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Coexistence of Biotech, Organic and Conventional Crops: Facts. Issues and a Path Forward

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Summary of my presentation

- Background on CSPI's Biotechnology Project
- Introduction to coexistence
- Secretary of Agriculture's Advisory Committee on Biotechnology and 21st Century Agriculture (AC21)
 - Background and charge
 - Deliberations
 - Recommendations
- USDA Activities Since AC 21 Report
- Path Forward and Conclusions

Center for Science in the Public Interest -- Background

- Food and Nutrition consumer organization – more than 40 years old
- Advocacy and education based on the best available scientific evidence
- Called “Food Police” by some



Nutrition Action

MARCH 2014 \$2.50

HEALTH LETTER®
CENTER FOR SCIENCE IN THE PUBLIC INTEREST

BE KIND TO YOUR KIDNEYS

An estimated one out of five adults in their 60s—and nearly half of those 70 or older—have chronic kidney disease. Many of them don't know it. Your risk is greater if you have diabetes or high blood pressure, though obesity and smoking also play a role.

While most cases never progress to kidney failure, the condition raises the risk of heart attack, stroke, osteoporosis, and anemia.

And kidney stones, which can cause excruciating pain, may also raise the risk of kidney and heart disease. Yet many doctors may not know that kidney stones can be prevented.

Here's how to protect your kidneys.

Continued on page 3.

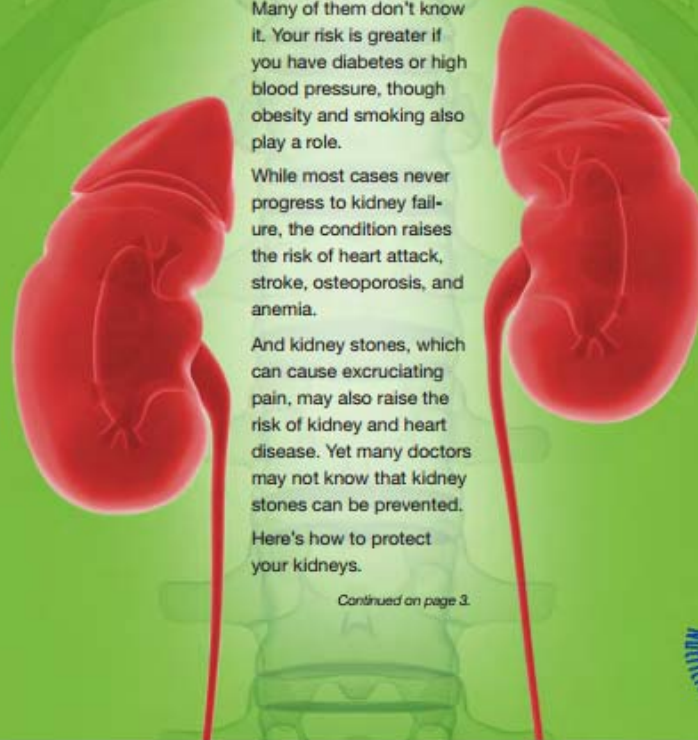


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CSPI (cont.)

- Nutrition Action Healthletter -- approximately 850,000 subscribers in US and Canada
 - Useful health and nutrition information to consumers
 - Ranking of products
 - recipes
- No funding from industry or government

CSPI Biotechnology Project's Positions

- Current crops in the US are safe to eat
- Some benefits from some crops
- Products need to be assessed on a case by case basis
- Functional biosafety regulatory systems that ensure safety and allow safe products to be marketed are essential
- Sustainable use of safe products

Introduction to Coexistence

Definition of Coexistence

- *“...the concurrent cultivation of conventional, organic, IP, and genetically engineered (GE) crops consistent with underlying consumer preferences and farmer choices.” (from AC21 report)*
- Can consumers get the products they want?
- Can different production methods get along?
- Called “unintended presence” by some; “contamination” by others

Background Facts

- Coexistence is not something new
- Coexistence only involves legal products (not StarLink or LL Rice)
- Biology is crucial
- Not just biotech/organic
 - Non-biotech and biotech (e.g. European market)
 - Biotech and biotech (functional traits such as amalyse corn)

Secretary Vilsack, March 12, 2015

- “Unfortunately, both sides of the debate have failed to truly speak about these issues in a way that advances the conversation. It is confusing, it does little to advance the interests of either side, and it negatively impacts consumer confidence.”

The Debate

- “Ultimately growers seeking a premium from IP crops are responsible for implementing the necessary practices to preserve them.” – comment by BIO and other trade associations
- “Those who patent, promote, and profit from GE products should be responsible for preventing contamination and covering damage in cases where prevention fails. Any strategy for coexistence between all types of agriculture must be based on a strong regime of liability for contamination being assigned to patent holders.” -
- comment from Food and Water Watch

Secretary of Agriculture's Advisory Committee (AC21)



The re-established AC21 in 2011

- Announced by Secretary Vilsack when GE alfalfa was granted “non-regulated” status
- 23 members -- including representatives from the biotechnology industry, the organic food industry, farming communities, the seed industry, food manufacturers, State government, consumer and community development groups, the medical profession, and academic researchers
- About 1/3 of members are farmers



Committee Charge

- What types of compensation mechanisms, if any, would be appropriate to address economic losses by farmers in which the value of their crops is reduced by unintended presence of genetically engineered (GE) material(s)?
- What would be necessary to implement such mechanisms? That is, what would be the eligibility standard for a loss and what tools and triggers (e.g., tolerances, testing protocols, etc.) would be needed to verify and measure such losses and determine if claims are compensable?

Committee Charge (cont.)

- In addition to the above, what other actions would be appropriate to bolster or facilitate coexistence among different agricultural production systems in the United States?
- Committee told to focus on parts 1 and 2 and only address part 3 after completing parts 1 and 2

Committee Process

- 5 plenary meetings
- 4 workgroups
- Numerous conference call
- Public comments
- Attempt to achieve consensus but not required

Key Areas of Discussion

- Is there a problem that requires a policy solution?
 - Data on actual losses
- What are the triggers for compensation?
 - Should there be a “threshold?”
- Who pays for addressing any losses?
- Issue of “co” in “coexistence
- “Fence in” versus “fence out”

Report Recommendations – Themes

- Compensation mechanisms
- Stewardship and outreach
- Research
- Seed Quality

Compensation Mechanism

- No consensus on the need for a compensation mechanism (committee about evenly split)
- Gather data; if warranted, Secretary set up a pilot program based on crop insurance mechanism
- Create incentives for joint co-existence plans and premium reductions

Stewardship and Outreach

- USDA should spearhead and fund a broad-based, comprehensive education and outreach initiative to strengthen understanding of coexistence between diverse agricultural production systems.
- USDA should work with a broad group of agricultural stakeholders to develop a package of specific mechanisms that: (1) foster good crop stewardship and mitigate potential economic risks derived from unintended gene flow between crop varieties and unintended presence in general; and (2) promote and incentivize farmer adoption of appropriate stewardship practices.
 - Includes development of toolkits
 - Encourages involvement of seed providers
 - Supports local efforts to develop planting zones

Research

- Quantification of actual economic losses incurred by farmers as a result of unintended presence, and occurrences of these losses over time and in different geographies.
- Assessment of the efficacy of existing on-farm and post-farm unintended presence mitigation techniques on a crop-by-crop basis and development of improved techniques as needed.
- Gathering and aggregating, on an ongoing basis, data from seed companies on unintended GE presence in commercial non-GE seed supplies intended for IP uses.

Seed Quality

- USDA should task the National Genetic Resources Advisory Council to develop a plan in conjunction with the seed industry for ongoing evaluation of the pool of commercially available non-GE and organic seed varieties and identification of market needs for producers serving GE-sensitive markets.
- USDA should work with seed suppliers to ensure that a diverse and high quality commercial seed supply exists that meets the needs of all farmers, including those supplying products to GE-sensitive customers.

Report Concurrence

- 22 of 23 members supported report
- 18 wrote separate comments

- Report submitted to USDA in end of November, 2012

CSPI's Recommendations on Coexistence

- USDA should propose actions to foster coexistence when it grants a GE crop non-regulated status
- USDA should require biotech seed companies to include coexistence measures as a mandatory requirement in their GE seed contracts
- USDA should provide incentives for farmers to carry out measures supporting coexistence on their farms

USDA Activities Since AC21

Comments to USDA Request – January, 2014

- “The majority of commenters generally opposed the growing, production, and marketing of GE products with some commenters indicating that GE crops should be banned.”
- Many comments wanted GE labeling
- “Most of the comments we received that referenced the AC21 report to the Secretary opposed the premise that coexistence could effectively provide protection for the organic farming industry and the consumers supporting it.”
- Some comments were constructive and provided useful information.

Secretary Vilsack, March 12, 2015

- “Unfortunately, in the majority of comments, and in much of the ongoing dialogue, the conversation about coexistence appears to be backsliding towards more inflexible and strident contrasting positions. It is devolved into bitter rhetoric about what is ‘good’ and ‘bad,’ or ‘right’ and ‘wrong.’ Very rarely is the world so black and white, and agriculture is not exception.”



Use of “Noxious Weed” Authority

- Definition: “any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment.”
- USDA could use this authority to issue regulations that address the economic harm posed by GE (or at least make them part of the deregulation decision process)

USDA Actions

- Funding research
 - On crop stewardship and gene flow risk mitigation
 - On gene flow in alfalfa
 - On corn pollen germination
- Improvement on crop insurance options
- Organic seed finder
- Non-GE and organic seed varieties

USDA Activities Announced in 2015

- ERS study on economic implications of coexistence
- Survey of Organic farmers and actual economic losses
- Develop USDA Coexistence Education and Outreach Strategy
 - Goal is for “all producers to understand and accept responsibility for both the biological and social consequences of their cropping practices.”



USDA Activities Announced in 2015 (cont.)

- Best management practices for plant germplasm and breeding stocks
- Providing information to farmers about facilitating production of IP products
- Toolkits to reduce unintended gene flow or post-harvest mixing
- Voluntary conflict analysis (CA) and coexistence plan (CP) with non-regulated status applications
- Potential use of conservation programs to promote coexistence

AMS Process Verified Program

- Use of AMS Process Verified Programs for non-GE crops/processes
- Announced first process based claim for non-GMO corn and soybean grain in early May, 2015

Path Forward



Economic Impact is not an issue

- USDA proposed research is too little and taking way too long
- Damage not just to organic but also to non-GM markets
- Data from throughout the food chain to document what works to avoid economic harm and what does not

SOYBEANS: (Identity Preserved & Organic)			
Samples:		5220	
GMO Level		% of Total	
Non-detectible	4908	94.0%	
.1 - .5%	270	5.2%	99.2%
.51-.99	33	0.6%	99.8%
1.1-2.3	8	0.2%	100.0%

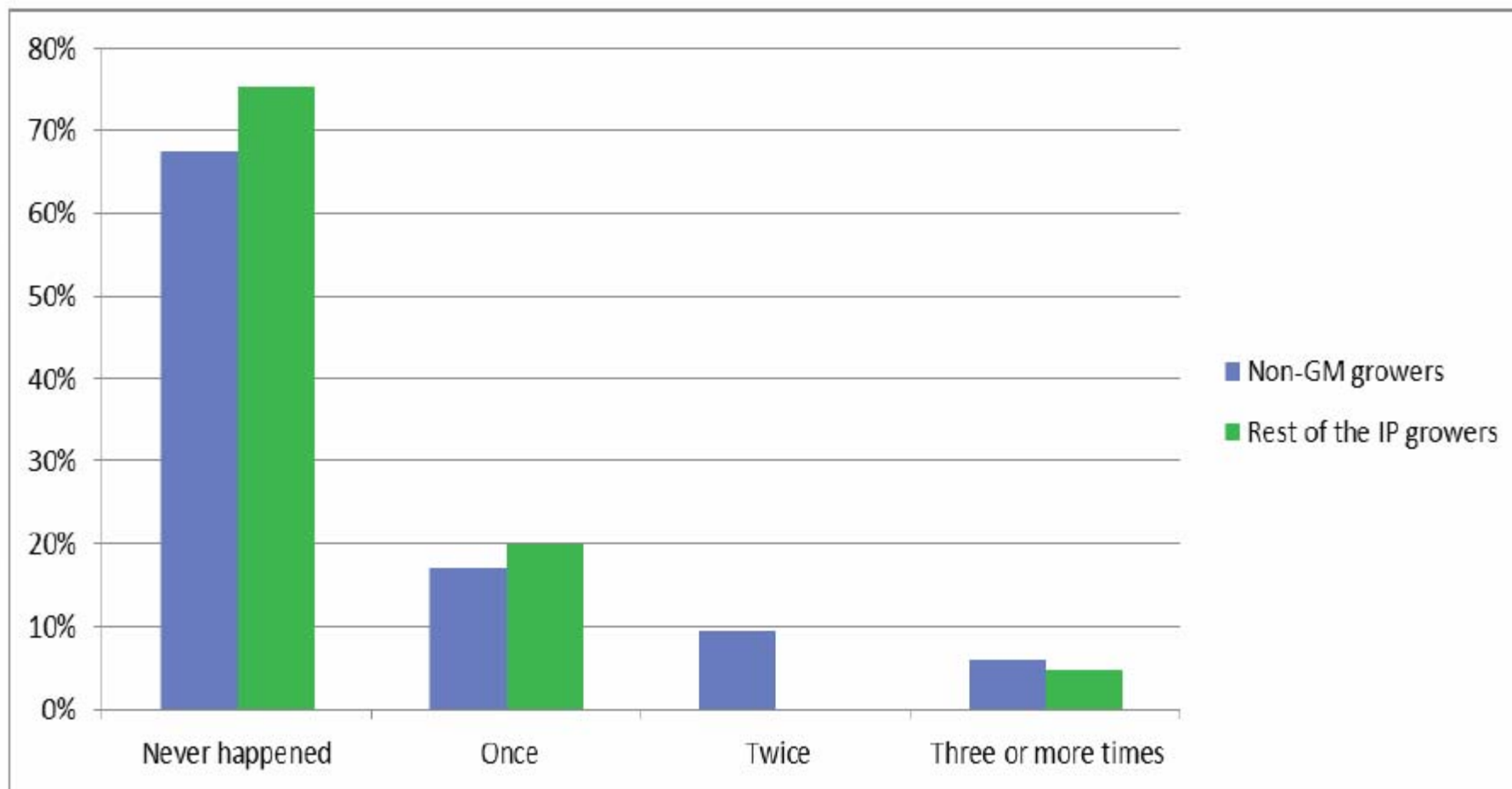
SOYBEANS: (Organic Only)			
Samples:		2180	
GMO Level		% of Total	
Non detectible	2065	94.7%	
.1 - .5%	93	4.3%	99.0%
.51-.99	17	0.8%	99.8%
1.1-2.3	5	0.2%	100.0%

CORN: (Identity Preserved & Organic)			
Samples:		7293	
GMO Level		% of Total	
Non detectible	6481	88.9%	
.1 - .5%	274	3.8%	92.6%
.51 - .99	311	4.3%	96.9%
1.0 -3.0	145	2.0%	98.9%
> 3.0	82	1.1%	100.0%

CORN: (Organic Only)			
Samples:		2461	
GMO Level		% of Total	
Non detectible	1713	69.6%	
.1 - .5%	224	9.1%	78.7%
.51 - .99	252	10.2%	88.9%
1.0 -3.0	225	9.1%	98.1%
> 3.0	47	1.9%	100.0%



Declared incidence of rejections



1 out of 4 of those rejected were due to GM content

EMAC

Voluntary is not Enough

- CA and CP are essential
- Give incentives for applicants to do this voluntarily when submitting petition for non-regulated status
- If not submitted, then USDA needs to conduct.
- Not a part of decision but released in conjunction with decision so both GE and non-GE farmers have best management practices.

“Co” means everyone!!!!

- Make acting responsibly to foster coexistence a mandatory requirement of GE seed contracts (and all other seed contracts)
- Give incentives for coexistence plans between neighbors

Be Creative

- Use existing programs – crop insurance, conservation programs, pinning maps, etc...
- Use incentives

Consumer Confidence

- Consumers can get the food they want
- Farmers meet their different customers
- US agriculture is about to meet both domestic and international markets

Conclusions

- Not yet such a big problem
 - Different crops; most neighbors get along; farmers use multiple production methods
- Everyone needs to be involved – “co” in coexistence
- USDA must show all farmers and parts of the food chain that this is a priority -- it must lead the country on this issue

Secretary Vilsack, March 12, 2015

- “Coexistence has to be more than a buzzword. It is our only viable option. That is why it is time to move beyond this idea of one side winning and one side losing. There is a better way: a solution that acknowledges agriculture’s complexity, while celebrating and promoting its diversity.”

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