

FDA approves 2nd generation of Simplot GMO spuds

By JOHN O'CONNELL
Capital Press

BOISE — The J.R. Simplot Co. announced Jan. 13 it has obtained federal Food and Drug Administration approval for the second generation of its Innate line of potatoes, developed with biotechnology.

The company plans to raise less than 100 acres of second-generation Innate Russet Burbanks this season in anticipation of approval by the U.S. Environmental Protection Agency, which is expected by December and would represent the final step in the review process.

Innate's second generation was previously approved by USDA, and the company voluntarily sought FDA approval, said Simplot spokesman Doug Cole.

"(FDA approval) is something most all biotech companies will go through because it gives customers an assurance of safety," Cole said. "We will pursue it for all of our various (Innate) generations."



Courtesy of J.R. Simplot Co.

These second-generation Innate potatoes, bred by J.R. Simplot Co. using genetic modification, show their resistance to U.S. late blight strains in Michigan test plots. Simplot announced Jan. 13 it has obtained federal Food and Drug Administration approval for the second generation of its Innate line of potatoes.

Innate lines utilize genes introduced through biotechnology from wild and cultivated potatoes, which has led to concerns by some in the industry that the product could affect foreign trade markets where consumers are wary of genetically modified organisms. The first generation of Innate,

which offered low bruising, non-browning and low acrylamide, was approved by FDA last March and saw its first significant commercial production in 2015. The second generation includes the original traits, plus improved cold storage and late blight resistance.

Because of the late blight

resistance trait, the second generation of Innate must also undergo review by EPA, which is tasked with assessing pesticides, despite the fact that the protection is incorporated into the plant.

Cole said field trials were conducted last season in Idaho, Michigan and Pennsylvania, which were all hard hit by late blight, and the second-generation Innate spuds showed "very strong resistance." He said the potatoes resist all common U.S. strains of late blight.

"Growers should expect a significant reduction in sprays as a result of Innate generation two," Cole said.

Cole said Simplot has submitted petitions for approval of Innate in foreign markets including Canada, Japan, Mexico, Korea, Taiwan and China and hopes to have OKs from Mexico, Japan and Canada by the end of this year. The foreign approvals would represent a major step toward introducing Innate into the frozen

and dehydrated potato markets, Cole said.

He said it's uncertain if Simplot will seek to segregate frozen or dehydrated Innate products and market them separately from conventional potatoes.

For now, however, he said Simplot is focused exclusively on the domestic whole-fresh and fresh-cut markets, marketing Innate spuds under the White Russet label.

"The industry is feeling more and more comfortable with (Innate) every passing day," Cole said.

Oakley, Idaho, farmer Randy Hardy, chairman of Sun Valley Potatoes and a past president of both the National Potato Council and U.S. Potato Board, said both grower organizations have followed Innate closely because of the sensitivity of export markets. Hardy emphasized gaining approval to export into a market doesn't necessarily mean a product will be accepted by foreign consumers.

"I've personally been opposed to the idea because of what I know about export markets, but Simplot has been very diligent in assuring us they're doing everything they can to prevent (market disruptions) from happening," Hardy said, adding he considers Innate to be an impressive product.

Hardy said Idaho dehydrated potato producers don't allow suppliers to raise Innate because of the potential for GMO spuds to be mistakenly intermingled.

Cole said Simplot intends to produce roughly 6,000 acres of first-generation Innate spuds in 2016. The potatoes reduce waste and enable the food service industry to save time by utilizing pre-cut, fresh potatoes that stay white without preservatives.

"We believe we've got a product consumers want that's been shown to have better quality, reduces waste, and in the case of generation two, reduces the amount of pesticides being applied," Cole said.



Capital Press File

A Kansas researcher is developing a type of wheat that people with celiac disease can eat.

Researcher aims at developing 'celiac-safe' wheat

Miller wants to ease disease's disruption for patients

By MATTHEW WEAVER
Capital Press

A Kansas researcher hopes to develop wheat varieties that people with celiac disease can eat.

Celiac disease causes extreme sensitivity to the gluten in wheat and some other foods.

In theory, celiac-safe wheat would still contain the proteins such as gluten necessary for making bread, but would have none of the reactive protein epitopes, which cause the body's immune system to produce antibodies, said Chris Miller, director of wheat quality research for Heartland Plant Innovations in Manhattan, Kan. He is working with the Kansas Wheat Commission at the Kansas Wheat Innovation Center.

Miller is measuring the variability for reactivity within a large pool of wheat lines, including commercial varieties and wild relatives. This helps determine whether any existing varieties with low levels of reactivity are already in the center's collection.

Miller's work came about when researchers discussed the need to address wheat's role in celiac disease.

"We feel confident the gluten-free craze will fade out, but the medical condition will obviously continue," Miller said in an email. "Most food allergies are protein-based, such as soy, milk, eggs, nuts, etc., which is no different from celiac disease. The issue is that most people can avoid nuts and even milk and eggs without too much disruption, but wheat is in everything and really difficult to avoid without major changes to diet and routine."

Celiac disease affects roughly 1 percent of the U.S. population, or about 3 million people, 97 percent of whom are undiagnosed, according to the University of Chicago

Celiac Disease Center.

Variety development is not included in Miller's current work, so it could be several years before a celiac-safe wheat is available commercially, he said.

The research uses standard breeding practices, although Miller said GMO technology would speed things up. The U.S. wheat industry is hesitant about developing a GMO wheat variety without acceptance from overseas customers.

"We just can't take the risk of having a GMO solution sitting on the shelf with no ability to actually get it into the market," he said. "I will say our work is compatible with GMO technology, and if by some stroke of luck the regulation changes, we won't need to start from scratch. We will simply accelerate our progress."

Washington State University Professor Diter von Wettstein is also working on wheat that celiac patients can eat. Miller is familiar with von Wettstein's work, but says it's a different approach.

"I think the problem of celiac disease is so big that it won't be solved by a single group of researchers, so I support his effort to look at this from a different perspective," Miller said.

Medical researchers are still trying to understand what triggers the disease, Miller said. Some patients have it from childhood, while others develop the disease later in life. This and better tests to diagnose the disease still need to be studied, he said.

Miller's work, in general, is about understanding wheat protein, including agroecology, end-product quality and human health and nutrition.

"The overall theme is wheat improvement, so I can't imagine a negative outcome for farmers or consumers," he said. "If we can identify the underlying cause of celiac reactivity in the process, and we have the means to reduce it, we should be working towards those types of goals."

Farm transparency relieves consumer suspicion, experts say

Researcher says consumers believe agriculture has 'motivational bias'

By MATEUSZ PERKOWSKI
Capital Press

ORLANDO, Fla. — Public suspicion of agriculture may seem like a recent phenomenon, but consumer researcher Charlie Arnot traces it back to the turmoil of the 1960s.

After the U.S. victory in World War II, the nation was characterized by a collective optimism about the future and public confidence in institutions, said Arnot, CEO of the Center for Food Integrity, a nonprofit that studies consumer attitudes.

That began to change in the 1960s, with the assassinations of high profile leaders and clashes between young people and the political establishment, he said this week at the American Farm Bureau Federation convention in Orlando, Fla.

Scandals from Watergate to the subprime mortgage crisis have since continued to erode public deference for institutions, Arnot said. "Mistrust of institutions has become the cultural norm."

How does this affect farming?

While the consolidation and industrialization of agriculture has increased the availability and affordability of food, the industry is now also viewed by the public as an institution, he said.

That means many consumers regard farming practices with more skepticism than in the past, particularly for operations that they see as large, Arnot said.

About 28 percent of respondents to a Center for Food Integrity survey said they strongly agree with the statement that small farms put their own interests above those of consumers, compared to 48 percent when asked the



Mateusz Perkowski/Capital Press

Charlie Arnot, CEO of the Center for Food Integrity, said his nonprofit's research indicates consumers are growing more distrustful of agriculture, which can be overcome with transparency.

same question about large operations, he said.

The "large" category is also broader than many farmers expect — consumers generally define this as any farm with more than 100 acres or 100 animals, he said.

Arnot likened the farm industry's situation to that of the U.S. military.

Prior to the Vietnam era, leaders of the armed forces were effective at managing the public's beliefs about war efforts, but that changed when televisions became pervasive in American homes, he said.

"We're seeing the same thing happen with food," he said.

Just as the nightly news broadcasts hindered the military's power to manage perceptions of war, the Internet and social media allow information and misinformation about agriculture to be widely disseminated, Arnot said.

In more recent wars, the military has recognized the shift and now tries to affect perceptions by embedding journalists with the troops, he said. "Once they came to the conclusion that control was no longer possible, they changed their strategy."

Agriculture has traditionally responded to concerns about its practices with facts and peer-reviewed studies, but demonstrating shared values is three to five times more effective at building trust than data and expertise, Arnot said.

In many cases, myths about agriculture arise due to "tribal shaming," such as mothers talking online about the dangers of high fructose corn syrup, he said. In such scenarios, consumers feel compelled to act by either avoiding the product or conducting further research, he said.

However, it's not getting any easier for farmers or food companies to influence such decisions, as consumers are becoming less willing to study allegations for themselves, said Judy Rupnow, communications strategist for the MorganMyers public relations firm.

"We're starting to see the effect of information overload," she said.

When confronted with negative opinions about agriculture, farmers should avoid becoming overly sensitive and instead listen to the consumer's concerns, Rupnow said.

"Resist the urge to defend right off the bat," she said.

Some consumers think farmers have a "motivational bias," meaning they value profits more than principles, said Arnot.

Their suspicions can be overcome with transparency, though this solution can make farmers uneasy, he said. The industry's attitude often boils down to "we have nothing to hide, but it's none of your business," he said.

The reality is that smartphone cameras are now ubiquitous, so producers should assume consumers can see what they're doing at any time, Arnot said.

"Transparency is no longer optional," he said.

One farm has adapted to the new reality by providing a live video stream of hens laying eggs at its facility, not because this is "must-see TV" but because consumers find it reassuring, Arnot said.

At the other end of the spectrum are state "ag gag" laws that criminalize secret recordings, he said. "Unfortunately, I think they send the exact wrong message to the public. The message is, 'We have something to hide.'"

Oregon county plans class action for state's forestland management

By PARIS ACHEN
Capital Bureau

SALEM — Linn County plans to seek more than \$1.4 billion in damages in a class action suit against the state for breach of contract in management of forestland in 15 counties.

Linn County special counsel delivered a letter to Gov. Kate Brown and State Forester Doug Decker Wednesday to notify them of the county's plan to file the suit after a mandatory 30-day waiting period.

Up to 150 local taxing districts that receive timber sales receipts from harvests

from the Oregon Forest Trust Lands contract could be eligible join the suit. That includes schools, libraries, public safety agencies and other districts.

The other counties that benefit from the trust are Benton, Clackamas, Clatsop, Columbia, Coos, Douglas, Josephine, Klamath, Lane, Lincoln, Marion, Polk, Tillamook, and Washington.

"There have been general discussions and angst for years about the distribution formula and how counties have been deprived of revenue by state," said attorney John DiLorenzo, who is representing Linn County in the suit. "It's no surprise they're

not getting as much of a return from the arrangement as they should be."

The 15 counties have contracted with the state since the 1930s to manage forestlands for the land's "greatest permanent value." Linn County and the state are at odds over the meaning of that term. The county claims that the term means greatest economic value allowable under state and federal regulations and that returns ought to match what a private land manager could glean off the land. The state in 1998 defined the term to mean economic, ecological, recreational and aesthetic returns and implemented a man-

agement plan based on that definition starting in 2000, DiLorenzo said.

Linn County estimates that the 150 local districts in the 15 counties have missed out on \$35 million per year in revenue in the past 15 years from the state's management of the forestland. That number is based on forest modeling, much of which was borrowed from the Department of Forestry, DiLorenzo

"All of those local districts in need of funding especially in the area of public safety," he said. "Lives would be vastly improved if these monies were distributed to these districts."