

Review of Comments - Wheat Biotechnology Grower Petition

May 18, 2009

In February 2009, NAWG undertook a grower petition and survey effort to measure the level of support for biotechnology commercialization among the nation's wheat producers. In order to focus the effort on commercial wheat growers, the distribution list included only wheat growers who had at least 500 acres of wheat and at least 1000 acres in total farm area. With those parameters in place, more than 21,000 wheat growers in 30 states received the petition and response card request, and 32 percent of those responded by sending in their cards or responding to follow-up phone calls. Of those who responded, 76 percent agreed with the language of the petition. Full results from the petition are available at www.wheatworld.org/biotech.

The response cards also invited respondents to provide comments or concerns, and many of them did so. Following is a summary of some of the issues mentioned most often in the responses and a discussion of NAWG's approach to those issues. The issues are arranged by frequency of occurrence, with more frequently-mentioned points listed first.

Market Acceptance

Market acceptance was probably the most mentioned concern in the returned responses. Significant investments of time and resources have been made to develop markets for wheat both domestically and overseas, and our farmers want to be sure that customers will buy what we produce. There were several requests to make sure customers are ready before commercializing biotech traits in wheat and to make every effort to synchronize commercialization in the United States with other sources of supply around the world.

The need for market acceptance is a fundamental consideration in our biotechnology work. For this reason, NAWG and the North American Millers' Association have facilitated detailed discussions about biotechnology with the domestic food chain. These meetings have included seed companies, grain merchants, transportation companies, millers, bakers, food companies, retailers and researchers. While there is no official statement from this group, the discussions have led to broad understanding throughout the domestic wheat chain of the competitive pressures wheat is under from competing crops, and how lower net returns per acre in wheat compared to those crops will lead to continued reductions in acreage and production.

U.S. Wheat Associates is engaging foreign markets on biotechnology as well. Every one of the markets in which USW works has an element of biotechnology outreach in its development plan, and the topic is addressed at USW buyer conferences around the world.

We are also committed to the principle of choice in the marketplace. The joint position statement of NAWG and U.S. Wheat Associates on biotechnology emphasizes this point as follows: "We support and will assist in the development by all segments of the industry of an orderly marketing system to assure delivery of non-transgenic wheat within reasonable tolerances to markets that require it." Customers who seek access to non-GM supplies of wheat will find them in the market, with incentives provided through market mechanisms and specific arrangements negotiated between buyers and sellers.

Glyphosate Tolerance (RoundUp Ready)

There was clear consensus from those that commented on glyphosate tolerance that this would be an unwelcome trait in wheat. The comment came from both supporters and opponents of the petition text. Many of these growers are already using glyphosate-tolerant technology in other crops in their rotation, and introducing this trait in wheat would make volunteer wheat more difficult to control in these other crops. Rotating modes of action in herbicides is an important resistance management tool and there was broad support for preserving that approach. Some respondents who marked “no” on the card indicated that their response would change if this trait were off the table.

Concerns of Excessive Market Influence by Private Companies

This concern centered around the cost of seed and whether development of new traits by private seed companies would lead to excessive seed costs and technology fees or market dominance by the developers. A few comments mentioned that this would preclude their practice of saving seed, and one seed conditioner commented that it would put his company out of business. Some respondents were also curious if there would be equivalence in the technology fees charged in competing production regions around the world.

The petition text itself mentioned the expectation that value will be created by the development of new traits in wheat, and that we as producers will expect to share this value with the developers of the new traits. In order for that value to exist, it must be “captured” – so growers are correct to conclude that saved seed without royalties will not be an option if those growers want access to the new traits. However, the concept of choice will govern here too: if farmers want to continue saving seed as they have been doing, they will be free to do so with the current varieties they are legally using for that purpose. Only those farmers who perceive value from the trait enhancements will be willing to pay the royalties and tech fees for new traits.

Competition is a powerful force in keeping market power in check. This is why NAWG is working to recruit multiple providers into wheat research, so that no one company is able to control the market. Competition also drives the providers to continually improve their offerings in the market and ensure that grower value is there. During 2008 the NAWG/USW Joint Biotechnology Committee met with every major agricultural biotechnology company in the country to encourage their investment in wheat genetics.

Equivalent technology fees in competing countries is an issue we’ve discussed before, and it mirrors the interest NAWG has advocated in pesticide regulatory harmonization. Developers are unlikely to promise exactly equal fee levels in competing countries, as fluctuations in currency values would make it impossible to maintain exact equality. However, the need for comparable burdens from these fees has been communicated to developers and will continue to be part of the discussion. NAWG agrees that it would be unfair to ask U.S. producers to pay significantly higher technology fees than producers in competing countries.

Preserve the Role of Public Breeding Programs

In addition to private wheat varieties, wheat growers have come to rely on the varieties developed by public university and Agricultural Research Service (ARS) breeding programs, and

many have invested dollars directly into those programs through their state checkoffs. Producers generally want to preserve the role of these public programs and not weaken or undermine them in the move to recruit more private investment into wheat research.

Public varieties are commonly now registered under Plant Variety Protection (PVP) laws or other protections, and royalties are being generated from those varieties to be invested back into the breeding programs. While some have expressed concern about paying for a variety two or three times – through taxes, then checkoffs, and through seed royalties – the bottom line is that without adequate resources and returns to investment, these new varieties will not be developed.

NAWG and the National Wheat Improvement Committee (NWIC) are working to ensure that the public breeding programs have a strong role in a world with biotech traits in wheat. While some private developers will commercialize through private channels, the sheer number of varieties necessary (because of the variation in growing conditions and number of classes) strongly suggests that some of them will elect to commercialize wheat traits through the public breeding programs. More than one potential developer has indicated their preference would be to work through the public breeders. Furthermore, it is unlikely that public breeding programs will have sufficient resources to develop traits and secure regulatory approvals for them; commercializing private traits through public breeding programs may be the only way to ensure a major ongoing role for the public programs.

In order for this to happen, we need to make sure the public system provides an efficient and coherent system for deploying traits. NAWG and NWIC are investigating ways to provide uniformity across the various university technology transfer platforms to make this task simpler for private developers.

Co-Existence with Non-Biotech & Organic Markets

We believe there will be no important differences between biotech and non-biotech wheat from the perspectives of food safety, environmental safety, or end use functionality. Nonetheless, some customers may express preferences for non-biotech wheat products for other reasons. Essential and implied with the commitment to choice is the need to provide for coexistence between varieties with biotech traits and those without, such as organic wheat. Being a self-pollinated crop, the incidence of trait outcrossing in wheat is less than in other crops, but it is not zero. Achieving a zero tolerance for biotech traits is not possible.

In order to make coexistence work, widely accepted and commercially achievable tolerances will need to be established for the low-level presence of biotech traits in non-biotech lots of wheat. This need is well understood by the industry and work is underway on a number of fronts to make it happen.

Concerns that Higher Yields Will Lead to Lower Prices

To the extent that improved technology results in increased production, a few commenters observed that this will limit potential for price increases. Citing lower market prices in today's environment as proof of sufficient supplies, they argued that in the event the wheat industry ever faced a true shortage, market incentives will unleash the forces of capitalism to address it.

It is certainly true that the cure for high prices is high prices. In 2007 and 2008 the market responded to shortages in global wheat supplies by raising prices, and USDA's projections for global wheat production in 2008/2009 are at a record 684.4 million metric tons¹, leading to lower prices in 2009. The increased supply compared to a year ago comes from countries other than the United States, meaning that preserving our making market share in export sales will be more difficult and margins for US producers will be under more pressure. The advent of new technology should drive costs out of the production equation or improve efficiencies, making our wheat supplies more competitive from a price perspective (and allowing producers to prosper at those price points).

Crops which have been content to allow their acres to shrink in hopes that prices will rise have been disappointed in the results. Oats are now nearly extinct in the United States. Rather than pay significantly higher prices for oats, food companies have elected to import them or replace them in their recipes. While replacing wheat would be more difficult, it's not something that anyone in the wheat industry wants to encourage.

Other Issues

A small number of respondents mentioned other issues in the comments, including:

Philosophical or Religious Objections to Biotechnology

Some people believe that altering or patenting living organisms is not appropriate, and we do not quarrel with their right to this opinion. No one will be forced to consume or produce products that they do not wish to consume or produce. Choice will be available in the marketplace, both for consumers and for producers, and we fully expect a premium market niche to develop for either an expansion of organic wheat or a commercial non-GM alternative. Those developments will be driven by market incentives between buyers and sellers, allowing the market to provide the quantities of each type of product that consumers demand.

Safety Concerns

Opponents of biotechnology continually repeat concerns over safety, though there is not one single documented incident of food safety or environmental harm attributable to biotechnology in the world over the 13 years it has been used on over 2 billion acres. For this claim to have any traction its makers need to provide proof but there is none to provide. Conversely, there is significant evidence that biotechnology has enabled producers – including small holder farmers in developing countries – to become more profitable, reduce resource consumption, and better their lives. One source of this information is the International Service for the Acquisition of Agri-Biotech Applications (www.isaaa.org).

Fundraising

A number of comments indicated a belief that either this project or NAWG and the wheat industry organizations in general were wasting their checkoff dollars, or that the advent of biotechnology would amount simply to an excuse to raise more money from producers. The investment that producers make in industry organizations at the state and national levels returns significant value: three specific examples among many are direct payments, the

¹ March 11, 2009 World Agricultural Supply and Demand Estimates (WASDE) report.

existence of crop insurance and the latest varieties from their state universities that were developed with checkoff dollars. There will be an investment necessary from producer organizations to fulfill the industry's vision of deploying biotechnology traits, and most of that investment will be focused on finding market acceptance solutions with partners in the food chain.

Terminator gene

The owner of the so –called terminator gene (Monsanto) has pledged that it will not be used in the application to inhibit seed germination. The concept behind what became known as the Terminator gene was a genetic “switch” that would prevent germination in a second year of production. This type of tool is now referred to as gene use restriction technology (GURT). While it certainly would serve the interest of the seed developer in preventing saved or pirated seed, it would also severely restrict pollen flow into neighboring fields or other crops. This pollen flow concept is a concern often raised in coexistence discussions, in terms of how to keep non-GM fields as pure as possible. The irony is that those who oppose biotechnology for pollen flow concerns and also oppose use of GURT are opposing both the problem and its cure. NAWG has not taken a position on the use of GURT.

NAWG is in the Hip Pocket of Seed Companies

The respondents who made this comment or ones like it would certainly have noticed if it were not included in this list, and the actual language used was more colorful. NAWG's financial support, leadership, policy, clout and credibility come from wheat growers that make up its member state associations. We do have relationships with a number of industry partners in several sectors of the industry, and it would be foolish and inefficient not to work with those partners in areas where our interests align. The policy actions we have taken on biotechnology have been directed by our Board of Directors, which is comprised entirely and exclusively of wheat growers, and there is no question within the NAWG Board (all farmers) or NAWG staff (many of whom come from farm backgrounds) about who we're working for.

Summary

NAWG appreciates the time that people took to respond to the petition request and provide their thoughtful comments and concerns. We promised to review all of the comments provided, and hopefully this document demonstrates that the promise has been honored. The information gleaned from this effort will continue to inform our biotechnology work in the months and years to come.