grown in North America. Estimates indicate that they or their derivatives are present in 70-80% of the foods found in supermarkets today. If some consumers prefer foods with ingredients derived through other sources, however, they can freely choose to buy products marked with the USDA Organic label. This label is awarded to growers who avoid using biotech seeds on their farms.

Further, when scientifically unjustified GMO content labels have been imposed by governments, despite the demonstrated safety of these foods, campaigners with vested financial interests have organized boycotts to intimidate supermarkets into dropping or reformulating products to avoid such labels. This scenario has played out across much of Europe. Although indications are that this gambit would not succeed in the U.S., food companies are understandably concerned, and have therefore fought hard to preserve the scientific integrity of food labels in the U.S.

- This isn't about freedom of choice It's about destroying biotechnology and getting it off the shelves.
 - Bruce Chassy, Assoc Director, University of Illinois Biotechnology Center.
- If these products all have to be labeled, who is going to put it on the market? It's a big risk for food companies and for retailers because they run the risk that the clients don't take the product. The market rejections and the consumer rejections plus the labeling laws will make sure that GMOs will not enter in Europe.
 - Geert Ritsema, Friends of the Earth Europe
- "Personally, I believe GM foods must be banned entirely, but labeling is the most efficient way to achieve this. Since 85% of the public will refuse to buy foods they know to be genetically modified, this will effectively eliminate them from the market just the way it was done in Europe."
 - Joseph Mercola at <http://vtdigger.org/2012/04/17/wanzek-genetically-modified-food-is-perfectly-healthy/>

FACT: Bill 6527 and others like it would mislead consumers into believing foods from biotech improved seeds are more risky than other foods.

Proponents of mandatory labeling provisions like Bill 6527 claim either that we do not know enough about biotech derived foods, or that there is actual evidence of harm from eating them. They say there are no long term studies of food safety, and that the risks of unknown toxins or allergy are too high, and that foods are not reviewed to assure their safety before they are placed on the market. All these claims are false, abundantly contradicted by facts

There are a number of long term animal feeding studies with crops improved through biotechnology. I can provide you with references if you like. It is true, however, that there are no such tests with humans, for a number of reasons. First, if there were any legitimate uncertainty about the safety of these foods, such tests on humans would be unethical. Second, even animal feeding studies involving whole foods are so difficult and costly to conduct, and so complicated (impossible) to interpret, that the scientific consensus is that there are far superior ways to evaluate safety, namely those that are routinely used on biotech foods. Indeed, the U.S. General Accounting Office looked at this issue more than a decade ago, and concluded that

Monitoring the long-term health risks of GM foods is generally neither necessary nor feasible, according to scientists and regulatory officials we contacted. ..such monitoring is unnecessary because there is no scientific evidence, or even a hypothesis, suggesting that long-term harm (such as increased cancer rates) results from these foods. Furthermore, there is consensus among these scientists and regulatory officials that technical challenges make long-term monitoring infeasible. (US General Accounting Office, GAO-02-566, 2002).

phenotype is desirable and to ensure that unintended changes have not occurred in key components of food.”

– National Academy of Sciences, 2004. *Safety of Genetically Engineered Foods: Approaches to Assessing Unintended Health Effects*. National Research Council, Washington DC. 256pp. ISBN 0-309-53194-2. <http://www.nap.edu/catalog/10977.html>.

Despite this extraordinary consensus of expert opinion and experience (far stronger, I note, than the consensus in support of anthropogenic climate change), opponents continue to raise the same abundantly resolved issues time and again. Near the top of the list of such unfounded worries is the spectre of unexpected allergies. This is worth some attention.

Foods derived from crops improved through biotechnology are routinely subjected to far greater scrutiny than applied to any others, as discussed above. Allergenicity is included in this screening. This is of particular, personal importance to me, because my son has a potentially life threatening food allergy: he could be killed by something as simple as a shared cookie at school. This is an issue I take very seriously.

The fortunate facts are that alone, among foods brought to the market, all those derived through biotechnology are screened in advance to ensure no new allergies are introduced into any foods to surprise sensitive individuals. The DNA sequences of inserted genes are routinely screened against a database of known allergens to ensure nothing suspect inadvertently gets by. It is therefore clear that from an allergy sensitive point of view, biotech derived foods are far safer than any others. Contrast that with what we saw when kiwi fruits were first introduced in the United States. Despite a known history of allergenicity in kiwi fruits and their relatives, because of a long history of generally safe consumption, no safety screening was required before kiwis could be introduced, sold, and consumed in the U.S. Those concerned about food allergies would find a more deserving focus of their interests on foods other than those derived through biotechnology. Indeed, far from being the source of increased allergenicity risks, biotechnology offers the potential to eliminate the proteins known to cause food allergies to soy, dairy, peanuts, and other foods of concern, as well as the potential to develop tools for diagnosis and treatments that can be developed in no other way. The threat of food allergies is actually reduced significantly by biotechnology.

There are other safety issues that are repeatedly raised as well: claims that rats fed biotech derived soy or corn develop cancer; claims that previously unknown viral DNA sequences have recently been discovered in biotech crops and foods; and many more. There are far too many to discuss in the time we have available, but I would be pleased to address any that you are specifically interested in

FACT: Organic and biotech improved crops have a track record of peaceful coexistence.

There are those who argue coexistence is not possible; that pollen from biotech crops will be borne by the wind or pollinating insects to neighboring fields, and cost organic producers their certification and make it impossible for them to sell their harvests. Experience shows that these claims are false, and that biotech crops and organic crops can and do coexist happily. Indeed, the Secretary of Agriculture's

advisory committee ("AC21") recently spent a whole year considering this issue, and whether or not a mechanism should be developed to compensate organic farmers injured by the nearby growing of biotech crops. Advocates of such a compensatory mechanism had a full year to make a case. At the end of the year they had not produced a single example of a farmer who had suffered any losses. This is because the Organic Standard was deliberately written as a guide to permissible practices which specifically protects organic growers against the inadvertent presence, in any quantity, in their harvests, of material derived through prohibited methods like biotechnology. (The relevant USDA policy memo is attached below).

The fact of the essential compatibility of organic and biotech improved crop production methods is corroborated by data on the growth of each. According to the Organic Trade Association [website](#) (accessed 12 February 2013) U.S. sales of organic food and beverages have grown from \$1 billion in 1990 to \$29.22 billion in 2011. [OTA website](#) April 23, 2012. At the same time, biotech-improved crops acres have increased around the world from zero to over 384 million acres, grown by 16.7 million farmers, 15 million of whom are small farmers in developing countries.² In all that experience, we are unaware of any farmer losing their organic certification due to the adventitious presence of biotech derived material.

We could continue to talk about related issues for much longer than the time available to us today, so I will conclude my remarks here by thanking you again for the opportunity to visit with you today. I am willing to answer any questions you may have.

² See <http://www.isaaa.org/resources/publications/briefs/43/executivesummary/default.asp>

United States Department of Agriculture 1400 Independence Avenue SW Policy Memo 11-13 Agricultural Marketing Service
Room 2646-South Building National Organic Program Washington, DC 20250 *PM 11-13 GMOs Internal Rev02 10 31 11*
Authorized Distribution: Public Page 1 of 4

Policy Memorandum

To: Stakeholders and interested parties

From: Miles McEvoy, Deputy Administrator

Subject: Genetically modified organisms

Date: Original Issue Date – April 15, 2011

The National Organic Program (NOP) has recently received questions concerning the use of genetically modified organisms (GMOs) under the U.S. National Organic Standards. This policy memorandum addresses frequently asked questions concerning GMOs and reiterates the statements made in a 2004 letter from USDA Undersecretary Bill Hawks to the National Association of State Departments of Agriculture.

Compliance with the organic standards entails that operations have verifiable practices in place to avoid contact with GMOs. Since organic certification is process-based, presence of detectable GMO residues alone does not necessarily constitute a violation of the regulation. The NOP relies on organic certifiers and producers to determine preventative practices that most effectively avoid contact with GMOs on an organic operation.

The use of GMOs is prohibited in organic production and handling. The NOP regulations prohibit the use of GMOs as “excluded methods” under 7 CFR § 205.105, “Allowed and prohibited substances, methods, and ingredients in organic production and handling.” Excluded methods are defined as: A variety of methods to genetically modify organisms or influence their growth and development by means that are not possible under natural conditions or processes and are not considered compatible with organic production. Such methods include cell fusion, microencapsulation and macroencapsulation, and recombinant DNA technology (including gene deletion, gene doubling, introducing a foreign gene, and changing the positions of genes when achieved by recombinant DNA technology). Such methods do not include the use of traditional breeding, conjugation, fermentation, hybridization, in vitro fertilization, or tissue culture. (7 CFR § 205.2-Terms defined)

This policy memo reiterates that the use of GMOs is prohibited under the NOP regulations and answers questions that have been raised concerning GMOs and organic production and handling.

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Room 2646-South Building National Organic Program Washington, DC 20250 *PM 11-13 GMOs Internal Rev02 10 31 11*
Authorized Distribution: Public Page 2 of 4

Issue: If a producer adheres to all aspects of the NOP regulations, including never utilizing genetically modified seeds, but a certifying agent tests and detects the presence of genetically modified material in the crop, is that crop's status determined to be no longer certified organic?

Reply: Organic certification is process based. That is, certifying agents attest to the ability of organic operations to follow a set of production standards and practices which meet the requirements of the Organic Foods Production Act of 1990 and the NOP regulations. The NOP regulations prohibit the use of excluded methods (i.e., "GMOs") in organic operations. If all aspects of the organic production or handling process were followed correctly, then the presence of a detectable residue from a genetically modified organism alone does not constitute a violation of this regulation. This policy was established at the promulgation of the NOP Regulation in the Preamble to the Final Rule (FR Vol. 65, No. 246, p. 80556), December 21, 2000. The Preamble stated that:

As long as an organic operation has not used excluded methods and takes reasonable steps to avoid contact with the products of excluded methods as detailed in their approved organic system plan, the unintentional presence of the products of excluded methods should not affect the status of the organic operation or its organic products

Issue: Is the inadvertent presence of GMOs in organic seeds a violation of the NOP regulations? Can organic producers use seeds that contain the inadvertent presence of GMOs?

Reply: 7 CFR § 205.105 of the NOP regulations prohibits the use of GMOs as excluded methods in organic production and handling. The use of excluded methods, such as planting genetically modified seeds, would require a specific intent, and would render any product ineligible for organic certification. However, the inadvertent presence of GMOs in organic seeds does not constitute a use because there was no intent on the part of the certified operation to use excluded methods. The presence of detectable GMO residues alone in an organic seed does not constitute a violation of the NOP regulations.

Issue: How do organic producers avoid contact with GMOs?

Reply: Organic producers utilize a variety of methods to avoid contact or the unintentional presence of GMOs including testing seed sources for GMO presence, delayed or early planting to get different flowering times for organic and GMO crops, cooperative agreements with neighbors to avoid planting GMO crops adjacent to organic crops, cutting or mowing alfalfa prior to flowering, posting signs to notify neighboring farmers of the location of organic fields, and thorough cleaning of farm equipment that has been used in non-organic crop production.

Issue: What are organic producers required to do in order to avoid the presence of GMOs in their products?

Reply: In order to become a certified organic operation, a producer must submit an organic system plan to a NOP accredited certifying agent for approval. The producer's organic system plan must include a description of management practices and physical barriers established to prevent contact of organic crops with prohibited substances. Certifying agents evaluate the preventative practices and buffer zones to determine if they are adequate to avoid contact with GMOs.

Issue: Could a farm's organic certification status be threatened if sufficient buffers and barriers are not established and inadvertent contact with GMO material occurs?

Reply: Organic producers that implement preventive measures to avoid contact with GMOs will not have their certification threatened from the inadvertent presence of the products of excluded methods (GMOs). Crops grown on certified organic operation may be sold, labeled and represented as organic, even with the inadvertent presence of GMOs, provided that all organic requirements under 7 CFR Part 205 have been followed.

Issue: Is there a working definition of the word "contamination" within the NOP?

Reply: There is no definition in the NOP regulations for the word "contamination," even though it is mentioned frequently in the standards. The use of excluded methods in organic production is prohibited, as cited in 7 CFR § 205.105.

Issue: What actions are authorized or required when organic crops or products are found to contain unintended or inadvertent genetically modified substances?

Reply: The inadvertent presence of genetically modified material does not affect the status of the certified operation and does not result in loss of organic status for the organic product, provided it was produced in accordance with all of the organic requirements under 7 CFR Part 205. Certifying agents are responsible for working with organic producers to identify the source of the inadvertent GMOs and to implement improvements to avoid contact with GMOs in the future.

Issue: Are organic products tested for genetically modified substances?

Reply: Under 7 CFR § 205.670(b) certifying agents may test organic products when there is reason to believe that excluded methods were used in the production or handling of an organic agricultural product. Certifying agents may also collect and test organic products from organic handlers to ensure that practices are in place to prevent commingling or contamination during handling and processing.

Issue: Are organic products free of GMO contaminants?

Reply: Organic standards are process based. The NOP regulations prohibit the use of genetically modified organisms, prohibit commingling or contamination during processing and

handling, and require preventative practices to avoid contact with GMOs. Organic agricultural products should have minimal if any GMO contaminants; however, organic food products do not have a zero tolerance for the presence of GMO material.

Issue: Has a tolerance level (e.g. 5%) been established for the presence of GMOs in organic agricultural products?

Reply: The NOP regulations do not establish GMO tolerance levels. The NOP regulations establish a tolerance for the presence of pesticides registered by the U.S. Environmental Protection Agency (EPA) that is set at 5% of the EPA tolerance level for the specific residue detected. No federal agency, including EPA or USDA has established tolerance levels for the inadvertent presence of the products of excluded methods (GMOs).

Issue: Processed foods sold as "organic" must contain at least 95% organic ingredients. Are GMOs allowed in the remaining 5% of ingredients? Likewise, processed foods sold as "made with organic (specified ingredients or food group(s))" must contain at least 70% organic ingredients. Are GMOs allowed in the remaining 30% of ingredients for these products?

Reply: The use of GMOs is prohibited in all ingredients in "organic" and "made with organic (specified ingredients or food groups(s))." There is no provision within the NOP regulations that allows the use of excluded methods (GMOs) in ingredients or processing aids under the "organic" or "made with organic (specified ingredients or food group(s))" label categories.



H-480.958 Bioengineered (Genetically Engineered) Crops and Foods

H-480.958 Bioengineered (Genetically Engineered) Crops and Foods

- (1) Our AMA recognizes the continuing validity of the three major conclusions contained in the 1987 National Academy of Sciences white paper "Introduction of Recombinant DNA-Engineered Organisms into the Environment " [The three major conclusions are (a) There is no evidence that unique hazards exist either in the use of rDNA techniques or in the movement of genes between unrelated organisms, (b) The risks associated with the introduction of rDNA-engineered organisms are the same in kind as those associated with the introduction of unmodified organisms and organisms modified by other methods, (c) Assessment of the risk of introducing rDNA-engineered organisms into the environment should be based on the nature of the organism and the environment into which it is introduced, not on the method by which it was produced)
- (2) That federal regulatory oversight of agricultural biotechnology should continue to be science-based and guided by the characteristics of the plant or animal, its intended use, and the environment into which it is to be introduced, not by the method used to produce it, in order to facilitate comprehensive, efficient regulatory review of new bioengineered crops and foods
- (3) Our AMA believes that as of June 2012, there is no scientific justification for special labeling of bioengineered foods, as a class, and that voluntary labeling is without value unless it is accompanied by focused consumer education
- (4) Our AMA supports mandatory pre-market systematic safety assessments of bioengineered foods and encourages (a) development and validation of additional techniques for the detection and/or assessment of unintended effects, (b) continued use of methods to detect substantive changes in nutrient or toxicant levels in bioengineered foods as part of a substantial equivalence evaluation, (c) development and use of alternative transformation technologies to avoid utilization of antibiotic resistance markers that code for clinically relevant antibiotics, where feasible, and (d) that priority should be given to basic research in food allergenicity to support the development of improved methods for identifying potential allergens. The FDA is urged to remain alert to new data on the health consequences of bioengineered foods and update its regulatory policies accordingly
- (5) Our AMA supports continued research into the potential consequences to the environment of bioengineered crops including the (a) assessment of the impacts of pest-protected crops on nontarget organisms compared to impacts of standard agricultural methods, through rigorous field evaluations; (b) assessment of gene flow and its potential consequences including key factors that regulate weed populations, rates at which pest resistance genes from the crop would be likely to spread among weed and wild populations, and the impact of novel resistance traits on weed abundance, (c) implementation of resistance management practices and continued monitoring of their effectiveness, (d) development of monitoring programs to assess ecological impacts of pest-protected crops that may not be apparent from the results of field tests, and (e) assessment of the agricultural impact of bioengineered foods, including the impact on farmers
- (6) Our AMA recognizes the many potential benefits offered by bioengineered crops and foods, does not support a moratorium on planting bioengineered crops, and encourages ongoing research developments in food biotechnology
- (7) Our AMA urges government, industry, consumer advocacy groups, and the scientific and medical communities to educate the public and improve the availability of unbiased information and research activities on bioengineered foods (CSA Rep 10, I-00, Modified. CSAPH Rep 1, A-10, Modified CASPH Rep 2, A-12)

The US Regulatory System for Crops & Foods Improved Through Biotechnology

Crops and foods improved through biotechnology have undergone more rigorous safety reviews, in depth and detail, than any other foods in history.

Complete description of the extensive US regulatory process with details can be found here:

<http://usbiotechreg.epa.gov/usbiotechreg/> , which has been in place since 1986:

http://www.aphis.usda.gov/brs/fedregister/coordinated_framework.pdf .

The U.S. Regulatory Process Involves comprehensive regulatory oversight by USDA, EPA & FDA.

USDA: Database of regulatory reviews for all transgenic crops cleared for commercial planting here:

http://usbiotechreg.epa.gov/usbiotechreg/database_pub.html per regulations found here:

<http://www.aphis.usda.gov/biotechnology/index.shtml> . A comprehensive database of all risk assessments for permission to conduct field trials is here: <http://www.nbiap.vt.edu/>

FDA requires all foods placed on the market to be safe. Because of this overarching safety requirement, FDA does not require specific reviews of foods derived from crops improved through biotechnology because the process of production tells one nothing about safety. Safety depends on the characteristics of the end product regardless of how it was produced. FDA has prepared a thorough list of points to consider in evaluating and ensuring the safety of "bioengineered foods". Details can be found here: <http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/Biotechnology/ucm096095.htm>.

Agricultural biotechnology companies are on record requesting the consultation process be made mandatory. Without exception, all "bioengineered" foods on the market have gone through the FDA review process, and these biotech companies are on record they will continue to do this for all such foods. A compilation of summaries on all completed FDA consultations is here:

<http://www.accessdata.fda.gov/scripts/fcn/fcnNavigation.cfm?rpt=biolisting>

FDA staff conduct rigorous internal review of all data provided by companies/product developers. They also subject such data to peer review by multiple invited external experts before confirming to the applicant that all safety questions have been satisfactorily answered.

The system in the European Union (as also Canada, Japan, Australia, New Zealand, and many other countries) is similarly rigorous. Risk assessment research has been extensive, as shown in this from the EU:

Indeed, the use of more precise technology and the greater regulatory scrutiny probably make them even safer than conventional plants and foods; and if there are unforeseen environmental effects - none have appeared as yet - these should be rapidly detected by our monitoring requirements. On the other hand, the benefits of these plants and products for human health and the environment become increasingly clear.

–European Commission, Press Release of 8 October 2001, announcing the release of 15 year study including 81 projects/70M euros, 400 teams
(<http://ec.europa.eu/research/fp5/eag-gmo.html> and
<http://ec.europa.eu/research/fp5/pdf/eag-gmo.pdf>)

The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are not per se more risky than conventional plant breeding technologies...

http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf

"...because the technique is so sophisticated, in many ways it is probably safer for you to eat GM products - plants that have been generated through GM - than normal plant foods, if you have any sort of reaction to food, because you can snip out the proteins that cause the negative reaction to certain parts of the population."

–Sir David King, Chief Science Advisor, UK
The Guardian Unlimited, 27 November 2007
<http://www.guardian.co.uk/gmdebate/Story/0,,2217712,00.html>

Learned Societies and National Academies Endorsing Safety of Genetically Modified Crops

The scientific consensus on the safety of genetically modified crops is overwhelming. Below is a list, not intended to be exhaustive, of learned societies and national academies around the world who have found that genetically modified crops are as safe as their conventional counterparts.

American Association for the Advancement of Science
 American Medical Association
 American Society for Microbiology
 Australian Academy of Sciences
 Brazilian Academy of Sciences
 British Medical Association
 Chinese Academy of Sciences
 Council for Agricultural Science and Technology
 European Commission
 European Food Safety Authority
 Federation of Animal Science Societies
 Food and Agriculture Organization of the United Nations
 French Academy of Science
 Indian National Science Academy
 Institute of Food Technologists
 International Council for Science
 International Union of Food Science and Technology
 Italian National Academy of Science
 Mexican Academy of Sciences
 National Academies of Science (United States)
 Organization for Economic Cooperation and Development
 Pontifical Academy of Sciences
 Royal Society (United Kingdom)
 World Health Organization

"There is no substantiated case of any adverse impact on human health, animal health or environmental health, so that's pretty robust evidence, and I would be confident in saying that there is no more risk in eating GMO food than eating conventionally farmed food."

Prof. Anne Glover, Chief Science Advisor to the European Commission, "No risk with GMO food, says EU chief scientific advisor," www.euractive.com

March 5, 2013

To: Children's Committee
From: Theresa Velenzas, Glastonbury CT
Re: RB 6527 An Act Concerning Genetically Engineered Baby Food

Good afternoon Madame Chair, Mr. Chairman, Co-Vice Chairs, Ranking Members, and members of the Children's Committee. My name is Theresa Velenzas and I am here today to support Raised Bill 6527: An Act Concerning Genetically Engineered Baby Food

I want to thank you Representative Urban for introducing this Bill. As a mom trying to navigate the supermarket to make the best possible choices for my family I can tell you it is a frightening proposition. The reality is that as much as one may try to grow and make their own food we live in times where we need to rely on providers to grow and prepare at least some foods for us. Our food system allows for a lot of layers that take away transparency. At the very least a labeling law would enable its restoration. Although there are studies that show Genetically Modified Foods are unhealthy, there are many others that purport they have no impact on our health. As a lay person, my thought is that perhaps we need more studies. As a lay person I wonder how these GMOs can be in our food system since the 1990s and generally regarded as safe (GRAS), without the benefits of exhaustive tests to PROVE they are. I find it frustrating that there is so much confusing information out there. One of the many problems associated with GMO consumption has to do with fertility. I grew up in the 1990s and unknowingly consumed a lot of GMOs. I had fertility problems and after exhaustive tests that were repeated over and over again, I received several clean bills of health and NO medical explanation. I now wonder if the problems I had were related to GMOs but we don't have sufficient studies. Labeling would allow for that. We need to label GMOs. We need more studies to ensure their safety for our children. We can't just FEED them to our children, need to KNOW. Labeling is a practical first step out of this mess we've found ourselves in.

In recent years, started reading about nutrition and changed my diet drastically. I am my family's "nutritionist". I spend a lot of time planning meals from scratch, using whole ingredients and trying to provide the best wholesome diet I can. And the more I research, the more I find problems with engineered ingredients whose safety is untested, unproven, undocumented, yet there, on my baby's teething biscuits, in the formula I had to use temporarily to supplement breastfeeding, in their cereal, in their bread, their buttery spread, to name a few.

Food not PROVEN to be safe should not be in our supermarkets. At the very LEAST it should be labeled. I cannot fathom why we need to be having this discussion today. I cannot believe that after so much saturation of GMOs in our American food chain, we are still struggling State to State to pass labeling laws. I

feel so betrayed by the companies I trusted all these years to deliver the wholesome goodness promised. I wonder if I always made the right choices for my children or if something "new" will be uncovered next.

As a mom, I am here to support this important task you have before you as a Committee. I want you to know that I have been and will be meeting with more parents in my community to facilitate informational sessions about what is happening in our food chain and how important it is for you to hear their voices. As a mom and a CT resident I am here today to support CT parents' freedom to know what is in their children and baby's food - the same freedom enjoyed by citizens in over 60 other countries including Australia, Europe, New Zealand, Brazil, and China . I thank you for working on something that will further transparency and labeling of a basic need- our children's food and sustenance for life. I wish you the best of luck in this important work you have before you. Connecticut may be small but we are mighty and we can do this. I would welcome the opportunity to answer questions and meet with you or assist in any way possible. Please feel free to contact me any time. Thank you.

Sincerely,

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