SOJABONE / SOYBEANS

Webwerfopdatering / Website update

September 2015

Die vorige jaarlikse opdatering van belangrike rolspelers se webwerwe is, in plaas van om te strek tot einde Augustus 2014, is weens vertraging eers voltooi in Februarie 2015 en het dus die 17 maande periode van September 2013 tot Januarie 2015 gedek.

Ten einde die periode van die jaarlikse verslagdoening steeds te laat strek tot einde Augustus van elke jaar, dek hierdie opdatering nou dus slegs die 7 maande periode van Februarie 2015 tot Augustus 2015.
Die verslag is saamgestel binne die onderstaande raamwerk.

Aktiwiteite van:

United Soybean Board (USB)
American Soybean Association(ASA)
US Soybean Federation(USSF)

USDA - Agricultural Research Services (ARS), Beltsville,MD – Research result
National Institute for Food and Agriculture (NIFA)
Committe on New Usages of USB

Tendense/Ontwikkelings mbt. Kwaliteit van Sojaolie

Aktiwiteite van saadmaatskappye:

Monsanto
Bayer CropScience
DuPont Pioneer
Cargill
Dow Agro Sciences
Syngenta

en bykomend

BASF
Limagrain
K2 Agric

Vordering by Embrapa met die teel van cultivars in volwassendheidsgroepe 4.8 tot 6.7

Ander maatskappye/organisasies wat betekenisvolle bydraes maak tot sojaboonontwikkeling

Ander belangrike ontwikkelings in bogemelde velde en ook in die sojaboonbedryf in die algemeen.

United Soybean Board (USB)

1. Annual Action Plan 2015

Gaan na onderstaande webwerf en aan onderent van bladsy klik op 'Annual Action Plan 2015 (61 bladsye)
http://unitedsoybean.org/about-usb/strategic-planning
Dated: October 1 2014

2. Future Long-Range Strategic Plan 2017-2022

Gaan na onderstaande webwerf (dieselfde as 1 hierbo) laaste paragraaf en klik op laaste woord 'here' vir enkelbladsy van bg. plan.
http://unitedsoybean.org/about-usb/strategic-planning/
Dated: 2015

3. Growing Forward
How changes in research, meal and technology will impact soybean profitability over the next ten years

"“Most people overestimate what they can do in one year and underestimate what they can do in 10.”(Bill Gates)
From providing tools that helped map the soybean’s full genetic code to meeting a growing worldwide demand for U.S. soy to introducing a new, edible oil into the marketplace, the soy industry has made great strides in the last decade. *(Refer to 'Beyond the Bean' June 2015 Issue)*

But what will the next 10 years look like for the U.S. soy industry?

“This includes ensuring that soybean research across the country is strategically coordinated and nurtures innovation. It also means producing soybean meal with maximum value for the evolving animal-agriculture industry.”

Also over the next decade, U.S. soybean farmers will be called upon to embrace even more new technology – including things like big data,--------- .

Soybean Research: Coordinate and Innovate

Checkoff-funded research has made many accomplishments possible over the years, from boosting yields to helping scientists map the soybean’s genome, which will make developing new traits quicker and less expensive. What will the next 10 years of soybean research look like?

-------- the answer to that question has a lot to do with how agriculture has changed.

“In the past, (soybean researchers) have been largely focused on how to grow more beans,”--------. “Today, we ask ourselves, ‘How do we continue to make soybeans more efficient, profitable and sustainable in a way that leaves less of a footprint?’ That’s the challenge of our time.”

For that reason, ------ research in the next decade will aim to bring improved nutrient-use efficiency, drought and disease tolerance, as well as better options for weed control to farmers in order to directly impact their profit potential. While these research areas aren’t new, an intensified focus on coordination and collaboration could make the results even more impactful.

A checkoff-funded study found one way to maximize strategic coordination among the many public and private entities that conduct soybean research is by forming partnerships in “regional centers of excellence,” a model similar to the ones used by the research-intensive National Institutes of Health. This would concentrate resources across wider areas to share information, avoid duplication and reduce costs, while still addressing local needs.

Added to the need of developing new traits, the overarching challenges of water availability, global climate change and increasing regulation, among other issues, add an increasing need for strong collaborative research.

Maximizing Meal Value
One thing that's certain in the years ahead: the needs of U.S. soy's customers will continue to evolve. It won't be enough to just produce a greater supply of commodity soybeans.
"Looking forward, in order to maximize value all along the chain, we need to send a clear signal throughout the industry that it's not just bushels we're growing and selling."

USB farmer-leaders are working alongside representatives from the swine and poultry industries, seed companies and processors to address this issue and ensure that the nutritional bundle of digestible energy, protein and minerals in U.S. soybeans meets the various needs of the animal species that consume it.

No longer is soybean meal in animal feed a one-type-fits-all proposition--------.
"We aren't the only ones out there producing soybeans,"-------. "New innovations in soybean meal could help us differentiate U.S. soybeans from our competitors in places like Brazil and Argentina, and that would support U.S. soybean-farmer profitability for years to come."

"Our competition isn't just coming from other countries, it's coming from other feed ingredients," ---------. "Protein sources from other feed ingredients, combined with synthetic amino acids, have already edged-out soybean meal in some animal feed formulations. It's up to us to fight back."

Big Data and Beyond
"But although farmers have already been called upon to embrace new technology, they'll likely be called upon to consider even more in the decade ahead.
-------- the most significant challenges on the horizon for U.S. soybean farmers will be figuring out how to utilize vast amounts of available data on their individual operations, without getting overwhelmed by the sheer magnitude of it all.
Vast amounts of data can help farmers fine-tune their resource management or improve production efficiencies, for example.

"Farmers can use big data and technological advances to grow their profit potential, which is at the core of the soy checkoff's mission," says Haselwood. *(USB Chairman).*

http://unitedsoybean.org/article/growing-forward/

Dated: June 17 2015

4. Wild Soybeans Could Hold Key to Improving Today's Varieties

Genetic diversity in wild soybeans could improve today's yield, composition, stress resistance and more

"More akin to a ground cover, weed or vine, the primitive plants that have lived for millennia in China bear little resemblance to today's lush, upright plants to which they're technically related. These soybean ancestors cling to the ground as if afraid of the sun. Skinny-stemmed and narrow-leaved, they produce multi-colored beans a fraction of the size of today's commodity soybeans.

Yet, it's the diverse genetics in these runts of the soybean litter that a team of researchers working on a multi-state soy-checkoff-funded project believe hold the key to improving today's commercial soybean varieties in some of the most important ways.

Our attraction to wild soybeans is that they're much more diverse than the cultivated soybeans," ---------. "We are finding a lot of interesting traits – protein and amino acid composition, disease resistance, stress resistance, and we have some initial evidence that we'll find some good yield

genes as well."

Left to grow uncontrolled in China, these viny wild soybeans have maintained a much more diverse set of genes compared with commercialized varieties. The breeding process got the plants to stand upright, but it also eliminated other beneficial traits.

"We've lost valuable genetic diversity in selecting plants for cultivation. By some estimates, the wild plants are as much as seven times more diverse than a cultivated soybean."

------ the team continue to use state-of-the-art equipment and techniques to breed wild soybean lines for public and commercial breeders to use, which could result in more diverse varieties for farmers to plant.

http://unitedsoybean.org/article/ancient-soybeans-could-hold-key-to-improving-modern-varieties/

Dated: April 7, 2015

5. Ancient Answers to Modern Questions

Soybean researcher hopes to borrow genes from wild lines to improve yield, composition and pest resistance in varieties that farmers grow

"Instead of working directly with genes from soybean varieties that farmers commonly plant, Carter *(Tommie Carter ,U.S. Department of Agriculture Soybean Research Genetist)* is a collaborator on a multistate soy-checkoff-funded study of the genes from soybean lines that have been growing wild in China for thousands of years.

There's a general fear that there's not enough diversity in the soybean crop ------.
Genetic studies have shown that when the soybean was first domesticated, only a few of the genes from the wild soybean were brought into the crop that we grow today. Since then, continuous breeder selection has improved our crop, but also led to the unintended consequence of losing even more of those original wild soybean genes along the way.
We are pretty sure there are yield genes in wild soybeans, and we have a way to extract them. It's also a really high-protein-type of soybean, and they're high in some of the amino acids, like methionine and cysteine. And there's disease resistance in the wild soybean, such as resistance to soybean cyst nematode. So yield is number one, but all these other benefits are important, too.

In our first round of breeding, we developed a whole series of lines from the wild soybeans that are very diverse and extremely exciting from the breeder's standpoint. We've already transferred some of the materials to companies and they're starting to cross with those in their programs.
http://unitedsoybean.org/article/ancient-answers-to-modern-questions/
Dated: April 7, 2015

6. Biodiesel Pours Savings into Feed Supply

"Because biodiesel creates greater demand for soybean oil, more soybeans get crushed. The extra crush puts more soybean meal on the market, reducing feed costs.
Outlining biodiesel's impact, a checkoff-funded study found that biodiesel production saved livestock and poultry farmers up to $4.8 billion dollars through lower soybean meal costs between 2005 and 2009."
http://unitedsoybean.org/article/biodiesel-pours-savings-into-feed-supply/
Dated: May 20, 2015

7. Keep the Impact of Your Soil Nutrients Positive

Tips to keep N and P in the soil and prevent them from impacting the environment

"Most row crops require nitrogen (N) and phosphorus (P) to get an adequate supply of nutrients and maximize yield. Soybeans are no different, requiring both N and P to grow, but the application of these fertilizers could have negative effects on the environment.

In a recent video from the Plant Management Network Fernandez (University of Minnesota Assistant Professor Fabian Fernandez,) offers practices to help.

Additional N not needed

Soybeans have the ability to fix their own N in the soil, so applying additional N does not usually benefit the crop. Fernandez has studied the benefit of applying N to soybeans at different growing stages and found that it does not increase yields.

Reducing the loss of P

------- soil erosion causes major losses. Fernandez says P is usually found in higher concentrations at the surface layer of the soil, which is the same layer where most erosion loss occurs.

Other practices

Fernandez offered these additional tips that may be beneficial to reducing the loss of N and P:

- Cover crops
- Crop rotation
- Buffers, bioreactors and wetlands
- Testing soil-nutrient levels to help you apply nutrients only in the amounts they're needed

Environmental impacts

N and P can be harmful to the environment in a variety of ways, including:

Surface water: N and P can cause pollution of surface water. Runoff of these nutrients into bodies of water can support algal blooms, which can deplete oxygen levels in the water, making it unable to support fish and other aquatic life.

Ground water: N can be leached into the ground water as nitrate, impacting water resources that---- communities use for drinking water.

Air pollution: N can enter the atmosphere as nitrous oxide emissions that occur during wet soil conditions and contribute to greenhouse gases.

The soy checkoff sponsors the "Focus on Soybean" *(covering many aspects of soybean production)* webcasts *(covering many aspects of soybean production)* through a partnership with the Plant Management Network,------."

http://unitedsoybean.org/article/keep-the-impact-of-your-soil-nutrients-positive/

Dated: August 17, 2015

8. 6 Questions to Keep in Mind for Managing Weeds During Planting

Weed scientist stresses applying full herbicide rate, timing, rotating modes of action

Excerpts from this item are:

"Effective weed management is a yearlong process that begins well before planting time.

------- implement a diversified weed management plan that includes the integration of many different practices. Farmers should always apply the full labeled herbicide rate, time the application effectively and rotate the herbicide modes of action they are using. In the long term, crop rotation is

also one of the most important weed-management strategies.

A large part of herbicide effectiveness can be attributed to timing. If farmers don't catch weed problems early, they are going to be in trouble. Weeds emerge and grow very quickly, and once they reach a certain stage of growth, they can become very difficult to control.

Application of pre-emerge herbicides depends largely on the biology of the target weed. When dealing with summer annuals, for example, it is ideal to apply herbicide before the weed germinates in the spring. If farmers wait until the weed germinates at planting time, they are going to be behind. However, applying herbicides too early can also be detrimental because they degrade rapidly and can become ineffective.

Sequential applications of residual herbicides may be the best approach to control a broad spectrum of weeds and for an extended period of time.

Weather and precipitation patterns are important factors. Last spring, we had the perfect conditions for herbicide-carryover issues. Fall herbicide treatments applied in 2013 had little moisture for breakdown to occur in the spring. That lack of moisture left farmers planting into fields with herbicide residues, which caused problems with the next crop.

-------- if farmers plan to use dicamba as a pre-plant treatment for control of spring weeds like marestail, kochia and ragweeds they need to check waiting intervals and note precipitation patterns after planting to ensure they don't experience short-term carryover issues. Reading herbicide labels carefully and keeping good records of crop rotations and herbicide usage from year to year can also prevent potential herbicide carryover problems in the future.

For more planting time weed management tips visit www.TakeActionOnWeeds.com.

http://unitedsoybean.org/article/6-questions-to-keep-in-mind-for-managing-weeds-during-planting/

Dated: April 1, 2015

9. Four Helpful Weed-Management Tips for Harvest Time

"Harvest is a good time --------- to reflect on lessons learned from environmental, disease and weed pressures from the past growing season, how much yield those stresses cost and how to manage them next year. Here are four adjustments you can make to your management practices during harvest that could make your spring and summer weed management easier.

Specifically for weeds, you can be a steward of the land and get a jump on next year's weed management during this year's harvest. While harvesting your crop, it is very easy for the combine to spread weed seeds throughout your field as well as into neighboring fields.

Below,--------- four adjustments you can make to your management practices during harvest that could make your spring and summer weed management easier.

1. **Manage weeds before they take over your field.** Proactive management will improve your yields and reduce the chances of having herbicide-resistant weeds develop in your fields.
2. **Leave large patches of weeds in the field.** This will diminish the amount of weed seed spread throughout the rest of that field.
3. **Clean the combine after harvesting weedy fields.** Clean machinery transfers fewer weed seeds to other fields.
4. **Harvest the fields with the most weeds last.** Leaving the worst for last will decrease the spread of weed seed even more."

http://unitedsoybean.org/article/four-helpful-weed-management-tips-for-harvest-time/

Dated: September4, 2015

10. Seeing Is Believing

Extra cost of using multiple modes of action for weed control worth it, says applicator

" Clif Faircloth -------- a professional herbicide applicator, develop and apply a program that

-------- advocates product diversity and different modes of action. Farmers, however, usually need some convincing. "You can tell them all you want, but seeing is believing."

Faircloth says the program he favors is a herbicide mix that includes multiple modes of action. It uses chemistries that target the weeds growing in each field and problematic species like waterhemp. While farmers who sprayed for themselves may have used different products, Faircloth is convinced having the right combination and diversity made all the difference.

We tried to get the guys we sprayed for on a program that included spring burndowns with a residual and to keep a residual down at all times," ------ "We also sprayed in the fall to prevent winter annuals from using nutrients and soil moisture that could be there for the next year's crop. The weed control in our fields, that used to be infested with weeds, was dramatically better than the previous year, and it was because of the residuals that were being used."

Faircloth says it often costs $5-$10 more per acre for the program compared with what farmers were used to doing, and some balked at the additional price. But once the growers saw their clean fields, most were happy to make the switch.

"It did take some convincing, but when you broke it down, it's equal to less than a bushel of soybeans per acre, but you're losing several bushels if you let the weeds go,"

"The fold-out flyer is the most beneficial tool I have as an applicator," he says. The flyer lists sites of action, chemical family, active ingredients and trade names to help determine which products to use in particular situations. *(The article has a link to open the 'fold-out flyer').*
http://unitedsoybean.org/article/seeing-is-believing/
Dated: March 9, 2015

11. Old School Weed Control
Step 1: Know which weeds you have. Step 2: Kill them by any means necessary.

" Doing the same thing over and over again and expecting a different result isn't just one definition of insanity; it's also a recipe for herbicide-resistant weeds.
Over the past two decades, the convenience and effectiveness of post-emergence glyphosate applications led many farmers to abandon past approaches to weed control, which included using a variety of herbicide and tillage options.
"Many farmers today only know glyphosate, so we've got some training to do."

Diversifying your operation to combat herbicide resistant weeds can seem overwhelming. With the help of NDSU weed scientists, here is a top-12 list of tips for managing weeds to reduce the likelihood of herbicide resistance on your farm.

1. **Scout fields before and soon after herbicide applications –** Correctly identify weeds and use whatever means are necessary to kill weeds that escape or germinate after chemical application.
2. **Diversify crop sequences –** Crops with different lifecycles, such as winter annuals, perennial crops and summer annual crops, offer different planting and harvest times, more herbicide options and decreased risk of herbicide-resistant weeds.
3. **Consider weed biology and ecology –** Consider tillage, crop sequence, soil fertility,

planting date, crop competition, weed-seed longevity and herbicide response as you build your weed-management plan.

4. **Use effective pre-emergence herbicides –** Apply effective pre-emergence herbicides at full rates and include multiple modes of action. Pre herbicides reduce weed emergence and allow flexibility in timing of post herbicide applications.
5. **Use effective post-emergence herbicides –** Apply herbicides that include multiple modes of action in tank-mixes or in sequential applications.
6. **Use full herbicide rates –** Full rates kill weeds and dead plants cannot produce resistant progeny. Reducedrates allow plants with low-level resistance to survive and produce offspring with higher levels of resistance.
7. **Spray weeds when they're small –** Small weeds, those less than 3 inches tall, are generally more susceptible to herbicides than large weeds.
8. **Practice zero tolerance –** Scout fields after row closure and kill uncontrolled weeds, including by pulling them manually, if necessary. Seed from escaped weeds will contribute to the weed seedbank.
9. **Control weeds in field perimeters and non-crop areas –** Weeds surviving a partial herbicide dose on field borders can be a repository for the introduction of resistant weeds into a field. Control weeds in all areas of the field where crops are not growing, including field edges, fence lines and waterways.
10. **Rotate herbicides with different modes of action –** Diverse crop rotations can introduce herbicides with different modes of action to delay herbicide resistance.
11. **Use good sanitation –** Clean tillage and harvest equipment to ensure weed seed will not be transported between fields.
12 **Evaluate –** Review your weed-management results at the end of each season and revise to improve weed control next year.

These practices that can help, but fighting herbicide resistance starts with farmers knowing what they are up against.
Weed species respond differently to herbicides and tillage practices, so scouting and understanding which weeds are present sets the stage for farmers to develop a plan for eradicating the problem.

Take Action is an industrywide effort involving agricultural organizations, agri-businesses and researchers to fight herbicide resistance. The Take Action website features resources to help farmers identify weeds while highlighting options for treating them.

When it comes to diverse practices farmers should employ, weed researchers are nearly unanimous in their call for the use of herbicides with different sites of action and different chemistries. Many recommend starting off with a pre-emergence residual herbicide, followed later by a post-emergent herbicide with a different chemistry. Increased tillage is also an option for control of some weed species.
Adopting a diversified approach does require more management than relying on a single post-emergent strategy. It could also add cost, but it's an investment that farmers need to consider as part of their long-term plan.

"If growers aren't willing to spend the money to stop resistant weeds now, they'll likely spend three times that amount to try to remove them once they have them,"

http://unitedsoybean.org/article/old-school-weed-control/

Dated: March 2, 2015

12. A Simple Approach to Weed Control

Diversity key to weed-management plans

"Pat Sullivan has what he calls a “pretty simple plan” when it comes to weed control on his south-central-Minnesota farm. It may be simple, but it’s exactly what many scientists promote as the way to prevent herbicide resistance.

We use a pre-emerge herbicide on all our soybean and corn ground, then come back in post-emergence with different concoctions, using different products,” ------. ------- use different modes of action in spraying early while weeds are still small, before they become more difficult to kill.

------- paying attention to detail and doing things many other farmers aren’t. That includes hand pulling troublesome giant ragweed and waterhemp from fields and every fence line, hand spraying some areas and completely mowing road ditches twice a year to prevent weeds in those uncontrolled areas from going to seed.

These different practices are the essence of the diverse weed-management plans being promoted as a way to fight resistance. That diversity can come in many forms, including:

- Herbicide site of action
- Herbicide chemistry
- Pre-emergent herbicides
- Post-emergent herbicides
- Tillage practices
- Row spacing
- Crop rotation
- Cover crops

“------- even pulled the cultivator out and cultivated around the edge of every soybean field,” ------.

-------- not always popular when he tells his children and employees they’re going to go pull weeds that day. But the alternative is much worse.

Having a diverse weed-management plan is an important tool farmers can use to keep resistance at bay.

“Farmers need to have a diverse approach ------- a strategy that fits their weeds and utilizes herbicide diversity.”

Find some of those tools on the Take Action website, and start developing your own weed management plan."

http://unitedsoybean.org/article/a-simple-approach-to-weed-control-2/

Dated: August 28, 2015

13. **Weed Out the Competition**

"Anita Dille, Ph.D., professor of weed ecology at Kansas State University,is compiling a state-by-state analysis of yield loss from lack of weed control. Early findings from nearly 100 research plots from 2007 through 2013 show that soybean fields with good weed control averaged double the yields of weedy plots.
“Modern weed-management practices have allowed us to pay less attention to details for a while, but we’re paying for that now,” Coble says.*(Harold Coble, a farmer and weed scientist with a long history working for North Carolina State University and the U.S. Department of Agriculture.)*
We really need to pay attention to post-treatment monitoring. We can’t just spray our herbicides and then go fishing and assume everything is going to work 100 percent anymore."
http://unitedsoybean.org/article/weed-out-the-competition/
Dated: January 7. 2015

14. Lessons from Down Under

Australian farmers find diversity is the answer to herbicide-resistance management

"The message from weed scientists across the country is clear: If the issue of herbicide resistance isn't addressed soon, U.S. farmers will face a problem of terrific proportions in only a few years.

Just ask farmers in Australia.

------ to be headed down the same road as Australian farmers, who have been fighting herbicide-resistant weeds for 20 years,"
----- they built a huge sheep industry, ------- plant ryegrass across much of the country for grazing.

As the sheep industry became less profitable over the years, farms made a gradual shift to row cropping. And the ryegrass that was once intentionally planted for grazing quickly turned into their most problematic weed.

-------herbicide resistance take hold across much of Australia's cropland in the early 1990s. Farmers used only herbicides, and a small selection of herbicides at that, to control the ryegrass. It provided a temporary fix, but in the end, biology won. Today, ryegrass in many places in Australia shows resistance to seven or eight modes of action.
For years, glyphosate was the answer for many farmers. But the era of glyphosate being lights out on weeds is gone for most. As Powles *(Professor Stephen Powles, weed scientist, University of Western Australia)* simply puts it, "It was a great technology overused."

The Australian Resistance Solution

Die maatreëls behels hoofsaaklik die versameling en vernietiging van onkruidsaad deur etlike tegnieke en word kortliks bespreek in die artikel met daaropvolgend die vooruitsigte van die VSA produsente in die verband.

Norsworthy*(* J*as*on *Norsworthy, University of Arkansas Professor and Elms Farming Chair of Weed Science.)* is testing harvest weed-seed control strategies, including the use of a chaff cart and windrow burning, here in the U.S. with promising results. He predicts that a mechanism to destroy weed seeds as they exit a combine will become standard for major equipment manufacturers in the next decade.
http://unitedsoybean.org/article/lessons-from-down-under/
March 4, 2015

15. Soybean Protein 101

How do soybean plants make protein, and what can you do to help them?

"Seth Naeve, Ph.D., University of Minnesota associate professor and extension agronomist, explains how it all works.

Q: How does a soybean plant produce protein?

A: Protein is partially made of nitrogen. The soybean plant has a symbiotic relationship with bacteria in the soil, which form nodules on the roots of the plant and feed off of sugar produced by the plant. In return for food and housing, the bacteria convert nitrogen from the environment into a form the plant can use. The nitrogen compounds produced in the nodules are then absorbed by the plant, stored in the leaves and later utilized to create protein in the seed. Because of this symbiotic relationship with the bacteria, the nitrogen is basically free for the farmer. That's one of the good things about soybeans—they have a high amount of protein, which is valuable to end-users. And there's also value for the farmer because they don't have to apply nitrogen on their fields to get protein from the crop.

Q: Is there any way farmers can improve protein levels?

A: Soil type and climate may be a part of the regional differentiation we see across the U.S. Unfortunately, those are two things farmers can do little to change. However, there are several things farmers can do to increase protein levels in soybeans. Choosing a high-protein variety and selecting the appropriate maturity group are important – you want to choose plants that will mature under good conditions. Stresses during seed-filling can affect the quality of the soybeans, so minimizing the stresses of insects and disease can have a positive effect on quality. Although farmers cannot change the soil type they have, root health is important for the uptake and metabolism of nitrogen. Building organic matter in the soil will give the plant a bigger reserve of nitrogen to go to when bacteria stop fixing nitrogen at the end of the year.

Q: How are protein, oil and yield related?

A: Protein and oil are the most valuable parts of the soybean, but they're also the parts that make up the yield of the soybean. So depositing more oil and more protein on an acre basis gives us more yield. Figuring out how to make more of both will give us more profit.

http://unitedsoybean.org/article/soybean-protein-101/

Dated: August 10, 2015

16. The Price of Quality

"-------- it is crucial that farmers choose high-quality soybean varieties in order to keep quality up and demand high.

That's because demand can also add to the value soybean farmers receive.

"Quality is related to the nutrient composition of the soybean, and producing higher-quality soybean meal adds value both to the soybean farmer and animal ag."

According to soy-checkoff-funded research, if farmers increase the protein content of their soybeans by 1 percentage point, the estimated processed value (EPV) generated could increase by between $7.70 and $12.96 per acre, depending on the state. The EPV is driven by the combined value of soybean meal, oil and hulls, ---------- .
http://unitedsoybean.org/article/the-price-of-quality/
Dated: Agust 10, 2015

17. Packing a Protein Punch

Arkansas researchers develop high-yielding, high-protein soybean variety

"---------- have bred a conventional soybean variety -------.University of Arkansas soybean breeder Pengyin Chen, Ph.D., says the new variety produces soybean meal with over 52 percent protein. "We have been able to break the linkage to get both yield and high protein," ------. "Higher protein itself has not been hard to work with, but getting good protein with high yield has been a challenge."

The new variety called UA 5814HP, was developed with support from the soy checkoff. It is a maturity-group-V soybean that averaged over 58 bushels per acre in four years of testing across Arkansas. It was also tested across several other southern states, averaging 64 bushels per acre. The variety has been released to the public -------- the University of Arkansas is in discussions on possible licensing agreements. "
http://unitedsoybean.org/article/packing-a-protein-punch/
Dated: August 11, 2015

18. Surfing for Soybean Quality

Online Soybean Quality Toolbox shows farmers which varieties will produce high yield

and quality

"Lots of existing soybean varieties will give you high protein, oil *and* yield – the trick is knowing where to find them. You can always ask your seed dealer or reference a free resource, called the Soybean Quality Toolbox, at *www.GrowSoybeanValue.com.*
The Soybean Quality Toolbox is an online tool from the soy checkoff that shows how commercial soybean varieties performed in test plots across the soybean-producing region of the United States. It lists protein and oil content, along with yield, for each."

http://unitedsoybean.org/article/surfing-for-soybean-quality/

Dated: August 12, 2015

19. Six Signs There Could Be a Problem with Your Soybeans

Causes and common symptoms for soybeans stressed during *vegetative growth* stages

"Have you noticed yellowing or discoloring on your soybean plants?------- signs of insect feeding or plant death? Below are several common problems and symptoms you may observe in your plants during the *vegetative stage* ------- ." *Die artikel gee, met iluustrasies, inligting oor die simptome en moontlike oorsake van die siektes onder die volgende ses hoofde:*

Plants appear Wilted or Dead

Stems are Discolored or show Fruiting Structure

Leaves are Discolored or Disfigured

Yellowing Leaves

Leaves, Stems or Roots show signs of Insect Feeding

Abnormal Root Growth

http://unitedsoybean.org/article/six-signs-there-could-be-a-problem-with-your-soybeans/

Dated: July 27 2015

20. Possible Causes for Eight Common Soybean Problems During *Reproductive* Stages

"Evidence of insect feeding, stunted pods or damage and discoloration to leaves and stems are all problems that can present themselves during the reproductive stages in soybeans. Pests, such as beetles or mites, may be the cause, but sometimes issues come from a virus or fungus. "

Die artikel gee in tabelvorm, met illustrasies, inligting oor die simptome en moontlike oorsake van die siektes onder die agt volgende hoofde:

Pods show evidence of Insect Feeding
Pods are Stunted, Shrivelled or Discolored
Physical damage to Leaves and/or Stems
Leaves, Stems and/or Entire Plant are Discolored Stunted or show Abnormal Growth
Leaves showing Spots or Necrotic areas
Plants remain Green past maturity in parts of Field while rest of Field is Mature
Plants are Wilted or Dead with no Evidence of Disease or Nematode damage
Plants are Wilted or Dead showing evidence of Disease or Nematodes on Stems and Roots."
http://unitedsoybean.org/article/possible-causes-for-eight-common-soybean-problems-during-reproductive-stages/
Dated: July 27, 2015

More Scouting:

- Palmer Amaranth is a Big Challenge
- Armed and Ready
- Managing Weeds Prevents Losses
- Be Ready to Scout These Five Soybean Diseases
- Scouting Helps to Keep Pests, Diseases Away From Soybeans

21. Scouting Protects Yield and Profitability

"Scouting fields gives farmers a wealth of information they can use to evaluate crop progress, determine in-season pest-management treatments and amass valuable data that can aid in future planting decisions.
“We have to start scouting early since we have so many insects to deal with in the South,”------- .
“You have to be diligent and scout regularly. It makes to much economic sense not to do so.

Early scouting starts with stand counts and checking for weeds that compete with young soybeans for water and nutrients. Weed scouting has been especially important this season ----- because of frequent rainfall -------.

As the season progresses,-------- will increase scouting trips from once a week to every four days. In northern states, such as Minnesota, scouting once a week is usually acceptable,--------- .

It depends on the environmental conditions and the types of pests you may be dealing with in your area,” -------. “Weekly scouting works for many growers, but there will be situations where increased scouting is necessary. When the conditions are right, pests like soybean aphids can really explode and double populations in only a few days.”
Knowing when to spray and when not to spray is important for maintaining yield and keeping input costs down. Kansas State University Extension Row Crops Pathologist Doug Jardine, Ph.D., recommends farmers fully consider the economics of spraying before taking action.

“It’s important to have a good idea of the yield potential of the crop and the expected selling price to know whether spraying will make economic sense,” Jardine says. “A cost-return worksheet can help growers determine if spraying will make economic sense.”

“Keeping the plant healthy and happy is our No. 1 goal,”--------. So we scout early and often to keep our soybeans healthy and protect yield.”

http://unitedsoybean.org/article/scouting-protects-yield-and-profitability/

Dated: July 28, 2015

22. Scout Early, Scout Often

Scouting Patrol: Maryland farmer sticks to thresholds for efficient pest management

"“We scout every other week, unless we start to see a problem,------- . When we do, we’ll scout more often, sometimes every other day, just depending on the pressure of the pest.”

------- know the threshold for troublesome insects, diseases and weeds-------- . --------- to control foxtail, Johnsongrass, Marestail and velvetleaf. -------- uncontrolled for too long, these weeds will keep growing and can choke a young soybean crop.

“------- very cautious not to over-apply any inputs,”-----. “We have a threshold number of insects or number of weeds within a certain square footage, and we will wait to take care of the problem until it reaches that threshold.”

http://unitedsoybean.org/article/scout-early-scout-often/

Dated July 23, 2015

More on Scouting:

- Managing Weeds Prevents Insects
- Stick to Thresholds to Minimize Yield Loss from Insects
- Be Ready to Scout These Five Soybean Diseases
- Scouting Helps to Keep Pests, Diseases Away From Soybeans

23. Researchers Weigh in on Top Three Insect-Scouting Tips to Minimize Yield Loss

If an insect lands on a soybean plant but there's no one there to hear it, does it make a sound?

"------- how many bugs might be buzzing through your soybean fields right now. They may be decreasing your yields, and you don't even know it.

Our biggest shortcoming with pest management isn't what we spray or understanding thresholds," says Scott Stewart, Ph.D., the integrated pest management specialist at the University of Tennessee. "It's knowing what is out in the field."

Stewart and other researchers agree that scouting is one of the most effective management practices to minimize yield loss from pests. Yet, too often, farmers don't utilize the practice.

> "The most important thing that farmers can put on their fields is their shadow," says Mo Way Ph.D., an entomology professor at Texas A&M University.

------- three best management practices ------ recommend for effective insect scouting:

Scout early, scout often

Regular scouting and documentation of pests helps farmers know what's happening in their fields, determine if economic thresholds have been reached and decide whether to apply treatment. Scouting also helps detect non-insect related problems like weed issues, disease and nutrient deficiencies.

"Scouting activities should be performed at least weekly, especially during critical times," ------. "Farmers should pay special attention to scouting their fields the first two weeks after planting and from the full-bloom (R2) through full-seed (R6) growth stages when soybeans are the most susceptible to pest damage."

------- suggests that farmers scout in several areas of their fields, not just the edges.

"Farmers should visually inspect the edges, middle and corners of their fields," ------ . "Walking through the field diagonally will give farmers a good idea of any problems they may be encountering."

Look for changes

Farmers should monitor their fields for stand loss, defoliation and significant changes in insect density, which can signal the need for field treatment.

"Some fields may be clean and won't need to be checked as often," ------ . "But others may need to be monitored more often as insects appear and thresholds are reached."

------ insects should not be treated until thresholds are reached.

"A soybean field is like an insectary and is full of both pests and beneficial insects," -------. "By scouting, a farmer can delay pesticide applications and preserve the number of beneficial insects while reducing the pesticide load on the environment."

Use the proper tools

While visual checks are beneficial early in the growing season, researchers suggest using a sweep net or drop cloth once soybeans have matured to accurately determine insect population estimates.

“Once soybeans reach between knee and waist high farmers should begin using a sweep net during scouting,” ----- . “I recommend that farmers use semicircular sweeps; they should consecutively sweep in a figure-eight pattern while walking down the row.”

http://unitedsoybean.org/article/researchers-weigh-in-on-top-three-insect-scouting-tips-to-minimize-yield-loss/

Dated: July6, 2015

24. Stick to Thresholds to Minimize Yield Loss from Insects

"Entomologists develop thresholds to help farmers determine when insect-control treatments will bring an economic benefit.
Thresholds are a valuable tool for insect control that allow farmers to make better management decisions, reduce negative environmental impact and reduce unnecessary input costs.

Here’s what researchers recommend

Only apply an insecticide after thresholds are met:

- Applying insecticides before thresholds are met can sharply increase input costs without getting a noticeable yield benefit in return.

Apply effective insecticides:

- Many insecticides and insecticide classes exist to control insect pests. Always consult the most up-to-date insect information and options from your local extension service or retailer.

Know your insects:

- Each insect pest has unique characteristics and targets different areas of the soybean plant. Know where and what to look for with specific insect pests.

For the most up-to-date threshold information contact your state or local extension office."

(This type of information for the local situation would be essential).

http://unitedsoybean.org/article/stick-to-thresholds-to-minimize-yield-loss-from-insects/

Dated: July8, 2015

25. Checkoff Studies Soybean-Honey Bee Relationship

Preliminary research results show soybean yield bump from honey bees

"The world of agriculture is abuzz with interest in honey bees these days.

Iowa State University entomologist Matt O’Neal, Ph.D., is directing checkoff-supported research ----- .-------- investigating the impact that the placement of honey bee hives near soybean fields has on soybean yield, as well as the impact that different types of landscapes around those fields has on honey bee health.

Last summer, limited trials in Ashton, Illinois and Clarion, Iowa revealed yield gains of 8 percent in soybean fields with hives placed in close proximity. Those trials followed a Brazilian study from 2005 that reported an 18 percent yield bump.
http://unitedsoybean.org/article/checkoff-studies-soybean-honey-bee-relationship/
Dated: June16, 2015

26. Leading Experts Stress Need for Cooperation on Honey Bee Health

"Amid a tide of bad news about honey bee health and criticism of production agriculture, new science indicates it is possible for soybean farmers and beekeepers to work together in a mutually beneficial way and maintain vital honey bee populations.
------- two things ------soybean farmers to know about the relationship between row-crop farming and honey bees:

1. Proper use of pesticides doesn't threaten bee populations.
2. Farmer communication with local beekeepers is vitally important.

Seeking Answers for Bee Population Decline

------ the current problems began almost 10 years ago.

"Between 2006 and 2008, we started seeing a really disturbing phenomenon — hives were dying out during the summer,"

------ honey bees have an estimated $15 billion impact on agriculture, it's understandable that any unusual population decline would set off alarm bells.

This trend was eventually named Colony Collapse Disorder (CCD),-------- pointed the finger at a category of pesticides known as neonicotinoids, or neonics. Primarily deployed as a seed treatment for corn and soybeans, neonics were introduced during the early 1990s specifically because of their minimal impact on agriculturally beneficial insects, like pollinators.

CCD has declined in recent years, but bee populations are still a concern -------- data from 2014 show high levels of winter and summer mortality.

------- a combination of factors is responsible for the declines.-------- much larger issue than just pesticides," -------- other factors that correlate strongly with bee population decline, including habitat loss, varroa mites and viruses.

As a result, the ag industry is marshalling resources to investigate.------ meaning the nation's premier public research institutions are now focused on the problem. More attention and research dollars are also being dedicated by the private sector, including:

- Bayer Crop Science
- Honey Bee Health Coalition
- The Keystone Group
- Monsanto
- Pollinator Partnership
- Syngenta

------ communication and collaboration will be crucial in tackling this major challenge to agriculture.

------- beekeepers themselves have had to resort to pesticide use to control the varroa mites, a honey bee parasite. Whereas the mites have a mutually beneficial relationship with Asian species of honey bees, they have a negative impact on developing hives of European honey bees, necessitating the use of miticides. This complicates discussions of the contributing factors involved with honey bee health.

Recently, the Environmental Protection Agency proposed a rule change regarding pesticide use that would restrict spraying when bee colonies are nearby during the flowering phase of crops."

http://unitedsoybean.org/article/leading-experts-stress-need-for-cooperation-on-honey-bee-health/

Dated: June16, 201518.

27 Inputs vs. ROI

A lot of predictions for the 2015 crop season and beyond have an element of doom and gloom to them, with crop prices down while input prices invariably continue to rise.

"The first input farmers want to cut is fertilizer," -------, "but that's the last one they should cut. The next one they want to cut is pre-emergence herbicides, but that's bad, too."

-------- a decreased seeding rate is a good place to look for savings. "----- project results show that maximum yield can still be achieved with lower plant populations."

The best decisions are the ones that result from scouting. Timely applications of products, based on real-time information from your fields, often better address problems and likely result in some savings.

The bottom line: Using inputs on a calendar system will likely hurt your bottom line, not help it. Think about what has and has not worked in your fields previously, scout your fields and address problems as they arise for the best chance of success.

http://unitedsoybean.org/article/inputs-vs-roi/

Dated: June10, 2015

28. Soil Tests Pay Dividends

Shortly after planting is a perfect time to get the details on your soil

"Although soils vary, there are a few principles that most farmers can apply. They all start with a soil test and end with patience.

Right now, with crop prices down and input costs high, farmers will really need to look at soil tests a lot closer.
"Information acquired from a soil test can be used to decide which crop and varieties to plant, which fertilizers to use and what kind of tillage practices to implement."
Soil testing can be done at various times of the year, ------ prefers right after planting. Soil conditions are ideal, farmers have time to get data analyzed and have more options for fall. As crops get taller in the summer, it is more difficult to sample.

The article continues to discuss this subject undder the headings: Balance pH, Organic matter matters, Soil Structure is Foundation, FertilityCounts, Invest the Time.

http://unitedsoybean.org/article/soil-tests-pay-dividends/

Dated: March 25, 2015

29. To Till or Not to Till

Farmers balance weed management, crop performance and sustainability on their farm

"Farmers are moving toward no-till practices, but many still rely on tillage to control weeds. Purdue University associate professor Bryan Young, Ph.D., says the deep-till method buries the weed seeds deep enough where many can't germinate.

"In a deep-tilled environment, you may be removing about 80 percent of the weed seeds from the germination zone, which alleviates some of the pressure for the following year, but might increase the weed seed longevity in the soil over the years beyond that," ------

Although tillage is seen as a useful weed management tactic, farmers still have a tough decision to make because reducing tillage can improve crop performance as well as farmers' sustainability.

“We recommend no-till soil practices because it uses less fuel, conserves soil, builds soil structure and holds more water, all of which can improve yield,” says Brad Soncksen, assistant state conservationist at Natural Resources Conservation Service in Nebraska. “It also protects the soil from erosion by maintaining crop residues on the surface, allows the soils to hold more carbon and increases organic matter.”

(Conservation tillage has grown from 17 percent of US soybean acreage in 1982 to 63 percent today).

http://unitedsoybean.org/article/to-till-or-not-to-till/

Dated: March 3, 2015

30. Sudden Death Syndrome Management: What Works?

Researcher sorts through which practices make an impact on soybean yields and which dont.

"------- presentation for the Plant Management Network, Daren Mueller, Ph.D., extension field crop pathologist at Iowa State University, used the latest research results to sort through the best management methods to help you protect your soybean yields from SDS.

Variety Selection
Bottom Line: Variety selection is the No. 1 way to protect fields from SDS. Pick the most resistant varieties available for your area.
Fungicides
Bottom Line: Ask your retailer about seed treatments right for your farm.
(Two of the products evaluated – ILeVO® and Luna Privilege in-furrow, which has the same active ingredient as ILeVO but is not commercially available – did reduce SDS when it was present,” he says. “No other foliar applications or products worked as well. This gives us hope that there are now seed treatments commercially available and products in the pipeline that may manage SDS.”)
Planting Date
Bottom Line: Do not delay your planting schedule, but plant fields with a history of SDS last.
Glyphosate
Bottom Line: Glyphosate has no impact on SDS under field conditions.
Tillage
Bottom Line: The type of tillage strategy you use does not affect SDS severity .
Crop Rotation
Bottom Line: Long-term crop rotation reduces the incidence and severity of SDS.
http://unitedsoybean.org/article/sudden-death-syndrome-management-what-works/
Dated: June 1, 2015

31. ID that Bean Stage

Knowledge of soybean growth can make a yield difference

"If you’ve been making management decisions for your soybeans based on the height of the plants instead of the growth stage, you could be leaving some yield in the field. Identifying soybean growth stages is essential for proper management of pests and environmental problems and for optimizing yield.
Soybean development can be divided into vegetative (V) and reproductive (R) stages. Vegetative growth stages start at soybean emergence; reproductive growth stages start with the first flower. These growth stages can overlap. When determining the growth stage of a crop, remember that a growth stage begins when 50 percent or more of the plants are in or beyond that stage.

Once you know how to spot the growth stages of your beans, you can better understand the effects stress will have on the crop at each growth stage, which is important in optimizing yield.

More on SCN Management:

- 5 Tips for Protecting Your Soybean Yield from SCN
- Proper SCN Management Helps Minimize Soybean Yield Loss
- Two Pests in a Pod

The article gives a brief illustrated review of each of the various consecutive vegetative and reproductive growth stages.

http://unitedsoybean.org/article/id-that-bean-stage/

Dated: June 2, 2015

32. Seed Treatments Can Help Farmers Manage SCN

Field trials show soybean-yield bump, decrease in SCN population

"But recent field trials by the Iowa Soybean Association (ISA) On-Farm Network and Iowa State University give reason for optimism that farmers can manage the disease.

The project examined the effectiveness of the Clariva™ seed treatment in field trials across Iowa during the 2014 growing season. While not all plots exhibited an increase in yield compared with the control plots, Clariva-treated soybeans exhibited an average yield increase of 0.6 bushels per acre, with two-thirds of the trials producing a yield bump in response to Clariva.

“These are promising results in a year where there was plenty of moisture,”------ noting that bigger yield differences should be seen in drier years as roots compromised by SCN limit water uptake.

The Clariva field trials also resulted in a 50 percent lower SCN population compared to the control treatment, on average, across all the trials.

“With one year of data, I think these are promising results to show farmers that there is some control of SCN,” ------- .

------- SCN is considered to be the most damaging and challenging soybean pathogen in the U.S. because of its unique biology and genetic diversity. The life cycle of SCN correlates with the growing season, allowing up to six generations per year. One female will produce more than 200 eggs, which are laid in the soil and can hatch immediately or even as many as 10 years later.

Battling SCN on your farm? Learn how a seed treatment can help manage SCN populations and boost yields.

Executive summary versions of all Focus on Soybean webcasts are available for free to all U.S. soybean farmers through a partnership between the Plant Management Network and the soy checkoff.
http://unitedsoybean.org/article/seed-treatments-can-help-farmers-manage-scn/
Dated: May 11, 2015

33. Invest in a Soil Test, Advises Agronomist

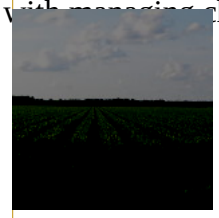
Six things to consider when managing soil fertility

"While there are several benefits to soil testing, less than half of U.S. cropland is sampled regularly, resulting in mismanaged soil fertility.”
Consider the potential gain in yield or reduced fertilizer cost versus the cost of sampling and testing. Only invest in what will truly pay off,”------ .
The article briefly discuss six points about sampling for testng and application.

Learn More
Check out this series of short videos for help with managing charcoal rot:

- Overview
- Identification in the field
- Management options
- Yield loss
- Life cycle of charcoal rot

Over half of crop yields can depend on soil fertility.



Click here

http://unitedsoybean.org/article/invest-in-a-soil-test-advises-agronomist/
Dated: May 4, 2015

34. Do's and Don'ts of Phosphorus Management

"------ the latest thinking from agronomy experts regarding phosphorus in soybeans.

Fred Below, Ph.D., professor of plant physiology at the University of Illinois, believes pre-season phosphorus applications offer benefits throughout the season. Phosphorus is critical for root development and seed development and growth. "Soybean plants need high amounts of phosphate when they're growing vegetatively early in the season, but almost half of that phosphorus is actually accumulated during pod fill,"------ .

Soybeans need phosphorus all season long.

Farmers should avoid the temptation of saving on application costs by fertilizing just once per corn/soybean crop rotation. -------- fertilizing both corn and soybeans based on soil tests and crop-removal rates could pay through better yield.

Phosphorus losses occur through soil erosion and runoff.

Phosphorus tends to bond with soil particles, so the primary means of loss are soil erosion and surface runoff. "Phosphorus on the surface will attach to soil particles,------. "Phosphorus is essential to raising high-yielding soybeans, but farmers must be diligent in managing it to ensure it is available for the crop."

Although some phosphorus remains in the soil after harvest, the level is minimal with soybeans. ---- soybean harvest removes 80 percent of the phosphate the plant takes up — the highest of any single mineral nutrient — leaving only 20 percent returned to the soil in residues. "The soybean plant typically removes 0.59 pounds of phosphorous per bushel," ------. ------- the higher the yield level, the greater the nutrient removal rate."
http://unitedsoybean.org/article/dos-and-donts-of-phosphorus-management/
Dated: March 25, 2015

35. Don't Let Charcoal Rot Leave You High and Dry

Identification and prevention are the best ways to manage soybean disease that blocks water flow

"Charcoal rot is more of a dry-year-type of disease," says Damon Smith, Ph.D., extension field crops pathologist at the University of Wisconsin-Madison." It can infect the plant in all types of conditions, but the dry years are when we see the most damage."
------- work on a project supported by the soy checkoff and North Central Soybean Research Program (NCSRP) to help farmers manage the disease.

“Awareness is so important,” -------. “Farmers have to know what fields have the disease so they can make better decisions the next time that field goes into soybeans.

Charcoal rot is a disease best diagnosed by splitting the stem of a soybean plant in half and looking for black spots inside. Those flecks are fungi that can block the flow of water and nutrients into the plant.

Identifying charcoal rot by looking at plants from the outside is more difficult. Visible clues don’t appear until late in the pod-fill stage. They include reduced vigor, yellowing and wilting – typically in a patchy distribution within fields. Premature plant death with leaves still attached is the most common symptom.

Preventative Management

Once discovered, most of the best management tactics against the disease don’t come until after the crop has been harvested. No fungicides or seed treatments have shown the ability to control the disease.

Instead, here are a few practices that can help:

- **Plant resistant varieties –** Scientists have found varieties with partial resistance, but they work best when combined with other strategies.
- **No-till –** Untilled fields usually offer better microbial activity, nutrients and moisture capacity, all of which can reduce the severity of charcoal rot.
- **Irrigation management –** Supplemental irrigation can slow the disease’s infection of a plant as well as the damage it causes, particularly during drought conditions.
- **Crop rotation –** Rotating to non-host crops, such as wheat, is a must in problem fields. And while corn, grain sorghum, sunflowers and other crops can also be charcoal rot hosts, certain strains of the disease show preference for certain crops. That means, depending on which strain is present in your field, rotating to even a host crop can help manage charcoal rot.
- **Seeding rates –** Lower rates won’t prevent charcoal rot infection, but it will decrease plant stress, minimizing loss.

“The biggest thing you can do is choose varieties with good resistance,” says Smith. “In-season, there’s nothing farmers can do on the back end of it. We’re trying to help people identify the disease so they can make some management decisions the next time there are soybeans in that field. It’s all preventative.”

Research for New Methods

“We’re continuing to look at research from the perspective of resistant varieties, as well as we’re looking at fungicides, seed treatments and in-furrow products,” ------.

http://unitedsoybean.org/article/dont-let-charcoal-rot-leave-you-high-and-dry/

Dated: May 27, 2015

36. Soybean Farmers Attest to Cover-Crop Benefits

Weed control, nutrient management and six more perks of planting cover crops

"Cover crops provide numerous benefits for the soil, including reduced erosion, improved ability to hold water and greater organic matter. But some soybean farmers still aren’t sure whether they’ll return the investment.

Here are eight cover crop benefits *(three soybean farmers)* cited during a recent panel discussion:

- ------ convert cover crops into dollars is through animals.

- Cover crops keep costly nutrients from escaping into the water. “We paid for them; we need to stop the leaks -------. -------- the earlier you plant the cover crop, the more nutrients it will absorb.
- ------- received 4 inches of rain in less than an hour at least once each year since 2010. ------ farm wasn’t able to handle that much moisture – until ------ started planting cover crops.
- The roots of a Tillage Radish® – when planted early enough – can stretch more than 6 feet into the ground. So that **plant can pull deep-lying nutrients** closer to the surface, where cash crops can use them. ------ cover crops in general make potassium and phosphorus more available, ------. And cover crops in the legume family produce nitrogen -------.
- Cover crops make a crop rotation more diverse. That leads to more diversity of insects, most of which are beneficial for production, such as pollinators and predatory insects that feed on insect pests. For every one harmful insect for agriculture, there are 1,700 beneficial bugs, ------.
- -------- cover crops are all about conservation and sustainability, which helps farmers meet customer demand. “Our customers are asking for sustainability – decreasing erosion and nutrient loss and improving soil health.”
- ------- cereal rye provides excellent weed control. . One of the things -------cover crops can do is provide excellent weed suppression, especially on those tough winter annuals.
- Cover crops come in handy during **weather catastrophes**. For example, when hail destroys a field and it can’t use all the nutrients you applied, ------ cover crops will absorb them and keep them in the field. ------- research plots ------- have proven that cover crops improve yield during drought years.

For more information on cover crops from the U.S. Department of Agriculture’s Sustainable Agriculture Research and Education program, visit www.sare.org/covercrops.

http://unitedsoybean.org/article/soybean-farmers-attest-to-cover-crop-benefits/

Dated: March 16, 2015

37. Clearing the Air with Soy-based Products

"The American Lung Association of the Upper Midwest (ALAUM) believes good lung health begins at home, or more precisely inside the homes of all consumers. The organization says soy-based products are a great way to breathe easier.

“Biobased products made with soybean oil contain less toxins and harmful chemicals than petrochemicals,”---------.“Using them improves indoor air quality and lung health.”

To get the message across, ALAUM partnered with the soy checkoff to produce an educational video on the benefits of soy-based products. Featuring a close-up look at the Soy Clean production facility in Brooklyn, Iowa, the video details the many places in a home where soy-based products can improve indoor air.

The soy checkoff invests in research -------- resulted in the commercialization of building materials that eliminate formaldehyde, a possible carcinogen, from wood paneling, laminate flooring and plywood.

Some soy-based products also reduce volatile organic compounds, which improves air quality. Using soy-based cleaners and other household products reduces irritants in the air, ------ important for people affected by lung diseases.

Use the checkoff’s 2015 Soy Products Guide to find and use soy-based products.. Or click on the *Soy Inside* website hosted by The Ohio Soybean Council and follow the beans to learn how to improve indoor air quality to breathe easier.

http://unitedsoybean.org/article/clearing-the-air-with-soy-based-products/

Dated: February 24, 2015

38. Gains in Biodiesel Industry Add Up For Rural Areas

Biodiesel plants support their communities by providing jobs, market for soybeans

"------- more and more rural communities have seen the biodiesel industry bring jobs and revenue into small towns.-------- keeping the plant operational means------- buy enough soybeans from local elevators to crush 70,000 bushels per day," ------- . "That is well over 1,000 acres of soybeans a day– all from a 50-mile radius." ------- tens of thousands of people that work in this industry and the countless farmers whose soybeans feed many of the nation's biodiesel plants,

------- providing jobs that might otherwise not be available in smaller communities. ------ include highly skilled jobs, such as scientists, chemists and lab assistants to oversee chemical blending and engineers to facilitate each plant's research and development.
Currently the biodiesel industry helps maintain more than 60,000 U.S. jobs and $2.6 billion in wages, adding up to $16.8 billion in total economic impact, much of which benefits small, rural communities.

------- data from the Environmental Protection Agency (EPA), U.S. biodiesel production for 2014 is expected to match 2013's production. In the first nine months of the year, the industry produced approximately 1.13 billion gallons.
http://unitedsoybean.org/article/gains-in-biodiesel-industry-add-up-for-rural-areas/
Dated: January 26, 2015

American Soybean Association (ASA)

1. ASA Praises House Passage of Safe and Accurate Food Labeling Act

"The American Soybean Association (ASA) welcomes a vote today from the House of Representatives to approve H.R. 1599, the Safe and Accurate Food Labeling Act, which would establish a national, voluntary framework for the labeling of foods either containing or not containing genetically engineered ingredients.

"The passage of the Safe and Accurate Food Labeling Act is a significant victory for the freedom of soybean farmers to make the most of the broad range of advances that biotechnology provides for our industry," --------. look forward to working with our partners in the Senate to advance this legislation to the President."

The legislation would require developers of genetically engineered plants to obtain FDA safety clearance on all new plant varieties before those foods are introduced into commerce; uphold FDA's authority to specify special labeling if it finds a health or safety risk is posed by such a variety; create a legal framework governing the use of label claims regarding either the absence or presence of GMOs in a food product; require FDA to define the term 'natural' on food labels.

https://soygrowers.com/asa-praises-house-passage-of-safe-and-accurate-food-labeling-act/

Dated: July 23, 2015

2. USDA Selects ASA's WISHH to Develop West African Poultry & Feed

The U.S. Department of Agriculture (USDA) has chosen the American Soybean Association's

(ASA) World Initiative for Soy in Human Health (WISHH) Program and key partners to implement a major poultry development project in the West African country of Ghana. U.S. soybean growers, as well as Ghana's poultry and feed industry, and its protein-seeking consumers, will all benefit.

https://soygrowers.com/usda-selects-asas-wishh-to-develop-west-african-poultry-feed-market/

Dated: August 25, 2015

3. In Trans Fat Decision, FDA Adds Time for High Oleic Soybean Oil to Meet Market Needs

"Following a final ruling from the U.S. Food and Drug Administration today that rescinds the generally regarded as safe (GRAS) designation for partially hydrogenated oils (PHOs), the American Soybean Association (ASA) noted the industry's ongoing progress at removing trans fats from American diets, and thanked FDA for the three-year time period – until June of 2018 – for the food industry to replace most uses of PHOs. ASA believes this compliance period will allow the U.S. soybean industry to ramp up production of high oleic soybean oil that can safely replace PHOs and highly saturated fats such as palm oil in many food applications."

https://soygrowers.com/in-trans-fat-decision-fda-adds-time-for-high-oleic-soybean-oil-to-meet-market-needs/

Dated: June 16, 2015

4. ASA, NCGA: IARC Pesticide Findings Create Confusion, Fear Among Consumers

"American Soybean Association (ASA) Chairman Ray Gaesser and National Corn Growers Association (NCGA) President Chip Bowling issued the following statement in anticipation of a second finding by the International Agency for Research on Cancer (IARC) that would classify another safe, important pesticide as a probable carcinogen:

"We are concerned, however, that a pending announcement from the U.N. World Health Organization's International Agency for Research on Cancer will only lead to more confusion and concern about two widely-used herbicides that have been mainstays for farmers for decades. "That's what happened recently with IARC's review of the herbicide glyphosate, the generic form of Roundup®, Touchdown® and several other branded herbicides. IARC classified glyphosate as a "probable carcinogen."

Following the IARC report, activists called for EPA to consider immediately pulling glyphosate from the market despite an overwhelming response from scientists acknowledging the safety of the product. We're concerned the same thing may happen again this month when IARC is going to release the findings of its review of several more substances, including 2,4-D, dicamba and other crop protection tools.

"These important herbicides – glyphosate, 2,4-D and others under review – have been the subject of hundreds of scientific studies and regulatory reviews. Government regulatory agencies charged with protection of public health in more than 100 countries have evaluated the science and concluded that 2,4-D and glyphosate do not increase health risks when used as directed. In fact, no government in the world considers them carcinogens. That includes U.S. EPA, the European Food Safety Authority, Health Canada and the World Health Organization (yes, the same World Health Organization that oversees IARC).

https://soygrowers.com/ncga-asa-iarc-pesticide-findings-create-confusion-fear-among-consumers/

Dated: June 3, 2015

5. 17 Trait Approvals Cap Wild Week for Biotech in Brussels

"---------- the American Soybean Association (ASA) welcomed news out of Brussels today that the EU has approved 17 biotechnology traits for import. The traits, which include the Plenish and Vistive Gold high-oleic soybean varieties, as well as dicamba-tolerant and omega-3 soybeans, have been in the EU approval process for multiple years.

The 17 products approved by the European Commission today have been pending for 69 months on average despite EU laws and regulations that foresee an 18-month time period for a decision .

“On the other hand, however, this announcement means little if the EU persists in its current unscientific and delayed approval process for new varieties developed through biotechnology. Today more than 40 additional GM applications for import, submitted by various companies, remain pending in the EU system.

“Additionally, the action taken by the EU Commission earlier this week that would allow each of the EU’s 28 member states to “opt-out” of allowing imports of a fully approved, safe GM product is a giant step backwards. We believe that if that proposal is adopted, it would be in clear violation of the EU’s obligations under the World Trade Organization and would negatively impact U.S. soy exports to Europe."

https://soygrowers.com/17-trait-approvals-cap-wild-week-for-biotech-in-brussels/

Dated: April 24, 2015

6. Growers Invited to Sign Up for a New Field Trial Program to Help Address Weed Resistance Challenges

"ASA welcomes Valent U.S.A. Corporation as a new industry partner --------- . ------- Valent is demonstrating their support for ASA, --------- through an opportunity for ASA members to participate in a field trial program. The program will help address weed resistance challenges and advance soybean yields, while also providing members with the chance to try Valent’s *Fierce*® XLT Herbicide.

-------- Valent would like to enroll up to 75 growers to participate in the *Fierce* XLT Field Trial Program during the 2015 growing season. ----------evaluate how the application of *Fierce* XLT as part of a pre-plant burndown program, or as a pre-emergence herbicide, can increase yield potential by providing greater control of ragweed and Amaranthus.

At the completion of the program, growers are provided with a report on the total results of the field trials. Valent will provide a complimentary supply of *Fierce* XLT for all acres enrolled in the field trial. Growers participating in the program who report their yield results and weed control by species will also receive a $100 Visa gift card and a warm *Fierce* XLT jacket."

(Rather an unusual activity for the ASA!)

https://soygrowers.com/growers-invited-to-sign-up-for-a-new-field-trial-program-to-help-address-weed-resistance-challenges/

Dated: March 5, 2015

7. ASA Calls on European Union to Issue Import Approvals for 13 Biotech Traits Without Further Delay

"American Soybean Association (ASA) and fellow farm groups urged that draft import authorizations for 13 new biotechnology products be considered without further delay by the EU’s College of Commissioners. Import authorizations ------- including soybeans, corn, canola and cotton, are pending, some for well over a year. The ASA and the other groups noted that, while the

process for approving new biotech traits had slowed in recent years, it now appears to have come to a "complete stop."

"All of these products have received positive European Food Safety Authority (EFSA) scientific assessments and have been considered by the Standing Committee on the Food Chain and Animal Health and the Appeals Committee," wrote the groups. "Timely action by the European Commission will avoid the risk of disruption to the essential supply of feedstocks needed by the EU's livestock, poultry and feed industries, which are more than 70 percent dependent on imported protein."

https://soygrowers.com/asa-calls-european-union-issue-import-approvals-13-biotech-traits-without-delay/

Dated: March 13, 2015

US Soybean Federation (USSF)

Nothing to Report

Research Results fromUSDA-ARS Beltsville, MD

1. A New Search Engine For Agricultural Research - USDA

Scientists and researchers in the agricultural fields may have an easier time accessing scientific information from the federal government thanks to a new free search engine [1] created by the Department of Agriculture's Agricultural Research Service.

PubAg [2], as the easy-to-use search engine is called, enables users to search and access over 40,000 scientific journal articles by USDA scientists between 1997 and 2014. Newer articles will be added as they are published.

With PubAg, which was designed with user friendliness in mind, USDA hopes to accommodate a wide variety of users, such as farmers, scientists, academicians, students and members of the general public. One not even need to register a username or password to access the database.

Subject areas [3] covered within PubAg's data base include nutrition, food safety, food quality, animal and crop production and protection, natural resources, sustainable agricultural systems, rural development, agricultural economic and policy issues, agricultural imports and exports, agricultural statistics, extramural research, and extension education.

Information and materials located through PubAg will be released in two phases. Phase I will allow searchers to access up to 340,000 peer-reviewed articles related to agriculture scientific findings between 2002 and 2012. NAL has taken 4 million citations from its database for the Phase I release.

Phase II is scheduled for 2015 and will feature the remainder of National Agricultural Library's (NAL) bibliographic records.

Source: GCN

Links:

1. http://www.ars.usda.gov/is/pr/2015/150113.htm
2. http://pubag.nal.usda.gov/pubag/home.xhtml
3. http://pubag.nal.usda.gov/pubag/static/FAQ.html

http://ritefmonline.org/a-new-search-engine-for-agricultural-research-usda/?upm_export=print

Dated: January 21, 2015

2. New Technique for Mining Health-conferring Soy Compounds

"A new procedure devised by U.S. Department of Agriculture (USDA) scientists to extract lunasin from soybean seeds could expedite further studies of this peptide for its cancer-fighting potential and other health benefits.

In addition to inhibiting certain cancerous cells in laboratory tests, lunasin has demonstrated anti-inflammatory activity that may prove helpful in the battle against some chronic diseases. Unfortunately, obtaining sufficient amounts of lunasin has been a costly, time-consuming and laborious affair. This, in turn, has impeded lunasin’s investigation in large-scale animal and human clinical trials, according to Hari Krishnan, a molecular biologist with USDA’s Agricultural Research Service (ARS), Plant Genetics Research Unit in Columbia, Missouri.

Now, however, Krishnan and ARS colleague Thomas Wang report their development of a fast new procedure for extracting lunasin in amounts suitable to conduct these trials."

http://www.ars.usda.gov/is/pr/2015/150722.htm

Dated: July 22, 2015

3. Fast New Approach to Formulating Pest-Killing Fungi on Tap

"Technological advances by U.S. Department of Agriculture (USDA) scientists are continuing to improve the way beneficial fungi are formulated for use as biopesticides.

Over the past decade, however, microbiologist Mark Jackson and colleagues at USDA's Agricultural Research Service (ARS - National Center for Agricultural Utilization Research in Peoria, Illinois.) have experimented with the use of liquid culture fermentation (LCF), an approach that's enabled them to mass-produce stable, effective spore forms called "blastospores" and resting structures such as "microsclerotia."

------- microsclerotia are especially durable, long-lasting during storage, and effective as bioinsecticides and bioherbicides. LCF has also proven to be faster and more economical to use, yielding blastospores or microsclerotia in two to three days versus the ten to fourteen days needed to produce conidia ---------. Replacing hydrolyzed casein and other expensive nitrogen sources with low-cost cottonseed flour also reduces production media costs by 80-90 percent, -------.

---------- ollaborations with visiting scientists Gabriel Mascarin (Brazilian Agricultural Research Corporation, a.k.a. "EMBRAPA") and Nilce Kobori (National Council for Scientific and Technological Development) showed that LCF can also be a cost-effective way to produce spores of U.S. and Brazilian strains of *Beauveria, Isaria,* and *Trichoderma* fungi.
-------- LCF cultures of *Beauveria* killed silverleaf whitefly nymphs 25 percent faster than the conidia. Fewer blastospores were also required. -------- under appropriate LCF conditions, *Trichoderma* can form microsclerotia suitable for use as a seed coating or soil-incorporated granules to guard against plant diseases.
http://www.ars.usda.gov/is/pr/2015/150408.htm
Dated: April8, 2015

National Institute for For Food and Agriculture

1. NIFA Awards more than $4 Million in support of Nutrition Research

"University of Arizona, $499,993.

| Collaborate with Purdue University to test hypoallergenic soybeans in swine to discover the potential and protocols by which hypoallergenic lines of soybeans can be used to build immunotolerance to later exposure to conventional food soybeans."

http://nifa.usda.gov/sites/default/files/resource/AFRI%20Nutrtition%20Release%202015%20Fact%20Sheet%20P2.pdf
Dated: April 23, 2015

2. Symptoms of Sudden Death Syndrome Begin to Appear in Soybeans

Die artikel gee kortliks die verloop en simptome van die siekte (met fotos).

" Management decisions must be made before the growing season begins.
The best way to manage SDS is to plant the most resistant varieties possible. Soybean varieties vary considerably in their level of genetic resistance. Seed companies typically provide SDS resistance ratings. To provide impartial SDS resistance ratings to help soybean producers more easily compare varietal resistance among seed brands, teams led by Drs. Jason Bond of Southern Illinois University and Silvia Cianzio of Iowa State University evaluated more than 500 soybean varieties (MGs 0 to V) from 19 different seed companies. Results from these 2014 check-off sponsored trials are posted here *.(19 page document)* Results from the 2015 trials are to be compiled and released in October in time for producers to use while making their 2016 seed purchases.

Research has also shown that SDS may be more severe in fields that also have high populations of the soybean cyst nematode (SCN). Monitoring SCN populations and planting SCN-resistant soybean varieties can also be important components to managing SDS.

The newest tools available for managing this disease are fungicidal seed treatments labeled specifically for SDS. While a University of Illinois Extension Plant Pathologist, Dr. Carl Bradley (now at the University of Kentucky) and his team conducted several SDS seed treatment trials. In these trials, the active ingredient in ILeVO (fluopyram) showed efficacy against SDS. Other SDS seed treatments are also currently being evaluated."

http://bulletin.ipm.illinois.edu/?p=3370

Dated: July 28, 2015

3. Slowing the Evolution of Weed Resistance to Herbicides

"The magnitude of herbicide resistance is best measured on a worldwide scale. The most recent summary indicates 450 unique cases of herbicide resistance—encompassing 245 species—occur globally. Approximately 11–12 cases of unique resistance are discovered each year. Methods employed to detect and study the evolution of herbicide resistance have improved greatly over time, but our understanding of the epidemiology of herbicide resistance has lagged. "

This article evaluates briefly the approaches to this matter and should be read in full. The concluding sentence reads:

"In other words, even if you have large populations of waterhemp in your field, or a neighbor with glyphosate-resistant waterhemp in their field, you can keep glyphosate-resistant waterhemp at bay if you implement appropriate weed management strategies."

http://bulletin.ipm.illinois.edu/?p=3037

Dated: April 20 2015

4. Soybeans and Nitrogen Fertilizer-Again

"------ our research at the University of Illinois has rarely shown a benefit in yield to applying N fertilizer during the middle part of the season. But it seems that some people, perhaps reacting to

testimonials of high yields after using N fertilizer in the high-yield conditions of 2014 remain convinced that adding N fertilizer "makes high yields higher."

Of course, most producers who got high yields – 20 Illinois counties averaged 60 bushels per acre or more in 2014, with Piatt County reporting an average of 69.2 – did so without using N fertilizer. But the idea that soybeans can't produce high yields and at the same time fix all of the N that they don't get from the soil is apparently a compelling one, even though it lacks much supporting evidence.

------- a small amount of work on N on soybeans in 2014, and Figure 1 summarizes the results of 33 comparisons we have run over the past five years.

Yields ranged from 39 to 87 bushels per acre, with an average of 66. We saw significant (statistically likely to have been due to treatment, not just to chance) yield increases in two of the 33 trials, both about 6 bushels above the untreated check, and a significant decrease (of a little less than 5 bushels) in one trial. The average response to using N fertilizer over all 33 trials was a half bushel (increase) per acre. There was no tendency for the response to be higher in higher-yielding trial; the ten lowest-yielding sites showed an average response of about one bushel while the 10 highest-yielding sites showed an average response of only a quarter of a bushel.

These results show that adding N fertilizer **can** increase soybean yield, but that also that a consistent yield increase is not likely. Getting a yield increase high enough to pay for the practice is also unlikely. The cost of the fertilizer (100 lb of urea is about $23 at the current price of about $460 per ton) plus application means that yields need so increase by 3 to 4 bushels per acre just to break even. Ignoring statistical significance, we saw a yield increase of 3 bushels or more in five of the 33 trials and of 4 bushels or more only three times.

Getting to a real-world answer

The need to find out how often and by how much fertilizer N affects soybean yields provides a perfect opportunity for Illinois farmers and fertilizer retailers and applicators to cooperate in running on-farm strip trials. I included the how-to in an article last spring, but there weren't many takers. We don't have funding for this, but I would like to think that there is a group of people willing to cover the costs to make this work "

The author continues to lay out how a test for the effect of N fertilizer could be done.

He concludes:

" Having a crop on 10 million Illinois acres that doesn't require N fertilizer is a great advantage under today's pressures to have crop production remain "sustainable" and to decrease the amount of N going into the rivers. We simply cannot afford to start applying N to large acreages of soybean without knowing if it's providing a response. We do know that, at least in some years, fertilizer N applied in July or early August won't all be taken up by the crop, and that part of any N from fertilizer left in the soil after soybean harvest will end up in tiles lines. Can we afford that?"

http://bulletin.ipm.illinois.edu/?p=2918

Dated: March 20, 2015

5. 2015 Cover Crop Survey Analysis

Cover Crops Continue to Boost and Expand Acreage

"A survey of more than 1200 farmers across the country revealed that cover crops boosted corn yields last year by a mean of 3.66 bushels per acre (2.1 percent) and increased soybeans by an average of 2.19 bushels per acre (4.2 percent)—the third year in a row a yield increase following cover crops was recorded by the Conservation Technology Information Center (CTIC) Cover Crop Survey. The survey, conducted by CTIC with funding from USDA's Sustainable Agriculture

Research and Education (SARE) and the American Seed Trade Association (ASTA), also registered a fifth year of steady increase in the average number of acres planted to cover crops. Average acres of cover crops per farm reported in the surveys have more than doubled over the past five years."

http://www.sare.org/Learning-Center/From-the-Field/North-Central-SARE-From-the-Field/2015-Cover-Crop-Survey-Analysis

Dated: 2015

6. Plant breeder boosts soybean diversity, develops soybean rust-resistant plant

"------- research geneticist Ram Singh managed to cross a popular soybean variety ("Dwight" Glycine max) with a related wild perennial plant that grows like a weed in Australia, producing the first fertile soybean plants that are resistant to soybean rust, soybean cyst nematode, and other pathogens of soy.

Singh works in the Soybean/Maize Germplasm, Pathology and Genetics Research unit in the department of crop sciences at the University of Illinois at Urbana-Champaign. The unit is a division of the U.S. Department of Agriculture's Agricultural Research Program."

http://news.aces.illinois.edu/news/plant-breeder-boosts-soybean-diversity-develops-soybean-rust-resistant-plant

Dated: May 15, 2015

7. NIFA Awards First Exploratory Research Grants for Transformative Approaches to Agricultural Challenges

" The U.S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) today announced it has awarded the first grants made through the inaugural round of funding provided under NIFA's Exploratory Research Grants (ERG) program. The ERG program provides one year grants for up to $100,000 for proof of concept research in areas not previously addressed or where a novel approach could result in high impact breakthroughs. NIFA will provide nearly $2 million of fiscal year 2014 funding for this program.

"The Exploratory Research Grants program provides limited initial funding to the scientific community for research that is judged to have a potential profound, positive, and rapid impact on agriculture -------- type of projects with the potential to transform agriculture in the United States for years to come."

http://nifa.usda.gov/press-release/nifa-awards-first-exploratory-research-grants-transformative-approaches-agricultural

Dated: June 10, 2015

Committee on New Usages of USB

1. High Five for Soy
Five significant new uses for soy developed with checkoff support

"In the last 10 years, industrial use of soybean oil and oil by-products in the United States, not including biodiesel, has increased from 619 million pounds to more than 1.4 billion pounds,----- .

Below are five of the most significant soy-based products commercialized over the past 10 years.

Polyurethane Foam

Several manufacturers produce soy polyols that are used in products ranging from carpet-backing and insulation to bedding and automotive seating. First introduced in the 2008 Ford Mustang, soy-based foam is now in every Ford vehicle and will soon be cushioning the rides of GM owners.

Wood Adhesive

First used in composites, soy-based wood adhesives are now being used in everything from furniture to laminated wood panels for walls and flooring. Already the largest industrial use for soybean meal, soy-based wood-adhesive sales are poised to grow even faster when manufacturers start using it in oriented strand board.

Plastic Composites

Plastic composites are another exciting segment for soy. technology in this area includes plastic body and interior parts for automobiles, boats and even agricultural equipment used to harvest soybeans and other crops. This full-circle usage could potentially replace hundreds of millions of pounds of thermoset resins in North America alone.

Paints, Coatings and Inks

New paints from Sherwin Williams, stains from Rust-Oleum, traffic-marking paints, soy-based inks for digital printers and product packaging have helped sales of soy in this segment grow to 278 million pounds each year.

Rubber

While soybean-oil use in making rubber is still in its infancy, it is literally on a fast track and is now a part of all the tires used by NASCAR. Product launches in passenger-car and agricultural-equipment tires and for belts in ag and construction equipment are expected in the next 1-2 years."

http://unitedsoybean.org/article/high-five-for-soy/

Dated: June11, 2015

2. 5 Exciting Soy-Based Products that Came to Market in 2014 with Checkoff Support

More than 800 soy-based products have been developed since 1990, many with checkoff support. Last year, manufacturers added 33 more, including five best sellers that can be found in home-improvement stores and possibly even on your farm.

Really Smart Phone Packaging. The Samsung Galaxy S5 box and manual are printed with soy ink, which eliminates the use of 30 tons of petroleum solvent each year

Breathe Easier. Nu Green SOYA™ NAF/ULEF particleboard uses a soy-based resin with no formaldehyde

Lighten up. Plastic composites by PreMix, made with a soy-based thermoset resin may soon reduce the weight of planes, cars and farm equipment.

Squeak Relief. Foam Products Corporation developed Eco Silencer, an acoustical underlayment for laminate and wood floor installations.

Concrete Proof. Daycon Graffiti-B-Gone Gel removes the toughest stains from masonry surfaces

http://unitedsoybean.org/article/5-exciting-soy-based-products-that-came-to-market-in-2014-with-checkoff-support

Dated: February 18, 2015

3. Checkoff Helps Commercialize 33 New Soy-Based Products

Farmer-funded projects drive innovations in soy chemistry, keep industrial demand on rise

"Browse USB's *Soy Products Guide*, an online catalog of the thousands of currently available soy-based products, ingredients and manufacturers.

New soy-based products and ingredients introduced in 2014 as a result of checkoff support include:

PLASTICS

Eco Ultimate Silencer™ – Foam underlayment and carpet cushion by Foam Products Corp.

Eco Silencer HD FOF™ – A high-density-foam underlayment for floors by Foam Products Corp.

BETAFOAM™ Renue – Sound-deadening foam by Dow Chemical that is used in cars

Automotive seating for GM cars – Foam made with soy polyols by Lear Corporation

TSE EcoWIND™ – A polyurethane resin with soy oil for filament winding by TSE Industries, Inc.

RUBBER

NASCAR Racing Tires – Soybean oil used in rubber compounds by Goodyear Tire & Rubber

COATINGS /PRINTING INKS

Avicor® 384 and Avicor® 385 – Low-VOC architectural latex paints by Celanese

Beckosol AQ® 400 – Traffic line paint by Reichhold

ADHESIVES

Liquamelt® – A new adhesive system for wood by H.B. Fuller

CedarSafe® – 4'x8' flakeboard panels used to make cedar closets made with Soyad® soy-based adhesive by Giles & Kendall, Inc.

Hardwood plywood panels – Made with Soyad® soy-based adhesive by States Industries, LLC, and available in home-improvement stores

Pangua PureGlue™ – Plywood with Soyad® soy-based adhesive made by Panguaneta S.P.A.

NU GREEN® – Particleboard and thermofused laminates by Uniboard Canada that replace formaldehyde with Soyad® soy-based adhesive

PAPER

AW-130SB™, AW-140SB™, AW-150SB™ – Soy wax emulsions for paper and packaging applications by A&W Products

PSA50MA™ and A5060™ – Binders for paper and paperboard made by Applied Protein Systems

SOLVENTS

Elevance Clean™ 1200 – Zero-VOC metal degreaser made by Elevance Renewable Sciences

ECO-300™ and MFS-Green™ – Oil-storage-tank cleaners made by FloTek industries

LUBRICANTS

GEOlube SCO™ – Oil-well-drilling lubricants by GEO Specialty Chemicals

Concert™ GC-350 – A grease-processing aid made by Elevance Renewable Sciences

EMERGING INDUSTRIAL OPPORTUNITIES

StimOil® FBA M, StimOil® FBA Plus, StimOil® EC, and StimOil® EN – Downhole crude oil recovery aides by FloTek industries

Azelaic acid – A soy-derived product by Emery Oleochemicals that is used in Nylon 6.9 and greases

Pelargonic acid – A soy-derived product used in paints, inks and greases by Emery Oleochemicals

WAX

Soy-based candles – Bennington Candle Company"

http://unitedsoybean.org/article/checkoff-helps-commercialize-33-new-soy-based-products/

Dated: Febrary 5, 2015

Tendense/ Ontwikkelings mbt. Kwaliteit van Sojaolie

1. Issue Brief: High Oleic Soybeans
"Current Situation
High oleic soybeans have been grown commercially in the United States for five seasons. Currently grown in 11 states throughout the soybean belt, these varieties allow farmers to offer end-use customers a U.S.-grown, highly functional oil without sacrificing performance. The soybean industry is working together to ramp up acreage of high oleic soybean varieties to meet growing

needs with a sustainable, consistent supply of high oleic oil. DuPont Pioneer and Monsanto are currently breeding varieties to be available in maturity groups I-V by 2023.
A recent announcement by the U.S. Food and Drug Administration (FDA) to phase out partially hydrogenated oils adds to the urgency to increase production of high oleic soybeans. The decision could mean an additional 1.5 billion pounds of lost soybean oil demand from U.S. food companies. Farmers previously lost 4 billion pounds of annual soybean demand due to trans-fat labeling. High oleic soybean oil can meet the needs of many users as a trans-fat-free replacement for partially hydrogenated oil, helping farmers regain some of that lost market and expand into additional markets.

Why the Checkoff Cares

The soy checkoff views high oleic soy as an opportunity to position the U.S. soy industry into the future and add to farmer profitability. The oil provides a highly stable, U.S.-grown oil for the food industry and additional industrial users. High oleic soybeans will protect and grow current markets while adding additional demand from customers looking for an oil that performs under high-heat conditions. The added demand from high oleic soybeans will raise demand for all soybeans, benefitting all U.S. soybean farmers, including those who don't grow high oleic. The success of high oleic soy hinges on timely farmer adoption of the varieties and the demand commitment from end users. The soy checkoff is committed to simultaneously building supply and demand for high oleic soy.

Key Points

- Performance: High oleic soybean varieties are packed with the same agronomic traits and performance that farmers expect from their traditional soybean varieties. Farmers continue to see high oleic yield competitively in their fields year after year.
- Profitability: In down market times, the modest premium paid for high oleic soybeans becomes even more attractive for farmers to increase their on-farm profitability.
- Demand: High oleic expands markets for soybean oil demand in frying and baking, as well as high-heat industrial uses. It doesn't take away demand for commodity soybean oil, which still meets the needs of many food and industrial customers.

Facts & Figures

- Approximately 250,000 acres – Estimated high oleic soybean acreage for 2015. The acreage is expected to rapidly increase following the global regulatory approvals that are expected to come in the near future. (QUALISOY)
- Nine states – Indiana, Illinois, Ohio, Michigan, Pennsylvania, New Jersey, Delaware, Maryland and Virginia farmers currently grow high oleic soybeans in select areas in 2015.
- 2.6-4.0 – The 18 varieties available on the market in 2015 ranged from 2.6 to 4.0 maturity groups. The maturity zones are expected to expand to 1 to 5 by 2023.
- The ABC's – ADM, Bunge, Cargill, Perdue Agribusiness and Zeeland Farm Services crush high oleic soybeans and also refine and market the oil those varieties produce.
- 18 million planted acres – That's the soybean industry's goal for high oleic soybeans by 2023. (QUALISOY)
- Fourth-largest crop – If the industry reaches 18 million acres, high oleic soybeans will be the fourth-largest grain and oilseed crop in the United States, behind corn, soybeans and wheat. (USDA NASS)"

Other Resources

- www.soyinnovation.com
- www.qualisoy.com

http://unitedsoybean.org/media-center/issue-briefs/high-oleic-soybeans/

Dated: August 14, 2015

2. S oybean Farmers Prepared for Phase out of Partially Hydrogenated Oils
FDA announcement shifts focus to new technologies

"------- for the past decade, the industry – including the farmers who grow soybeans – have been working on solutions to meet food-customer needs for a stable oil without partial hydrogenation, which causes trans fats.
The FDA has been considering removing the Generally Recognized as Safe (GRAS) status of partially hydrogenated oils since late 2013. After an open comment period in 2014, it announced this week intentions to phase out partially hydrogenated oils over the next three years.
-------- the United Soybean Board (USB) has been working with industry on two replacement options for partially hydrogenated soybean oil for more than 10 years. And now, those solutions are coming to the forefront.

"The soy industry estimates that 2 billion pounds of partially hydrogenated soybean oil are used in food today,"----------. ------- excited to bring solutions like high oleic and interesterified soybean oil to the market and ready to shift the discussion to innovation."

High oleic soybeans produce an oil that food companies can use for stability without the need for partial hydrogenation. Farmers currently grow high oleic soybeans in nine states, with more acreage being added each year.

Commodity soybean farmers can help with the solution, as well. By interesterifying commodity soybean oil, processors produce a hard fat, similar to the consistency of margarine, which helps meet needs for some baking customers."

http://unitedsoybean.org/article/soybean-farmers-prepared-for-phase-out-of-partially-hydrogenated-oils/

Dated: June16, 2015

3. Soybean Oil Still a "Solid" Option

" ------- interesterification is just a process that uses enzymes to turn soybean oil into a solid shortening.

"Enzymatic interesterification was invented around 10 years ago, and both ADM and Bunge have patents in this space. It's a completely green process of pushing oil through a column of enzymes, which rearranges the makeup. The result is a better blend of functional shortening. The process is similar to what your body does when it digests fats."
The potential demand is between 2 billion and 3 billion pounds. However, the FDA requires food companies to label the oil as interesterified soybean oil, which can turn some consumers away. Perceptions are the difficulty here because interesterification is a really long and technical-sounding word."
http://unitedsoybean.org/article/soybean-oil-still-a-solid-option/
Dated: March 19, 2015

4. The Dish on High Oleic Soybean Oil
With so many benefits, Food Network chef uses high oleic soybean oil to bring the heat in her kitchen

"------ recent event for QUALISOY, Ellyn cooked several dishes using only high oleic soybean oil. Afterward, she had rave reviews.
"I look at high oleic soybean oil and say 'why isn't everyone using it?'" ------ "It eliminates trans

fats, lowers saturated fats and is an all-around better-for-you fat!”

In addition to those advantages, high oleic soybean oil has demonstrated itself as a top performer in the kitchen, with high-heat stability and extended shelf and fry life.

“Plus, when you are baking and you need an oil that has a neutral flavor, ------- .

------- soybean industry expects high oleic to be grown on 18 million acres by 2023 in order to meet climbing demand from the food industry.

With over 500 food companies testing high-oleic soybean oil in their products, it is clear that the demand for more food oil has the potential to grow. Food companies are interested in high oleic soybean oil because the soybean industry has the potential to provide a consistent, abundant supply of U.S. grown oil.

Before food companies will commit, however, farmers must first grow enough high oleic soybeans to show they can be a trusted supplier of high oleic oil."

http://unitedsoybean.org/article/the-dish-on-high-oleic-soybean-oil/

Dated May 13, 2015

5. Life – Powered By Biodiesel

Regardless of location, biodiesel works for U.S. soybean farmers’ bottom lines

"“There is a study that shows that biodiesel added about 74 cents per bushel for all soybeans sold in the United States,”

Regardless of where biodiesel is being used – whether in the Midwest or on the East Coast or West Coast – its demand from various customers still brings economic benefits back to U.S. soybean farmers.

New Heating Oil Specifications Could Heat Up Biodiesel Demand

ASTM International, an organization that sets industry standards for fuels, recently released new performance specifications for blends of between 6 and 20 percent biodiesel with traditional heating oil. These blends, branded as Bioheat®, continue to gain popularity in the northeastern part of the United States, where heating oil is a popular fuel source.

Until now, only heating-oil blends up to 5 percent biodiesel had a quality specification for the industry to work from, so the new specs are a big win for the biodiesel industry.

U.S. soybean farmers have supported the growth of the biodiesel industry through their soy checkoff, which continues to support biodiesel research and education conducted by the National Biodiesel Board.

Biodiesel uses more than 25 percent of the soybean oil processed in the United States, -------."

http://unitedsoybean.org/article/life-powered-by-biodiesel/

Dated : April 28, 2015

6. Growth Markets

High oleic soybeans growth careful and calculated

"Before broad-range availability of the varieties can be realized, the seed companies providing the trait need to receive additional global regulatory approvals. Those approvals allow for easy handling of the soybeans and allow them to be shipped to other countries, which is very important because more than half of U.S. soybeans are exported.

----- delay in the high oleic approvals isn't a result of concerns about the product's performance or safety, but rather the political dynamics of the European Union biotech regulatory process.
In the EU, however, we are waiting for approval along with 11 other biotech traits that are in a similar stalled position, --------- hopeful that the gridlock will be resolved sometime in 2015, which will enable full scale commercialization,------."
http://unitedsoybean.org/article/growth-markets/
Dated: March 24, 2015

7. Soybean Oil Appeals to Local and Health-Food Movements
Relabeling vegetable oil as soybean oil increases sales

"Soybean oil has been labeled vegetable oil since the 1960s, ------.
Consumer research shows a knowledge gap – 78 percent of consumers think of soybean oil as healthy, but 90 percent are unaware that most bottles labeled "vegetable oil" in the supermarket contain soybean oil.The soy checkoff partners with regional grocery chains to move the food industry toward labeling those bottles as soybean oil. According to research conducted by the checkoff, marketing the oil as "100 percent soybean oil" helps bridge the knowledge gap,

"The results of our first labeling campaign and partnership with the checkoff strongly supports the '100% Soybean Oil' message as being well received by consumers,
http://unitedsoybean.org/article/soybean-oil-appeals-to-local-and-health-food-movements-3/
March 19, 2015

8. Great Traits
Latest genetic and herbicide-resistance packages part of high oleic soy's future

"A farmer's weed-management toolbox is always evolving to add diversity, fight arising resistance or utilize the newest technology. Farmers who grow high oleic soybeans can expect the same genetic and herbicide-resistance packages from high oleic varieties that they get from their traditional soybeans.
Today's high oleic farmers also benefit from powerful agronomics and defensive traits from DuPont Pioneer's Plenish and Monsanto's Vistive® Gold varieties. "
http://unitedsoybean.org/article/great-traits/
March 10, 2015

9. Coming to the Table
Oil sales managers share insights about high oleic soybean oil

"------ food companies are looking for better options for oil. And they are finding a new kind of soybean oil offers them many innovative benefits –

High oleic soybean oil is highly stable and has an extended shelf life," says Cargill's general manager for dressings, sauces and oils Jeff Kazin, who talks regularly to customers of high oleic soybean oil. "We expect steady growth for the oil over the next several years."
High oleic soybean oil can last two to three times longer in a fryer than traditional soybean oil due to higher heat stability," says Matt Porter, refined-oil sales manager for Perdue Agribusiness. "It also has a neutral flavor. We are confident about future demand for this product.
With high oleic soybeans projected to be grown across the United States in the coming years, customers have better access to the product, which reduces supply-chain risk."
http://unitedsoybean.org/article/coming-to-the-table/
Dated: August 5, 2015

Aktiwiteite van Saadmaatskappye

1. Monsanto

1.1 Roundup Ready Soybean Patent Expiration

"The first-generation Roundup Ready® soybean trait – the world's most widely adopted biotech trait, planted by farmers on billions of acres since 1996—comes off patent in 2015.

"Genuity Roundup Ready 2 Yield trait technology is the next-generation of the Roundup Ready

soybean trait.
Genuity Roundup Ready 2 Yield trait technology and Roundup Ready trait technology are protected by different patents.

The first possibility of planting seeds saved from Roundup Ready soybean varieties will occur in spring 2015 -------- ."

Die artikel bespreek die regsimplikasies en die 'mags en moenies' vir die verskillende belanghebbendes mbt. die verstryking van die patentreg.

http://www.monsanto.com/newsviews/pages/roundup-ready-patent-expiration.aspx

Dated: 2015

1.2 Roundup Ready Plus® Challenge to Demonstrate Effectiveness and Value of Residual Herbicide Programs in Soybeans

" Monsanto announced today the online kickoff of the 2015 Roundup Ready PLUS® Challenge, a program designed to demonstrate the benefits of a complete residual herbicide program in combination with Genuity® Roundy Ready 2 Yield® soybeans. This approach is effective in controlling weeds and in protecting yield potential for farmers battling herbicide-resistant and tough-to-control weeds in their fields.

“The PLUS Challenge is a head-to head comparison of weed management systems designed to show the effectiveness and value of the Roundup Ready PLUS Crop Management Solutions to a farmer’s current practices,” says Chris Reat, Monsanto’s Roundup Ready PLUS Marketing Manager. “For five years now, Roundup Ready PLUS Crop Management Solutions has been instrumental in helping farmers put together an effective residual herbicide program in their Genuity Roundup Ready 2 Yield soybean crops while offering incentives to use multiple mechanisms of action for better management of resistant and tough-to-control weeds.

Since its introduction, Roundup Ready PLUS has served as a platform of recommendations, incentives and education/training to manage tough-to-control and glyphosate-resistant broadleaf weeds. Products endorsed in Roundup Ready PLUS have been proven to perform with glyphosate-tolerant crops, and farmers are incentivized for using them. For more information, visit www.RoundupReadyPLUS.com. "

http://news.monsanto.com/press-release/products/roundup-ready-plus-challenge-demonstrate-effectiveness-and-value-residual-her

Dated: August 17, 2015

1.3 EPA Approves New Tool To Help Soybean, Cotton Growers Manage Weeds Warrant® Ultra Herbicide Premix Will Offer Excellent Control of Annual Grasses and Small-Seeded Broadleaf Weeds

"Soybean and cotton growers looking for new tools to manage weeds will have a new, first-of-its-kind option in 2016 with Warrant Ultra Herbicide, a premix of acetochlor and fomesafen approved by the U.S. Environmental Protection Agency (EPA) last month.

Roundup Ready PLUS® Crop Management Solutions recommendations have included products containing the active ingredient fomesafen as a key weed-management option since the launch of the platform in 2011. When fully approved, Warrant Ultra Herbicide will be the only premix on the market to formulate microencapsulated acetochlor with fomesafen, and will provide two mechanisms of action (MOA) for residual weed control. Additionally, fomesafen provides an

additional postemergence MOA, which is a useful herbicide resistance management tool when used in the Roundup Ready ® system.

University research shows that Warrant Ultra Herbicide provides excellent residual control of annual grasses and small-seeded broadleaf weeds when compared to competitive products.

Warrant Ultra Herbicide will be part of the Roundup Ready PLUS Crop Management Solutions recommendations and incentives in 2016, --------- .

The 2016 introduction of Warrant Ultra Herbicide follows the 2015 introduction of Rowel™ Herbicide and Rowel™ FX Herbicide, which can provide cotton and soybean growers consistent weed control on tough-to-control broadleaf weeds.

More information about Rowel Herbicide and Rowel FX Herbicide – as well as crop management recommendations and incentive information – can be found at www.RoundupReadyPLUS.com."

http://news.monsanto.com/press-release/products/epa-approves-new-tool-help-soybean-cotton-growers-manage-weeds

Dated" May 27, 2015

1.4 Roundup Ready 2 Xtend Soybeans to Deliver Enhanced Weed Control, Agronomic Packages Across All Maturity Groups

Expanded Training And Education Efforts Available To Growers And Retailers In 2015

"Monsanto is advancing toward commercializing Roundup Ready 2 Xtend™ soybeans, and this year the company will expand its training and education efforts to reach a broader number of growers and geographies. The USDA deregulated Roundup Ready 2 Xtend soybeans in January, and Monsanto anticipates the new technology will be available to growers in 2016 pending necessary regulatory approvals.

This will potentially be the largest biotech launch in Monsanto's history," said Miriam Paris, Xtend system launch manager. "Roundup Ready 2 Xtend soybeans will provide farmers another tool for weed management, ------.

Roundup Ready 2 Xtend soybeans will be available in potentially more than 60 varieties across eight maturity groups, which is more than six times the varieties offered in the launch year of Roundup Ready 2 Yield® soybeans. In addition, farmers can look forward to improved resistance packages against nematodes and phythophthora root rot with these varieties.

Roundup Ready 2 Xtend soybeans will be available in Asgrow® brand, Channel® brand, Monsanto Regional brands and licensee brands. Asgrow brand will lead with the largest number of varieties spanning eight maturity groups.

To learn more about Roundup Ready 2 Xtend soybeans and the Roundup Ready Xtend Crop System, please visit XtendCropSystem.com -------- ."

http://news.monsanto.com/press-release/products/roundup-ready-2-xtend-soybeans-deliver-enhanced-weed-control-agronomic-pack

Dated: February 27, 2015

1.5 Next Class Products to Deliver Top Performance for Asgrow® and Dekalb® Brands in 2016

Innovative Breeding Technology Equips Farmers With Tools For Maximizing

Performance

"2016 Asgrow Next Class Products Offer the Best Defensive Traits.

The Asgrow brand's lineup of Next Class products includes strong genetics and reliable technology, such as Genuity® Roundup Ready 2 Yield®.

Building on the trusted Genuity® Roundup Ready 2 Yield® technology, Next Class products plan to feature the highly anticipated Roundup Ready 2 Xtend™ soybeans pending necessary regulatory approvals. As part of the largest biotech trait launch in Monsanto history, the Next Class products that contain the Roundup Ready 2 Xtend™ soybean trait will offer tolerance to dicamba and glyphosate herbicides providing farmers more weed management options and increased application flexibility.

For more information about maximizing your yield potential and a complete list of new Asgrow and DEKALB products, ------- visit Asgrow.com/NextClass *(given hereunder)*.

"--------these products earned a place in our Next Class lineup. They're proven to have strong, consistent performance across a wide range of environments.

Group 00-1 Relative Maturity

- AG0536 Brand
- AG1636 Brand

Group 2 Relative Maturity

- AG2136 Brand
- AG2336 Brand
- AG2636 Brand
- AG2836 Brand

Group 3-4 Relative Maturity

- AG3066G Brand
- AG3266G Brand
- AG3536 Brand
- A3956 Brand
- AG3936 Brand
- AG4336 Brand "

Group 5-7 Relative Maturity

AG 6536 BRAND

http://www.aganytime.com/asgrow/products/Pages/Next-Class.aspx

http://news.monsanto.com/news-releases/all/all/all?page=5

Dated: February 25, 2015

1.6 Monsanto and FMC Agricultural Solutions Expand Relationship To Benefit Corn, Cotton And Soybean Farmers

Mnsanto's Roundup Ready PLUS® Relationship With FMC To Include Hero® Insecticide

"--------- announced today an agreement to extend the relationship with FMC Agricultural Solutions which will benefit corn, cotton and soybean growers through Roundup Ready PLUS® Crop Management Solutions. This agreement broadens the Roundup Ready PLUS Crop

Management Solutions relationship to include Hero® insecticide.

Hero insecticide is a powerful combination of two pyrethroid-based insecticides with complimentary activity against 45 labeled insects that other products may miss. Some of those insects include kudzu bug, aphids and mites on soybeans, as well as brown marmorated stinkbug on soybeans and some corn hybrids.

Hero insecticide is an effective tank-mix partner with fungicides, post-herbicides and foliar fertilizers and offers a broad -spectrum and increased length of control on multi-pest complexes common in corn, soybeans and cotton, as well as more than 80 labeled crops."

http://news.monsanto.com/press-release/products/monsanto-and-fmc-agricultural-solutions-expand-relationship-benefit-corn-cotton

Dated: January 2, 2015

2. Bayer CropScience

2.1 Bayer CropScience Announces National Availability of Credenz® Soybean Seed

Expanded availability gives more growers access to Credenz smart genetics across all maturity groups

"For the 2016 growing season, Bayer CropScience is expanding the Credenz® soybean seed brand nationally, with offerings in most of the U.S. soybean production regions, providing growers more choices for complete weed management and competitive yield performance. Credenz offers LibertyLink® and glyphosate-tolerant traits in more than 55 high-performing varieties suited to local growing conditions and tailored to address growers' individual needs, now in expanded maturity groups 0 through 7.
--------- with defensive traits for tolerance to frogeye leaf spot, Sudden Death Syndrome, southern stem canker, Phytophthora root rot, southern root-knot nematode, iron chlorosis, chloride sensitivity, Sclerotinia white mold, brown stem rot and soybean cyst nematode.

"Credenz is now available for soybean growers on a national scale, with characteristics to perform in a variety of soil types and relative maturities, offering growers a customizable platform tailored to meet a wide range of individual production preferences," ---------.

Bayer CropScience is working with partners to deliver the best biotechnologies science has to offer, including several new soybean traits over the next five years and beyond. Two herbicide-tolerant traits coming soon are Balance® GT*, which provides tolerance to glyphosate and Balance® Bean** herbicide, and Balance GT/LibertyLink, which provides tolerance to glyphosate, Balance Bean and Liberty herbicide.
Developed with MS Technologies. Balance GT has not received all needed regulatory approvals.
**Balance Bean is not registered for sale or use in the United States."
https://www.bayercropscience.us/news/press-releases/2015/090115-bayer-cropscience-announces-national-availability-of-credenz-soybean
Dated: September 1, 2015

2.2 Bayer CropScience: Sudden Death Syndrome a Growing Cause Of Crop Loss In Soybeans

"------ started nearly 20 years ago, university researchers have tracked the rise of sudden death

syndrome (SDS) from relative obscurity to its current status as the second-leading cause of soybean crop losses due to disease in 2014.
--------- new tools are emerging for SDS management. In 2015 Bayer CropScience launched its new seed treatment, ILeVO, the first product of its kind to provide breakthrough protection for soybean seedlings against the fungus that causes SDS. ---------- evaluated ILeVO and finds it can be a much-needed tool in an integrated approach to disease management, noting "In our tests ILeVO has been a very effective treatment in preventing damage from SDS and you can visually see the difference."
Doug Jardine, plant pathologist at Kansas State University summarizes his experience with ILeVO, saying "the product worked awesomely at our field site in Topeka last year." ILeVO is available as part of a seed treatment package with Bayer's Poncho/VOTiVO, and when paired with seedling disease base fungicide seed treatments, provides powerful protection against the top three soybean diseases - soybean cyst nematode, sudden death syndrome and seedling disease."
http://www.agrimarketing.com/s/97962
Dated: August 11, 2015

2.3 Bayer CropScience Launches Soybean SDS Website

"In an effort to help educate growers and other members of the agriculture community about the disease, Bayer CropScience launched www.soysds.com, a website the company bills as a comprehensive online industry resource."
http://www.farmchemicalsinternational.com/crop-protection/bayer-cropscience-launches-soybean-sds-website/
Dated: September 1, 2015

2.4 Plant Impact and Bayer CropScience Update Soy Pact

"Plant Impact of the UK and German-based Bayer CropScience have signed an additional agreement to develop yield enhancing technologies for soy cultivation. The latest agreement encompasses a multi-year partnership for Plant Impact to develop and Bayer CropScience to potentially commercialize new products in the soy markets of North and South America.
Plant Impact develops products designed to complement and enhance the effects of modern crop protection programs, such as foliar crop sprays and industrial seed treatments.

------- Bayer markets Plant Impact-developed Veritas, a product intended to improve the soy plant's capacity to fix pods and fill grains at critical growth stages."

http://www.chemanager-online.com/en/news-opinions/markets-companies/plant-impact-and-bayer-cropscience-update-soy-pact

Dated: february 17, 2015

2.5 Partnership to Advance the Use of Soil Microbes

"A new research initiative between Bayer CropScience LP and Elemental Enzymes Ag and Turf LLC will focus on the use of soil microbes to enhance plant health and improve crop productivity

The research collaboration and licenses are specific to certain Elemental Enzymes technologies in multiple areas of the agricultural industry --------."

http://american-seed.com/partnership-to-advance-the-use-of-soil-microbes/

Dated: September 1, 2015

3. DuPont Pioneer

3.1 DuPont Pioneer Soybean Herbicide Trait to Enhance Weed Control

Exclusive BOLT™ soybean herbicide trait technology provides cleaner fields and more options for growers.

"DuPont Pioneer today announced the launch of BOLT™ technology – a new herbicide-tolerant trait available in select U.S. soybean varieties. The new exclusive technology provides farmers more options and flexibility to manage glyphosate-resistant weeds from the start of the season. For 2015, Pioneer® brand T Series soybeans with the Roundup Ready® trait and BOLT™ technology will be available to farmers across the Mid-South in maturity groups IV and V."

Die artikel behandel kortliks die uitbreidings in moontlikhede wat hierdie tegnologie bied tov.

------ expects to expand its offerings of Pioneer® brand soybeans with BOLT™ technology across a wide range of maturities by the end of the decade."

http://www.dupont.com/products-and-services/crop-protection/corn-protection/press-releases/soybean-herbicide-trait.htm

Dated: February 10, 2015

3.2 Growers Up the Ante for 2015 Herbicide Resistance Management

Corn and soybean growers surveyed at 2015 Commodity Classic have finding better way to collaborate on herbicide resistance at the top of their list for the 2015 growing season.

"Herbicide resistance management continues to be a priority for corn and soybean growers, and they're working together more effectively to slow the spread of resistant weeds, according to a survey sponsored by DuPont Crop Protection at the 2015 Commodity Classic in Phoenix, Arizona.

The vast majority of growers surveyed (87 percent) said they are doing everything they can to prevent weed resistance on their own farms, a dramatic increase from respondents to a 2011 survey-------."

http://www.dupont.com/products-and-services/crop-protection/soybean-protection/press-releases/herbicide-resistance-management

Dated: April 14, 2015

3.3 DuPont Pioneer Announces Plans to Significantly Increase Pioneer® Brand Plenish®^ High Oleic Soybean Contract Acres in NE Indiana and NW Ohio

" DuPont Pioneer announced today it will more than double acreage of Pioneer® brand soybeans with the Plenish® high oleic trait in northeast Indiana and northwest Ohio for 2016. ------- for delivery to a participating elevator or directly to designated Bunge North America facilities for processing.

"We are pleased to be working with DuPont Pioneer and our farmer customers in Ohio and Indiana to increase production of Plenish® high oleic soybean oil. It's a product our oil customers are demanding as a result of its superior functionality and improved nutrition profile," said Tim Gallagher, executive vice president, Bunge North America.

The high oleic soybean varieties are developed by DuPont Pioneer using its elite genetics and cutting-edge technologies. Field testing has confirmed yields on par with elite commercial products, providing growers with added incentive to grow Plenish® high oleic soybeans.

Pioneer has obtained regulatory approvals for Plenish® high oleic soybeans in a number of key

U.S. soybean export markets and approvals are pending in additional export markets."

http://www.pioneer.com/home/site/about/news-media/news-releases/template.CONTENT/guid.2C709708-B010-7FA0-4ADD-854E2991

Dated: August 31, 2015

DuPont Pioneer announced similar arrangements for expanded growing contracts with ADM in Indiana and with Perdue AgriBusiness in Maryland, Delaware and Pennsylvania .

3.4 Encirca℠ Services Helping More Growers to Add Value on Every Acre

Real-Time Data Management Solutions Help Maximize Productivity, Profitability

"More growers are taking advantage of EncircaSM services from DuPont Pioneer to help them better manage inputs and mitigate risks as they plant their 2015 crops. -------- growers are utilizing EncircaSM services to adjust planting plans to accommodate the warmer spring weather, optimize critical inputs such as seed and nitrogen fertilizer, and log early season scouting notes.

-------EncircaSM Yield *Stand* helps growers tailor corn and soybean planting prescriptions -------.

The EncircaSM Yield *Nitrogen Management Service* works together with EncircaSM Yield *Stand* ----------.As growers begin early-season scouting, they are using the EncircaSM View service to record, organize, and share crop observations."

http://www.pioneer.com/home/site/about/news-media/news-releases/template.CONTENT/guid.82B46BE3-AC8C-7315-E962-C51FB70B

Dated: May 20 2015

4. Cargill

4.1 Cargill completes $12.5 million investment in South Africa animal feed facility, upgrades production capabilities and demonstrates growth in Africa

Increase in customer demand for plant's premix products boosts efficiency, product quality

"Driven by an increase in demand from customers throughout the region for animal feed products, Cargill has completed a USD $12.5 million expansion of its premix facility in Pietermaritzburg, South Africa. The expansion includes new equipment, technology and resources to increase the plant's efficiency and improve product quality. --------- demonstrates Cargill's commitment to an animal production market in sub-Saharan Africa that is experiencing significant growth."

http://www.cargill.com/news/releases/2015/NA31744855.jsp

Dated: February 23, 2015

4.2 Cargill to unveil $7.25 billion business plan for Mexico: paper

"Global commodities trader Cargill will unveil a $7.25 billion business plan for Mexico for 2015-2018, which includes financing for agriculture, crop purchases and $167 million in direct foreign investment, --------."
http://www.reuters.com/article/2015/08/11/us-mexico-cargill-idUSKCN0QG1Q220150811
Dated: August 11, 2015

4.3 Cargill set to take on soybean oil campaign

"One of the two main developers of high oleic canola is at odds with the national industry association on the outlook for the commodity.
The Canola Council of Canada wants one-third of the 22 million acres of canola it envisions for 2025 to be high oleic and other specialty oil varieties.

That would be more than double the three million acres now seeded to high oleic canola in Canada, which represents about 15 percent of total canola acres.

Lorin DeBonte, technical director of market development in Cargill's specialty seeds and oils division, believes the council's goal is unattainable.

"Cargill just has a different vision," -------.

The article deals with the viewpoints of various stakeholders, including the high oleic soybean oil interests, depicting the iminent clashes that lie ahead in the market place. A few excerpts are:

Willie Loh, vice-president of market development with Cargill, told ----- the major players in the food service and packaged food industries have already made the switch from partially hydrogenated soy oil to high oleic canola oil.

"We believe that market penetration is near the maximum," said Loh.

Dave Dzisiak, commercial leader of grains and oils with Dow AgroSciences, the developer of Nexera high oleic canola, has a different outlook.

"----- believes the U.S. Food and Drug Administration's announcement last month of a complete ban on trans fats will expand the market. ------ also room to increase de-mand in Japan and other Asian countries, where there are mounting concerns about saturated fat".

That is why Dzisiak believes the council's 2025 goal is feasible.

------- looming competition from high oleic soybeans.

"If you're in the high oleic canola industry, look out the window, they're all coming after you,"-----.

The United Soybean Board is spending $12 million per year for five years promoting the new product in an attempt to regain the millions of acres it has lost to canola. "They're going to win. This is a big industry and there's blood in the water,------."47

In response, Cargill is developing a new high oleic, low saturated fat canola, ------ in advanced field trials, contains four percent saturated fat compared to seven percent in today's varieties.

That is well below the levels contained in DuPont Pioneer's Plenish high oleic soybeans, which contain 12 percent saturated fat, and Monsanto's Vistive Gold high oleic soybeans with six percent saturated fat content.

Cargill is convinced saturated fat will be the next battleground in the oil industry.

"We're determined that we're going to win in this space," -----.

http://www.producer.com/2015/07/cargill-set-to-take-on-soybean-oil-campaign/
July 16, 2015

5. Dow AgroSciences

5.1 Dow AgroSciences Develops Novel Forensic "Fingerprint" Technology Ability to Identify Counterfeits Protects Integrity of Spinosyn Products

"-------- microbes that have been developed to produce naturally based crop protection products are also uniquely distinct. Dow AgroSciences LLC, ------ has developed highly sensitive and specific molecular forensic technology to actively ensure the integrity of its spinosyn insecticide products. Insecticides containing spinosad are a combination of natural spinosyns produced by a proprietary

bacterial strain in a fermentation process.
------- the company can now clearly identify and take appropriate action if the sample is counterfeit. This scientific expertise helps protect customers by ensuring the products they are using are of the highest quality and meet performance expectations."
http://newsroom.dowagro.com/press-release/dow-agrosciences-develops-novel-forensic-fingerprint-technology
Dated: June 10, 2015

5.2 Dow AgroSciences, Arcadia Biosciences and Bioceres Collaborate to Develop and Commercialize Soybean Traits
Leading Crop Protection and Yield Traits Companies to Accelerate Soybean Progress for Farmers

"Dow AgroSciences LLC, Arcadia Biosciences, Inc. and Bioceres, S.A. announced today an agreement to develop and commercialize innovative traits in soybeans. The collaboration leverages Dow AgroSciences' technology, regulatory expertise, and commercial seed capabilities with a leading soybean abiotic stress platform and unique grower relationships in South America represented by Verdeca LLC, a joint venture between Arcadia and Bioceres.

Under the collaboration, the companies will develop new soybean traits using Dow AgroSciences' EXZACT™ Precision Technology platform to generate soybean trait stacks. These stacks will combine Verdeca's agronomic performance and product quality traits with Dow AgroSciences' herbicide-tolerant and insect-resistant traits. The EXZACT Precision Technology platform will facilitate the development of multiple trait stacks with greater degrees of precision and speed-to-market.
"Our own expertise, combined with Arcadia's leadership position in abiotic stress traits and Bioceres' strong relationship with large soybean growers, presents a unique opportunity for greater yields."
http://newsroom.dowagro.com/press-release/dow-agrosciences-arcadia-biosciences-and-bioceres-collaborate-develop-and-commercialize-soybean-traits
Dated: April 28, 2015

5.3 Dow AgroSciences, Radiant Genomics Announce R&D Collaboration Focused on Natural Products for Crop Protection

"Dow AgroSciences, --------- and Radiant Genomics today announced a research and development (R&D) collaboration agreement to discover novel natural products for application in crop protection products. The collaboration combines proprietary metagenomic and engineering-biology technologies from Radiant Genomics with Dow AgroSciences' industry-leading natural products discovery and product development capabilities to deliver new products from naturally derived chemistries.
Dow AgroSciences is an industry leader in discovering and commercializing natural and semi-synthetic crop protection products. For example, spinosad (Entrust® SC Naturalyte® Insect Control, Conserve® SC speciality insecticide, Tracer® insecticide, and Success® Naturalyte® Insect Control) and spinetoram (Radiant® SC, Delegate® WG, Exalt™ SC, and Endure™ insecticides) are two market-leading active ingredients in the spinosyns family of chemistry that are derived through fermentation and are important tools for controlling insects in many crops around the world.

The technology employed by Radiant Genomics will enhance Dow AgroSciences' natural product lead generation and optimization process.

http://newsroom.dowagro.com/press-release/dow-agrosciences-radiant-genomics-announce-rd-

collaboration-focused-natural-products for crop protection

Dated: April 2, 2015

5.4 Dow AgroSciences Announces Trait Stacking Standards for Enlist™: Advanced Glyphosate Traits Only

Company Accelerates Licensing Efforts, Announces It Will Not Allow Stacking with First Generation Roundup Ready® Trait in U.S.

"-------- it will allow Enlist to be stacked with advanced glyphosate traits only. It will not allow stacking with the first generation of the Roundup Ready® trait.
------ are committed to optimizing the Enlist system for growers," says Damon Palmer, Marketing Director, U.S. Seeds, Dow AgroSciences. "We've done it with Enlist Duo™ herbicide with Colex-D™ Technology—a proven, superior herbicide tailored for the grower. Today's announcement helps ensure the Enlist family of soybean traits will be stacked exclusively with other industry leading traits."
Enlist soybeans with Roundup Ready 2 Yield and Enlist E3 soybeans—which feature an advanced glyphosate technology owned by MS Technologies—are our chosen trait platforms moving forward," says Palmer. "Without question, these are the best trait packages coming to market. Growers should know they can farm with confidence with the Enlist system."
http://newsroom.dowagro.com/press-release/dow-agrosciences-announces-trait-stacking-standards-enlist-advanced-glyphosate-traits only
Dated: January 30, 2015

5.5 Dow AgroSciences to Debut Two New Premix Herbicides

"--------- federal regulators have approved Surveil, a new premix herbicide for soybeans set to debut in 2016.
This preemergence premix contains two modes of action, flumioxazin (Valor) and cloransulam-methyl (FirstRate). It snuffs problem weeds like herbicide resistance issues and hard-to-control marestail, Palmer amaranth, and giant and common ragweed.

Surveil gives excellent handling properties, such as dispersing quickly when added to water, says Melissa Olds, Dow formulation chemist. Dow officials add its short rotational interval enables farmers to rotate to many key crops nine months following a Surveil application.

Dow officials also announced the debut of Resicore in corn --------."

http://www.agriculture.com/crops/soybeans/technology/dow-agrosciences-to-debut-two-new_143-ar49577

Dated: July 21, 2015

6. Syngenta

6.1 Syngenta adds BroadAxe® XC broadleaf and grass herbicide to portfolio

"The new BroadAxe® XC herbicide from Syngenta gives growers more flexibility for soybean, sunflower and dry pea weed control programs. BroadAxe XC is an herbicide combination with two different modes of action that is ideal for weed resistance management programs.

BroadAxe XC herbicide will expand the geography where Syngenta soil residual herbicides can be applied in soybeans, sunflowers and dry peas. It will provide these crops with pre-emergence herbicide activity and multiple modes of action against a broad spectrum of weeds.
"BroadAxe XC herbicide has the capability to maximize yield potential through early-season weed management and long-lasting residual control, ------."

http://www.syngentacropprotection.com/news_releases/news.aspx?id=187972
Dated: January 20, 2015

6.2 New Syngenta solutions effective against soybean sudden death syndrome

"Syngenta announces the potential for reduced damage from soybean sudden death syndrome (SDS) with Clariva™ Complete Beans and the addition of Mertect® 340-F fungicide to its broad soybean portfolio. Mertect 340-F provides proven, effective SDS protection and can be applied with Clariva™ Complete Beans and CruiserMaxx® Beans with Vibrance® seed treatments, both combinations of separately registered products.
Last year, Syngenta introduced Clariva Complete Beans seed treatment, establishing itself as a market leader in soybean seed treatments. Along with providing effective, season-long protection against SCN, Clariva Complete Beans also has the potential to reduce the impact of SCN-related diseases like SDS. The link between SCN and SDS is well documented -------.

With the addition of Mertect 340-F, Syngenta is expanding its commitment to fighting soybean disease. Mertect 340-F has shown consistent performance and yield protection under SDS pressure in four consecutive years of testing. Mertect 340-F also offers additional activity on seedborne diseases such as Phomopsis and boasts a first-rate seed safety profile for germination and stand protection ."
http://www.syngentacropprotection.com/news_releases/news.aspx?id=187783
Dated: January 13, 2015

6.3 Syngenta Introduces New NK Soybean Varieties

Syngenta will offer U.S. growers 22 new performance class NK soybean varieties, ranging in relative maturity (RM) from very early 0.009 to late RM 7.6., for the 2016 growing season.
The Y.E.S. Yield Engineering System enables Syngenta to bring higher-yielding varieties to the market quicker."

NK Soybeans lead the industry in sudden death syndrome (SDS) genetic resistance scores[1].
Additionally, new varieties offer resistance packages targeting common early-season diseases and pests, including soybean cyst nematode, iron deficiency chlorosis and Phytophthora root rot.

The Syngenta NK Varieties, including the new ones can be found by:
Google: syngenta soybean – Go to and click on : soybeen seed nk brand – Scroll down to and click on : Download your local 2016 Syngenta Seed Guide – Open each one of the six regions to obtain the full list, including the clearly marked new ones, of cultivars offered. (Note that some of the cultivars appear in more than one region.)
or Go to

http://www3.syngenta.com/country/us/en/agriculture/seeds/Pages/garst-golden-harvest-nk-seed-guides.aspx

Dated: August 10, 2015

6.4 Stinkbugs stir up trouble in soybean fields, Syngenta offers solution

"--------- stinkbugs continue to increase their impact on soybeans, ------- Syngenta encourages growers to remain diligent in their scouting efforts. While this pest has typically been an economic problem for Southern U.S. soybean growers, populations are now appearing in fields farther into the Midwest, --------.

Stinkbugs are sucking pests, so their damage may not be as outwardly apparent as defoliating

insects. They pierce soybean pods, then feed on plant fluids, causing shriveled, damaged seeds and flattened pods. "
+ Scout throughout the season to stay ahead of emerging generations

+ An application of an insecticide like Endigo® ZC may help to prevent yield reductions"

http://www.syngentacropprotection.com/news_releases/news.aspx?id=193591

Dated: August 17, 2015

6.5 Syngenta recommends soybean scouting to prevent economic loss from insects

"Proper soybean insect pest control begins with scouting. As the warm weather continues, Syngenta encourages growers to implement a scouting program to maximize yields and profitability.

Growers are beginning to see soybean aphid and Japanese beetle populations appear -------

If scouting reveals insect populations at treatment thresholds, Syngenta offers Endigo® ZC insecticide to combat some of the most difficult-to-control pests. Endigo ZC combines three industry-leading technologies, including a proprietary Zeon® concentrate formulation, for quick knockdown and extended residual control. With robust labeled rates of complementary modes of action, Endigo ZC offers control of numerous pests, including soybean aphid, Japanese beetle, stinkbugs and bean leaf beetle."
http://www.syngentacropprotection.com/news_releases/news.aspx?id=192962
Dated: July 22, 2015

6.6 Syngenta Announces New Biological SCN Seed Treatment

"Syngenta Canada Inc. has announced the registration and launch of Clariva pn seed treatment, a biological seed treatment for the management of soybean cyst nematode (SCN).
Clariva pn works by reducing SCN feeding and reproduction, a “targeted, direct and proven solution,” --------.

Clariva pn contains the *Pasteuria nishizawae* bacteria as its active ingredient. When Clariva pn treated seed is planted, the *P. nishizawae* spores are released into the soil and establish a protective zone around the young soybean plant’s roots, ------.

The seed treamtent *(treatment)* works by *P. nishizawae* spores infecting and eventually killing the SCN that come into contact with plant roots, thus curbing SCN’s ability to feed and reproduce. As the remnants of the dead nematodes decompose, the spores are released back into the soil to provide season-long activity and suppression.

Clariva pn has been shown effective under variable environmental conditions, independent of soil pH, temperature or moisture,-------."

https://www.realagriculture.com/2015/06/syngenta-announces-new-biological-scn-seed-treatment/

Dated: June 19, 2015

7. BASF

7.1 BASF introduces new anti-fake technology to tackle counterfeit crop protection products in China

"
- Special color additive makes labeling unique and has now been integrated into all key product lines in China
- Technology helps farmers keep food, feed and fiber safe
- Next step of BASF’s commitment to reduce illegal crop protection market globally

BASF is leading the fight against counterfeiting in the crop protection market by investing in brand

new anti-fake technology. In China the company is introducing an innovative product label that features an identification system developed by BASF and a local partner in exclusive collaboration. This technology will ensure that farmers in China can buy genuine BASF crop protection products.

“Our new technology quickly proves the authenticity of BASF products and points out with clarity products that are counterfeited.

---------incorporates a special water mark into the product label that is invisible indoors but clearly visible in sunlight. In addition, the BASF know-how Verbund has created a special BASF color pigment to provide an additional unique characteristic that makes it even easier for farmers and retailers to identify genuine BASF products.
The technology has already been incorporated into the BASF Cabrio®, Cabrio® Top, Merivon® and Cantus® fungicide product labels since March 2015. Beginning in 2016, it will be incorporated into the labels of other product lines, and the technology will be updated.

In other markets, like Brazil, BASF has also invested in a tailor-made device that helps its customers to check the authenticity of their purchase. The so-called DAF (anti-counterfeiting device) system consists of a seal containing a data matrix code and a modern bimetallic foil that can be applied to all product containers. Through directing a laser pointer to the bimetallic foil, BASF’s sales force and customers can identify the authenticity of the product: if authentic, the word BASF will be reflected."
https://www.basf.com/en/company/news-and-media/news-releases/2015/04/p-15-201.html
Dated: April 20, 2015

7.2 Priaxor® D fungicide receives federal registration for use against strobilurin-resistant frogeye leaf spot

"Priaxor® D fungicide from BASF has received federal Environmental Protection Agency (EPA) registration. A combination fungicide containing three modes of action, **Priaxor D** fungicide helps manage strobilurin-resistant frogeye leaf spot in soybeans while providing Advanced Plant Health benefits, including increased growth efficiency and stress tolerance.

Priaxor D fungicide will control a wide array of diseases, including strobilurin-resistant frogeye leaf spot, and will provide Advanced Plant Health benefits to help maximize overall yield potential.”

Priaxor D fungicide is a combination of **F500®** and **Xemium®** fungicide, the same active ingredients as in **Priaxor** fungicide, combined with tetraconazole. The combination of these active ingredients can further increase the control of strobilurin-resistant frogeye leaf spot in soybeans."

http://agproducts.basf.us/news-&-events/press-releases/current-press-releases/2015-priaxor-d-fungicide-receives-federal-registration-f

Dated" January 27, 2015

7.3 On Target Application Academy: By the Numbers

"Since the earliest days of agriculture, farmers have been locked in a constant battle with weeds. Today, the process for managing weeds has become increasingly complex as weed-resistance issues persist and as precision-farming practices grow more important.

According to recent BASF research, over 80 percent of farmers self-apply herbicides but formal training is limited. Surveys also show there is some confusion about the benefits, risks and proper application of herbicides, and growers are most interested in learning about herbicide application topics, such as optimum calibration and correct nozzles.

The On Target Application Academy (OTAA), led by BASF and industry specialists ------- helps farmers and applicators navigate today’s extraordinarily challenging herbicide environment. This

first-of-its-kind, hands-on, educational experience gives farmers and applicators the knowledge they need to make consistent, precise, on-target applications.

------ more than 9,500 applicators have attended OTAA sessions ------. More than 95 percent of attendees said they feel better prepared ------ and that they will become more successful in their operations ------.'

http://agproducts.basf.us/news-&-events/featured-stories/current-featured-stories/2015-on-target-application-academy-by-the-numbers

Dated: August 27, 2015

7.4 Grow Smart™ With BASF Solutions for Soybeans

Open onderstaande web en gaan na 'Soybean' ***of*** *'Grow Smart with BASF Solutions for Soybeans', dan na lys:* 'Seed, Insecticide, Preemergence, Postemergence, Disease Control and Plant Health, Burndown'

en kies onderwerp vir meerdere advies en middels vir elk van die produksieaspekte.

http://agproducts.basf.us/information/solution-guides/crop-solutions.html

Undated

7.5 BASF and Embrapa launch Cultivance®

"BASF and Empresa Brasileira de Pesquisa Agropecuária (Embrapa) officially launched the Cultivance® Production System, a milestone for Brazilian science, as it contains the first genetically modified soybean fully developed in Brazil. The technology was approved by the European Union, a major import market, ------. As a result of the partnership between BASF and Embrapa that stretches back more than ten years, the Cultivance® Production System combines four genetically modified soybean cultivars with considerable genetic potential and the use of Soyvance Pré, a broad-spectrum herbicide for controlling large leaf and grass weeds, thereby creating a new production system.

------- about 150 farmers have been selected to access the technology this first year. After familiarizing themselves with the materials under field conditions, the farmers will be able to request seeds for the 2016/2017 harvest. The seeds will be marketed by seed producers licensed under the Embrapa Partnership System and through distributors accredited under the National Seed and Seedling Production System."

http://www.agro.basf.com/agr/AP-Internet/en/content/news_room/news/BASF_and_Embrapa_launch_Cultivance

Dated: August 26, 2015

7.6 BASF and University of Göttingen scientists find new specific insecticide target protein

" Scientists from BASF Crop Protection and the University of Göttingen in Germany have found a new insecticide target protein. The discovery marks the first identification of vanilloid receptors, the TRPV ion channels (transient receptor potential vanilloid), as insecticide targets. The results, published in the scientific journal Neuron on May 6, 2015, could help to better manage insecticide resistance and have implications for research and insecticide usage.

In their study, the scientists focused on the mode of action of the insecticides pymetrozine and pyrifluquinanzon. They identified a novel TRPV ion channel complex as the target protein of the two substances. In insects, two TRPV channels exist, which occur together in certain stretch receptors that are present in joints, for example in the antennae and legs. By sensing mechanical stimuli, these stretch receptors provide insects with their senses of balance, hearing and

coordination. The two insecticides only act selectively on these stretch receptors because they activate an ion channel complex formed by the two TRPV channels. By activating this TRPV channel complex, the insecticides overstimulate the stretch receptors, disturbing insect locomotion and feeding. Substances with this mode of action are effective against many plant-sucking pests, particularly whiteflies and aphids.

By knowing the exact target of pymetrozine and pyrifluquinazon, the industry can now provide better advice on spray programs to farmers. “For instance, we would not want to treat fields with these two substances one after the other. The more you attack one particular target site, the faster insects will become resistant. The findings help us to use insecticides more wisely and more sustainably,”

The study thus encompasses exciting biology: It identifies a novel ion channel complex that plays a key role in the detection of mechanical stimuli. Furthermore, the methods employed by the study can be applied to other insecticides, and they may help in the identification of new insecticides with similar modes of action. "

http://www.agro.basf.com/agr/AP-Internet/en/content/news_room/news/BASF_and_University_of_Goettingen_scientists_find_new_specific insecticide target protein

Dated; May 7, 2015

7.7 Trait Deregulation Clears the Way for New BASF Weed Control Option in Cotton and Soybeans

"The United States Department of Agriculture (USDA) announced deregulation of a dicamba-tolerant trait for cotton and soybeans, which clears the way for the introduction of Engenia™ herbicide from BASF. Engenia herbicide will control the toughest broadleaf weeds --------."

http://cornandsoybeandigest.com/trait-deregulation-clears-way-new-basf-weed-control-option-cotton-and-soybeans

Dated: January 16, 2015

8. Limagrain

8.1 Limagrain is a French cooperative and presently rated as the fourth largest seed company in the world with key crops corn,wheat, sunflower and rapeseed.

One of their strategic levers are: "Intensification of the INTERNATIONALIZATION of our activities: to be consolidated for Vegetable Seeds, to be developed for Field Seeds, to be built for Cereal Products. " Their 42 country operation consist of six business units which apart from the units Agreliant Genetics and Limagrain Cereal Seeds are global regional units including Limagrain Africa. They have more than 1800 people employed in over 100 research centres in the world.

"Created in 2000 as a joint venture between the internationalseed groups KWS and Limagrain, AgReliant Genetics is ranked as one of the largest field seed companies in North America. AgReliant Genetics markets corn, soybean and alfalfa seed through its brands: AgriGold ® , Eureka Seeds ®, Great Lakes ® Hybrids, LG Seeds ® , Producers Hybrids ® , Wensman Seed ® and PRIDE Seeds ®."
Limagrain and Monsanto obtained control of the wellkown central African seed company SeedCo in 2014 soon after the 2013 Syngenta acquisition of Zambian MRI Seed.

Link Seed in South Africa was taken over by Limagrain in 2013 and offers ten soybean cultivars in their LS Roundup Ready range.

http://www.linkseed.co.za/products/soya-beans.html
Dated: 2015

9. K2Agric

K2Agric is die grootste onafhanklike saadmatskappy in Afrika en het ontwikkel uit die Klein Karoo Koöp. Met die totstandkoming van Klein Karoo Saad Bemarking (KKSM0 in 2003 "due to specific demands in the market, KKSM entered into agreements with various seed companies around the world and cooperation agreements with recognized international seed companies secured exclusive distribution and marketing rights for exclusive vegetable hybrid seeds.
Die maatskappy het daaropvolgend uitgebrei na meerdere gewasse en "KKSM now has cooperation agreements with almost all the major seed companies around the world.
KKSM at this stage forward became known as the all-in-one seed distributor in South Africa, with a complete product range comprising vegetable, pasture, wheat, sunflower, maize and canola seed.
Mbt. sojabone word vier cultivars verskaf tw. NS5009R*, NS 5909R*, NS 6448*, NS 7211R

KKSM Today

Today KKSM produces seed around the world including South Africa, Southern Africa, Europe, Australia, USA, South America and the East. The subsidiary Bakker Brothers in Holland, provides effective market access to Europe, the Middle East and North Africa. Together with product expansion the company also invested in research and development. Several research stations within and outside South Africa were opened, and breeding stations and experimental farms exist in Southern Africa and Europe."

http://www.seedmarketing.co.za/index.php?p=3
Dated: 2014

Vordering by EMBRAPA met die teel van kultivars in volwassendheidsgroepe 4.8 tot 6.7

1. AMMI Analysis to Determine Relative Maturity Groups for the Classification of Soybean Genotypes

"The classification of soybean cultivars into distinct maturity groups has great importance for their evaluation, selection and production in major soybean-growing regions of the world. The objective of this study was to identify stable soybean genotypes and classify them into Relative Maturity Groups (RMGs) by evaluating 20 commercial soybean cultivars using data from 17 environments across the main regions of Brazil for the following three traits: The number of days to flowering, the number of days to maturity and the length of the reproductive period. The evaluation was performed according to the additive main effects and multiplicative interaction (AMMI) method and efficiently distinguished stable genotypes for the generation of RMGs independently of the region analyzed. The established RMGs can be used separately for each region or adopted as a unique model for Brazil.

For this analysis cultivars of varying RMG's were used some of which were of the 4.8 to 6.7 RMG as shown under the top six in the table below:

Soybean genotypes by growth type, the presence of a long juvenile period (LJP) and relative maturity group (RMG), as tabulated according to data from Alliprandini *et al. (2013)*

Genotype	Growth type	LJP	RMGtab
Roos Camino RR	Indeterminate	No	5.6
BMX Titan RR	Indeterminate	No	5.6
CD 212 RR	Determinate	No	6.3
V-MAX RR	Indeterminate	No	6.4
CD 214 RR	Determinate	No	6.8
FTS Campo Mourão RR	Semideterminate	No	6.7
BRS 245 RR	Determinate	Yes	7.5
Fundacep 54 RR	Determinate	No	7.5
Fundacep 59 RR	Determinate	No	7.6
M7211 RR	Indeterminate	Yes	7.0
NK 7074 RR	Determinate	Yes	7.0
M7578 RR	Determinate	Yes	7.2
M7908 RR	Determinate	Yes	7.6
P98Y11	Determinate	Yes	7.6
CD 219 RR	Determinate	Yes	8.2
Valiosa RR	Determinate	Yes	8.1
TMG103 RR	Determinate	Yes	8.3
P98Y51	Determinate	Yes	8.6
P98Y70	Determinate	Yes	8.7
M9144 RR	Determinate	Yes	9.2

The conclusion of this article reads;
"The genotypes considered to be stable should be used as references in future trials of this nature. The relative maturity groups (RMGs) determined here provided good estimates, as expected, proving to be valid for all of Brazil without undergoing significant changes depending on the test region or the germplasm being assessed. The RMGs are an important reference for the soybean production chain. The AMMI methodology can be used to calculate RMGs. The partition of regions may or may not be performed, depending on the specific objectives of each breeding program. "
http://scialert.net/fulltext/?doi=ja.2013.168.178&org=11
Dated; January 13, 2014

Ander belangrike ontwikkelings

1 DuPont Pioneer Gains Exclusive License for Genome-Editing Technology from Vilnius University

"DuPont Pioneer (DuPont) today announced a technology license and research collaboration agreement with Vilnius University to further the technical and commercial utility of guided Cas9 genome editing technology. Under the agreement, DuPont receives an exclusive license to Vilnius University intellectual property for all commercial uses, including in agriculture. In addition, Vilnius University and DuPont have entered into a multi-year research collaboration to advance the development of the technology.

"Guided Cas9 is one of the most exciting recent breakthroughs in biology and, through our collaboration with Vilnius University, we're positioning DuPont to be an early adopter of this promising new technology in agriculture," said Neal Gutterson, vice president, Agricultural Biotechnology for DuPont Pioneer, the advanced plant genetics business of DuPont. "The superior properties of guided Cas9 assist our scientists to develop innovative and sustainable solutions for growers similar to those realized through marker-assisted plant breeding, but with even greater precision and accelerated development timelines."

A team of scientists from the Vilnius University Institute of Biotechnology was one of the first

groups to discover that the Cas9 protein could be repurposed to precisely edit targeted sections of an organism's DNA to achieve a specific outcome. In plants, this can include promoting drought tolerance and disease resistance for protecting plant health and increasing crop yields.

"We are pleased to have had our invention licensed by DuPont," -------.

Guided Cas9 genome editing technology is one of several CRISPR-derived tools. CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) is a feature naturally existing in bacteria. The guided Cas9 technology used for genome editing differs from the natural CRISPR process used to identify and immunize bacteria. The DuPont patent portfolio comprises more than 60 patents and patent applications related to the use of CRISPR for bacteria identification and immunization. It also comprises patent applications related to the guided Cas9 genome editing technology. "

http://www.pioneer.com/home/site/about/news-media/news-releases/template.CONTENT/guid.BAED75F2-4190-04E9-6549-0AA417910

Dated: June 23, 2015

jdup/sept2015