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Silage

By: Erin Rodríguez

As breeders, we are working to provide our customers with products that will meet their varied agricultural needs. We are aware that farmers want high yield and high quality grain. Likewise, we know that livestock farmers want high tonnage and high quality silage. When we are doing our observations and collecting data, we look at each product under various stresses and evaluate the strengths and weaknesses of each product. We ask ourselves, "How can this be of value to our customer and which customer would find it valuable?"

Look at the height on these leafy guys!

We have observed that as we breed for insect tolerance, we were able to achieve crops with higher sugar levels. As a result of these increased sugar levels, these crops have more energy in the silage. Consequently, these higher sugar levels translate into more digestible silage for livestock and more energy per ton while simultaneously increasing insect tolerance. We have also noted that as we work with making crops more stress tolerant, our processes result in bigger and bigger plants. These observations have led us to focus on DuraYield forages. Bigger plants translate into more tonnage. As these crops are bred to be more stress tolerant, they give us a longer harvest window of higher quality forage. We are seeing high tonnage and high quality in our hybrids. We are also crossing our inbreds to leafy inbreds, which create leafy hybrids that translate into high tonnage and high quality silage hybrids for the leafy hybrid market. We currently have a couple of commercialized leafy hybrid products in the marketplace that are performing well.

Forage crops are just another way 3MG R&D is working to provide you with viable genetic alternatives. We are continuing to work towards producing conventional stress tolerant and high quality products.

Silage sample data collection

Silage being chopped up north

The Farmer's View

by Ed Baumgartner

As I sit down to write this article I am headed up to the upper Midwest to sit in a combine and get a "farmer's view" of the hybrids we are developing. I can take all of the notes I want from the ground on hybrids but there is something special about seeing how the combine reacts when you harvest a hybrid. It seems to etch in your mind all of the characteristics of that hybrid from your notes that were taken. I wish I could spend the whole season on the combine and harvest every hybrid plot as I used to but that is no longer possible for me. My goal each year now is to try and catch at least one location of every trial we have from the operator's seat.

Combining in Minnesota

The other thing I try to do is visit with farmers wherever I am at and find out their views on agriculture today, thoughts on the hybrids they currently plant, what they want in the future from their hybrids, and where they think the seed industry is going. Most of the farmers that I visit with are from the US and concerned that they are losing their seed options. (This is a concern for farmers outside the US too.) Even with all of the approximately 150 retail brands remaining in the US to order seed from, they still feel limited on who is developing the hybrids and varieties of the future for them. Most farmers think that they have to work with the largest companies out there to make sure they get the best genetics. It makes sense from their standpoint, not knowing how segmented the hybrid development process has become in our industry. How often do you see an actual corn breeder at various seed functions visiting with farmers anymore? The breeders need the first hand connection to the farmer to cut through preconceived perceptions to understand what the farmer requires for their operation to be successful. Most breeders work under the assumption that if you can provide high yield with standability, then you have developed what the farmer needs. Everything else becomes secondary. From a high level view this would be correct.

Some of what I have learned the last few years getting out there again is that they want people selling to them that really know their products so they can select the right ones for their farm. They want to be able to change to a new hybrid when they are ready, not because their favorite one has been discontinued and they have no choice but to switch. When they pay for a specific variety, they do not want to hear that it is now not available. This does not sound like it has much to do with breeding does it? It does if you think beneath the surface of these topics. The questions that these types of statements have me pondering are: "Are we breeding in such a manner to create game changing hybrids?" "Do we know enough about the field performance of new hybrids prior to release on their farm?" "What farming practices should we be testing new hybrids under?" "Do our products add value to their farm?" "Should we develop upgradeable hybrids?" "What made them like a specific hybrid so much?" "Do they not want to change hybrids because we do not have enough positioning knowledge on the new hybrid?" "Do I know what corn backgrounds work best in their area?" "What can we do to help the salesperson know our products?" "Do I understand the risk that the farmer has by changing hybrids?"

Early snow in North Dakota made harvesting fun this year.

We want to change how new products are developed and brought to the market place. We love to listen to the farmer and understand his or her expectations of hybrids for their farm. We do not want to be in a commodity mindset. The family farms are getting large enough and specialized enough today to warrant customized products. We need to think through how the crop produced from the farmer's field will be utilized when we make selections. Is it destined for a dairy herd, a hog feeding operation, an ethanol plant, a cattle feedlot, food grade milling or the general market place? Currently our industry changes hybrids so fast that these concepts are nearly impossible to take under consideration. We understand that yield is the driver, but a few extra selection points to make sure the product has added value to specific customers is important. One item that we are seeing with our Durayield breeding process is that our hybrids generally have a lot more health throughout the growing season. This is especially important for the silage producer. They now have a larger harvest window for optimum moisture levels to create better silage.

North's warehouse is full, and they have their work cut out for them.

While one size fits all was good for agriculture, we see those days coming to an end soon. The consumer is demanding it. We see the GMO vs non-GMO debate continuing in the consumer arena. Some farmers do see this same thing and want to sell to this market. We will do all we can to make this possible for them.

The mindset we have at 3MG R&D is that if you are working with us using products that we have developed, we are your R&D department. We will support your brand by developing products specifically for your customers. We will be available to meet with your customers to discuss research things like explaining hybrid development and talk about product positioning. We will tell it how we see it. Most importantly we will listen to you and your customers to make sure we are developing what is needed for your success. We like having targets to go after.

To Label or Not To Label

by Erin Rodríguez

Currently, there is a debate raging in this country as to whether or not it should be a requirement for food producers to label Genetically Modified food products. Congress is preparing to convene and debate the issue. It begs the question, "How did we get to this point?" This is not a single issue, but rather one that encompasses various topics as well as many demographic groups and organizations. On one hand we have the consumer, who is not one homogenized group but rather a diverse population with varying opinions and perceptions. On the other hand we have the food producers, who also include a wide range of attitudes and organizations including agricultural companies, food processors, and wholesale and retail providers. Consequently presenting this debate in a binary manner is impossible. In the following article we will explore the arguments from both sides and try to understand why there is such distrust and bitterness between the two opposing views.

In recent years consumers have been putting more pressure on the government to require labeling of genetically modified food products. This pressure has been increasing over the last decade. In several countries GMO labeling laws have already been implemented, including Japan, New Zealand and the European Union. In the US however, this debate is still going on. There are two types of labeling models: voluntary and mandatory. Voluntary labeling in regards to GMO products can already be seen in the US. For example, General Mills posts non-GMO on Cheerios boxes. Mandatory labeling is when all products that contain GM ingredients are mandated by an oversight organization, such as the FDA, to require labeling.

Consumers cite "the right to know" as an inherent entitlement of the customer and that it is the responsibility of the retailers to provide them with this information. In a 2002 focus group conducted at the University of Maine,Mario F. Teisl et al. state, "In general participants underestimated the percent of the US food supply chain that contained GM ingredients. When told that most processed food probably contains some GM ingredients, some participants seemed upset because they felt they should have known this information." There is a general feeling among the proponents of GM labeling that there are unknown consequences to the consumption and production of GM products for both humans and the environment, such as allergies or pest and weed resistance in wild plants which could in turn present inadvertent consequences among wildlife. (Huffman & McClusky: The Economics of Labeling GM Foods, 2014) It has also been argued that there have not been sufficient independent studies done to test the safety of GM food products.

Food producers who oppose the mandatory labeling of GM food products say that it would be cost prohibitive. There is some consensus and a lot of variety as to how much new labeling would cost. In most models it is accepted that these costs would be passed on to the end user. According to ECONorthwest, an economic consulting firm, the median cost of relabeling was about $2.30 per person per year. However, other studies show a range of $0.32 to $15.01 per person per year. (Dyke and Whelan GE foods Labeling and Cost study Findings, ECONorthwest 2014) The estimates for the overall cost for the labeling for the food production industry range from $600 Million Dollars to $1.3 Billion Dollars. (Federal Register 1991 "Regulatory Impact of Analysis of the Proposed Rules to Amend the Food Labeling Regulations." 56 FR. Pp 60856-60878)

If we accept the argument that GMO labeling is cost prohibitive, we have to evaluate what we are currently spending. If we apply the median cost per capita of $2.30, those revenues would generate $739,409,879.67 in one year. That amount covers the low estimate of relabeling and leaves some left over. Furthermore, the cost of relabeling is a onetime occurrence that will be passed on to the end user. In contrast, when we evaluate what is currently being spent on lobbying, we see that in 2015 alone a total of $91,296,940.00 was spent on lobbying both for and against GMO labeling. Pro-labeling lobbies spent: $4,385,700 and Anti-Labeling lobbies spent $86,911,240 this year. (EWG.org) This begs the question, "If the costs are prohibitive, why are these companies spending so much money to ensure this legislation does not pass?". Tactics such as these leave the end user feeling as though something is being hidden from them.

Biotech food producers claim that consumers will perceive labels as a warning and therefore create a negative backlash against their products. However, according to the aforementioned focus group (Mario Teisl et al) labels themselves are not perceived as warnings unless presented as such. Furthermore, consumers reacted negatively to both positive and negative labeling formats and felt that both were untrustworthy. Neutral labeling was perceived as being informative rather than inflammatory or misleading. An unstated consequence of GMO labeling would be that food producers may find it more cost effective and easier to reformulate their current products to eliminate GM ingredients to avoid labeling. This speaks to a larger fear among food producers in that there may be a drop in demand for their products.

The lack of the public understanding in regards to what exactly are transgenic or genetically modified products has aided in cultivating distrust between the two sectors. We fear what we do not understand. Unfortunately, the industry has not done a very good job in educating the public about these products or their usefulness to the general public. Biotech companies are aware of this. BIO, the trade association for the biotechnology industry, has acknowledged this disconnect and the need for better communication between the sectors. Cathy Enright, BIO's Executive Vice President for Food and Agriculture said, "Transparency in our food system is critical for 21st century consumers" (link)

Many consumers believe that governmental agencies such as the FDA should be responsible for ensuring that consumers are provided with sufficient information to make informed decisions about what is best for them. However, the FDA has taken the official position that unless the labeling includes nutritional information, the GM foods are a new species in the food supply chain, a lower nutritional value or new allergic substances, then the FDA has no reason to intervene in the oversight of GMO labeling. (Huffman & McClusky, The Economics of Labeling GM Foods, 2014) Consequently the FDA advises that GM foods should be part of voluntary labeling practices.

We can see the implementation of voluntary labeling in current practice with kosher and organic foods. Although the labeling is voluntary, there are governmental agencies in place to ensure that all the guidelines that constitute kosher or organic foods are being adhered to. This type of labeling adds a perceived value for a particular group of consumer who are likely to pay a higher price for the product. Proponents of voluntary labeling argue that this is the most viable and economically efficient way to give consumers a choice as to whether or not products are best for them.

Where do we go from here? We must find a way to create an equally fair and beneficial legislation that balances the customer's right to know and safety as well as the company's right to profit from their innovations. The best way to do this is to tear down the veils of secrecy and invite a conversation that will facilitate this happy medium. We as a society need transparency in our food chain and an educated population is always a more productive one. Let us resolve as an industry to take steps in that direction.

Contributors

Ed Baumgartner
President

Erin Rodríguez
Editor, Assistant Marketing Manager

Raechel Baumgartner
Assistant Editor

Alexis González
Creative Design

We thank our staff at all our locations for providing us with support as well as many of the photographs used on our articles. Keep on contributing!

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3MG R&D

PO Box 818 • Santa Isabel, PR 00757

www.3mgpr.com

787-845-4600

Founded in 2012, 3MG R&D has been involved in the creation of innovative products that we hope will be in the forefront of the seed market. Guided by our principle that we can develop food crops that combat environmental pressures naturally and economically, we continuously research new solutions using a mix of millennia-old breeding techniques with high-end modern genetic technologies.