

**Iowa Legislature Joint GMO Study Committee
Testimony by Bill Latham, Latham Seed Co.
October 21, 2005**

Thank you for the opportunity to visit with you today concerning GMO and organic crop issues. First I might give you a little of my background as it might relate to this subject matter.

Intro

Our Latham home farm at Alexander has been farmed by the Latham family, starting with my great grandfather since 1892. It was a general crop and livestock farm until 1947, when my father got into the seed business by custom cleaning oats, and later growing and distributing smut resistant oats to neighbors.

Today Latham Seed Co. is a soybean seed company with 450 dealers in six north central states. Latham Seeds has an active soybean variety breeding program, both Roundup Ready transgenic soybeans and non-GMO soybeans. Significantly, we also have a sister company, Latham Farms, which produces non-GMO soybeans and markets them to customers in Japan, Taiwan, and other Asian countries. We also have an active farming operation at Alexander. In addition, my son John has started a new seed corn company this past year.

After graduating in agronomy from Iowa State in 1963 working as an agronomist and marketing rep for a large ag. company for several years, I came back to the family company in 1966, where I have been for 39 years. I am company president, administering general management, marketing, and our soybean breeding program.

It may be relevant that I am a past president of Iowa Seed Association and am serving my second stint as a director of Independent Professional Seedsmens Associaton (IPSA). I've been very active in the American Seed Trade over the years and have served as chair of the Soybean Division, as Regional Vice President and, in 1997-98, as president of ASTA.

Biotechnology

Because, in our own operation, we are involved with both biotech and non-GMO marketing, I should have a fairly even position regarding the two, and I do respect the marketing efforts of both. Here's how I see it.

First, I don't like the term "GMO", (genetically modified organisms) as applied to biotech, often used as if we are just now modifying organisms for the first time. Almost every crop and animal produced in modern agriculture has been modified by breeding techniques that have gone on since Gregor Mendel's experiments in heredity and breeding of garden peas in the 1860's. This rich history of breeding new crop varieties have literally made it possible for our world to eat, and to eat with great quantity, quality, and variety. All of these breeding improvements of past and present must accurately be called Genetically Modified Organisms.

In recent years, "GMO" has been used, usually in a negative manner, in part to suggest that biotech crops are a totally new and possibly unsafe phenomenon. My viewpoint is a little different. I don't believe biotechnology is either good or bad! That's because biotechnology is but a tool, and, with any tool, you can use it in a number of ways But, we have to now, what a marvelous tool it is, and will be!

So how is this tool being used? I believe it has been used with both strong and appropriate government regulation and with care and responsibility on the part of the U.S. seed industry. Most importantly, decisions have been made on the basis of sound science, as opposed some emotional scare tactics used by

some in opposition. The fact is, with these technologies we have the safest, most plentiful, most dependable food supply in recorded history.

Three federal agencies -- the Food and Drug Administration (FDA), the Animal and Plant Health Inspection Service (APHIS) of USDA (which generally conducts field trials for experimental traits), and Environmental Protection Agency (EPA) are charged with regulation.

The FDA is responsible for the safety and labeling of most human or animal whole foods and food ingredients, including food additives. Since 1992 the FDA has determined that foods from plants produced through biotechnology are, as a class, as safe as those from plants developed through conventional breeding. Therefore, they should be regulated the same way as any other foods entering the market.

APHIS is the primary agency regulating the safety testing of biotechnology-enhanced plants that are not insect or disease resistant. Commercialization occurs through a deregulation process after extensive review of environmental factors.

The EPA has primary jurisdiction over crops that are insect or disease resistant. Field testing of "Plant Incorporated Protectants", or PIPs, that are not reviewed by EPA are reviewed by APHIS. Commercialization of PIPs occurs through an EPA product registration process, which is usually limited in time after which a renewed registration must be sought.

The effectiveness of this 3-pronged regulatory regimen has been outstanding. I know of absolutely no threat to health or safety from any biotech crop that has been approved and de-regulated for general use.

GM History

And, with now nine years of history to look at, these traits are making a tremendous contribution to feeding the world. The recently released study on the First Nine Years of GM Crops by Brookes and Barfoot of PB Economics in the UK states, "*The analysis shows that there have been substantial economic benefits at the farm level, amounting to a cumulative total of \$27 billion. GM technology has also resulted in 172 million kg less pesticide use by growers and a 14% reduction in the environmental footprint associated with pesticide use. GM crops have also made a significant contribution to reducing greenhouse gas emissions by over 10 billion kg, equivalent to removing five million cars from the roads for a year.*" And they suggest that these figures are probably conservative.

Bottom line -- Biotech crops have had a very positive economic and environmental impact. I can speak to the tremendous popularity of the Roundup Ready soybean trait. Our soybean seed sales are now almost 95% Roundup Ready. Also, traits such as corn rootworm and corn borer resistance are also showing terrific performance and acceptance.

I have an advance copy of an article which will appear in the November Farm Journal, entitled "Put Seed Costs in Perspective". It reviews all the seed and trait options from a farmer's viewpoint, but I thought the central theme was very instructive. That is, the cost of many of these traits is a substitution for the pesticide costs of the past. Isn't this a terrific benefit of biotechnology?

Borlaug and Carter

The Wall Street Journal last week printed a joint open letter from Nobel Peace Prize winners Norman Borlaug and Jimmy Carter. It's called "Food for Thought". These men certainly have no vested interest in biotechnology, but they do have much concern about global food supplies. What they team us to say is very interesting.

"The past 50 years have been the most productive period in global agricultural history, leading to the greatest reduction in hunger the world has ever seen. The Green Revolution, as this period came to be known in the developing world, has kept more than one billion people from hunger, starvation, and even death.

It took around 10,000 years for the world's farmers to reach their current production of nearly six billion gross tons of food, consumed virtually in its entirety by 6.4 billion people annually. Within 50 years, we will have to increase this amount by at least another 50% – to nine billion tons. Most likely we will have to achieve this feat on a shrinking agricultural land base, and with most of the production increases occurring in those countries where it is to be consumed.

However, agricultural science is increasingly under attack by groups and individuals who, for political rather than scientific reasons, are campaigning to limit advances, especially in new fields such as genetic modification (GM) through biotechnology. Despite this opposition, it is likely that 250 million acres will be planted to GM crops in 2005. Most of this acreage is in the industrialized world, although the area in middle-income developing countries is expanding rapidly. However, the debate over biotechnology in the industrialized countries continues to impede its acceptance in most poor, food-insecure countries.

More than half of the world's 800 million hungry people are small-scale farmers who cultivate marginal lands. New science and biotechnology have the power to address the agro-climatic extremes. Their use lies at the core of extending the Green Revolution to these difficult farming areas."

How long must we go before there is a general realization that biotechnology, as it is regulated and applied, is extremely safe as well as tremendously productive? Unfortunately, sound science doesn't always change emotional or political opinions.

Recommendation

I urge the Iowa legislature to embrace the products of biotechnology and to refrain from laws and regulations that would hamstring their production and marketing. I'm proud that our legislature has not jumped to some of the reactionary provisions that have been suggested elsewhere. These products are our future and, indeed, the future of world food production.

Non-GMO and Organic

I know there is an active market for non-GMO crops and organic crops with some production premiums involved. As I mentioned, we at Latham Farms deal in non-GMO soybeans. In my opinion, consumers, especially in Europe and other countries, unjustifiably have been led to believe that these might be healthier, even in the face of sound science to the contrary. I believe much consumer education is needed regarding the safety of biotech crops, but that is a topic for another day.

Since there is a market for non-GMO and organic crops, I fully support the efforts of those who would produce and supply these markets. These folks are entrepreneurs and they are supplying a legitimate market. In fact, the American Seed Trade Association has now established an organic seed growers group within the organization to deal with the unique affairs of this segment.

Further, in the future there will be many more identify preserved (IP) crops with specific traits to produce and move through a marketing system, both biotech and non-GMO. One such trait is low-linolenic acid soybeans, a biotech soybean that is being actively contracted for farmer production. You've maybe heard the "Vistive" brand commercials to seek production from farmers. There will be more special IP crops

and traits in the future, including many specialized consumer traits. The questions and challenges of IP crop production will only increase. We need to find ways for coexistence in the production of these.

Pollen Transfer and Low Level Commingling

With regard to possible pollen transfer from field to field, the American Seed Trade Association believes the following with respect to the presence of biotech seed in conventional seed lots:

1. The presence of trace amounts of commercially approved, biotechnology-enhanced seed in conventional (non-GMO) seed lots is accepted in crop production and presents no risk to humans or the environment.
2. Fully tested, deregulated biotech seeds are not "contaminants". They are free to move through U.S. commerce, the same as any other seed.
3. Fully tested, deregulated biotech seeds have neither special rules regarding handling nor threshold levels to be maintained in food or feed in the U.S.
4. Because fully tested, deregulated biotech seeds move through the same channels as conventionally bred seeds, some low level of commingling is fully understood and expected.

Soybeans, being self-pollinated with very enclosed flower parts, have very little potential for pollen transfer. Corn, because of the nature of the flowering parts, can have more pollen transfer. Three different studies I've seen show that about 99% of the cross-pollination that occurs outside the emitter field takes place within 18-20 meters (roughly 60 feet) of the field borders. Of course, the amount is highly dependent on wind and other conditions.

Both crops do have the potential of very small amounts of commingling with IP crops due to use of the same harvesting, trucking, and storage equipment, even though seed companies traditionally are very careful with cleanout procedures, etc.

The word "contaminant" to describe this low level of commingling is inaccurate. In fact, there is no regulation that requires segregation and no science that would justify it. Contrary to what some may believe, U.S. organic standards do not prohibit the adventitious or unintended presence of biotech-derived material in organic produce. Therefore, I believe there is no need for any regulations that would restrict the vast majority of producers of biotech crops.

With regulated crops or traits, the situation is very different. For regulated crops the requirements for controlled growth and testing are very stringent, and are ably administered by the federal agencies mentioned earlier. Seed companies go to extraordinary measures to comply. In my opinion, no state regulations are necessary in this federally regulated area.

It is important, though, that legislatures clearly differentiate the difference between regulated crops and non-regulated crops, and understand that regulated crops simply are not a factor in the marketplace.

Given that the majority of farm producers are choosing to plant biotech crops, it seems inappropriate to impose large costs of a zero tolerance policy on the entire seed and farming industry, and ultimately the consuming public. This is especially true when the presence of biotech traits poses no certification restrictions or safety issues on non-GMO or organic production.

I want to thank you for the opportunity to visit with you today, and I hope this has been somewhat informative and helpful.