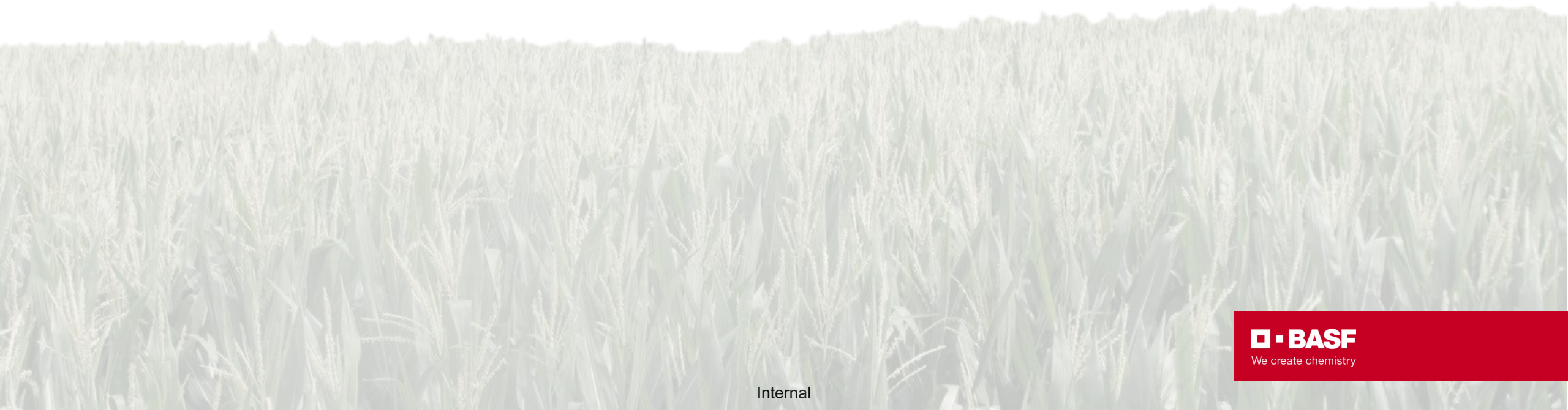
2025 Farmer Problem Review



BASF
We create chemistry

Undergrad 1
Beyond on Sunflower

Farmer and Judge:
Greg Dahl & Mark Bernards

Situation:

- Mid May in Central Indiana.
- Student is a local crop consultant.
- Local grower runs a small hunt club. Plants food plots and sunflowers for hunters who lease his ground. Sunflowers are showing symptoms of yellow. Thinks it might be disease. Without these sunflowers, the grower may have to cancel the dove hunting lease for the year. What can you do to help figure out how to get these back to life…?

Information the grower should know:

- Planted a standard (non-traited sunflower)
- Sprayed Beyond Xtra onto them to kill the weeds because a neighbor told the grower to do that. There was no discussion about a trait when talking to the neighbor.
- First time using Beyond Xtra, used Spartan as a PRE herbicide applied.
- Applied with ATV sprayer that was purchased this year (depending on size of sunflower at time of application)
- Has read online that sunflowers are very susceptible to anthracnose and that may be the issue??

What the student should identify:

- This is not a disease
- Needs to identify that Sunflowers must be traited to use Beyond Xtra
- Should confirm that sunflowers are most likely not going to make it, at least not to meet his needs for dove hunting
- Can replant sunflowers if Clearfield variety is planted, but at this point in the year it still may not produce seeds in time for dove season.
    - Or plant another safe crop like soybean or another Clearfield traited crop

Undergraduate Problem #1

Beyond Xtra (Imazamox) on Sunflowers

Undergrad 2
10x rate of Cobra

Farmer and Judge:
Jon Kohrt & Spencer Samuelson

Situation:

- Late June, central Illinois,
- 100 acre field
- Student is Valent rep
- Retailer is angry because grower's soybeans are believed to be dead. Had to use Cobra because they were out of Liberty apps for the season and still had weeds to clean up. Knows Cobra burns beans but this is more than they have ever seen. Wants compensation for an on label application.

Information the grower should know:

- E3 soybeans planted. No residuals used in the program (too expensive).
- Only this field has been sprayed for a 3rd time. No other fields were sprayed with Cobra. No other fields have issues
- Liberty didn't work the first time, so grower wanted to use Cobra instead.
- Commercial rig has been spraying only soybeans with Liberty, Roundup, and Outlook for the past 3 weeks (dedicated rig)
    - Need to keep assuring the student that it is not contamination.
    - Nurse truck is dedicated to this sprayer
- Will want to use the load ticket and student will have to do some quick math to see the 10x rate (provided)
- All loads to this sprayer are mixed in a Kahler system at the mix plant. They do not commonly run Cobra, and had to place a shuttle of product on its own brand new pump to integrate it into the system.
    - The pump was not calibrated prior to use.
- Junge system printout is available for the load. (100 acre load).
    - 15 GPA
    - Intended Cobra rate: 12.5 fl oz/A
    - Semi load contained:
        - 97.6 gallons Cobra
        - 15 gallons COC
        - 25 gallons 28% UAN
        - 1450 gallons water

What the student should identify:

- PPO injury
- Soybeans should not die
- PPO injury is excessive, identify rate used is too high
- Remove the possibility of contamination
- Do not pay!

Undergraduate Problem #2

Cobra (lactofen) applied at 10X rate

UnderGrad 3
Greensnap from Clarity

Farmer and Judge:
Nick Roysdon & Jon Frihauf

Situation:

- May 25th, Southern Illinois
- Students is a Wyffels seed corn rep
- Grower wants an explanation of why his corn went down and others did not?? Grower had weeds in corn, but has struggled with HPPD products. Doesn't like paying a lot for products so chose a generic dicamba product. 3-4 days after spraying a windstorm hit the field and now most of the corn is laying down.

Information the grower should know:

- One of the first growers in the area using Wyffels corn
- Planted Roundup Ready Corn on April 8th – no known sensitivities to herbicides
- PRE used was Verdict @ 18 fl oz/A + atrazine @ 1 lb/A
- No history of corn rootworm, but used capture LFR anyway
- Applied Roundup and generic DGA dicamba (Detonate – like Clarity) @ 16 fl oz/A with AMS and COC last week. Labeled at 16 fl oz/A up to V5 or 8" tall corn…
    - Application was well off label due to timing and rate
- Neighbors fields in the same area (also sprayed with dicamba brands like Status and Diflexx) have no issues.

What the student should identify:

- Greensnap symptoms and lack of recovery of plants when broken stems have occurred
- Differences in dicamba. Other brands do not include safeners which likely made the corn more brittle. Older versions of dicamba were labeled for later applications, but due to the lack of tools at the time, many growers assumed more risk
- May need to replant depending on % of stalk breakage.
    - Most of the time if stalks aren't broken it is best to wait 10-14 days to fully evaluate recovery of twisted or leaning corn
    - If considering replant, the Purdue replant charts show that as long as there are more than 20,000 plants final stand that are viable, it is still better to leave the stand than to try and replant from a yield standpoint

Table 3. Potential corn yield at harvest based on planting dates and plants per acre.[2]

Planting Date	Plants per acre at Harvest							
	10,000	15,000	20,000	25,000	30,000	35,000	40,000	45,000
	% of optimum yield							
April 20 to May 5	71	81	89	95	99	100	99	97
May 5 to May 15	68	78	85	91	95	96	95	93
May 15 to May 25	62	71	77	83	86	87	86	85
May 25 to June 5	50	57	63	67	69	70	69	68
June 5 to June 15	38	44	48	51	53	54	53	52

Table adapted from Abendroth, L. and Elmore, R. 2010. Replant checklist. Iowa State University. https://crops.extension.iastate.edu/

- Cannot switch to soybeans due to rate of Verdict and atrazine.
- Recommendation: use a better dicamba and spray on label… smaller corn = safer

Undergraduate Problem #3

DGA Dicamba off-label on corn

UnderGrad 4
Accent on non-GMO soybean

Farmer and Judge:
Kevin Johnson & Sarah Striegel

Situation:

- Late May, Iowa
- Student is Syngenta Rep
- Grower is raising non-GMO corn and soybeans for the first time for the premiums. Soybeans look very sick after POST application and need to know what happened. Not sure how to kill different weeds in the field without glyphosate and so the grower does a lot of reading on AgTalk and TikTok to get opinions from others.

Information the grower should know:

- Sprayed Tendovo @ 3 pt/A just prior to planting.
- Sprayed all the non-GMOcorn two weeks ago with Armezon + Accent + Zidua SC and performance is very good.
    - Everyone says it hard to grow Non-GMO crops but seem to be having no issues in corn. Soybeans seem to be a challenge.
- Grass broke through early, so grower sprayed the Prefix (2.3 pt/A) + Accent (0.9 oz/A) + AMS + COC earlier than normal to get it under control.
    - May want to act like it was just sprayed with Prefix until the ALS symptoms are identified
    - Used Accent to control grass in corn, and was trying to use it up so they weren't stuck with inventory.
- Ask what happens next…

What the student should identify:

- ALS symptomology on soybean
- Accent is not labeled for soybean
- Will very likely have yield impact, but should not die. Can replant if desired after 15 days (probably don't need to replant)
    - SIU study showed that a ½ rate of Accent on soybean reduced yield by ~4-5 bushels/A Soybean Tolerance to Simulated Drift Rates of Accent and Beacon
- Use clethodim next time for grass control in soybean

Undergraduate Problem #4

Accent (nicosulfuron) applied to soybeans

BASF
We create chemistry

Undergrad Final
ATZ burn on hot corn mixture

Farmer and Judge:
Brady Kappler & Nick Roysdon

Situation:

- Early June, Eastern Nebraska
- Student is BASF rep
- Grower's corn just doesn't look right. Farmer is confused. Not sure exactly what is going on. Retailer sprayed Armezon PRO just a few days ago. This is his first time using Armezon PRO, and he is concerned about the safety of the product and wants to know if his corn is going to be okay.

Information the grower should know:

- Armezon PRO + atrazine + MSO was sprayed 2-3 days ago, retailer-applied. (spray ticket available)
- Grower has never used Armezon PRO, but has heard that it is good for killing waterhemp and grass in corn. Looking for alternatives to glyphosate
- Weather has been cool and there has been plenty of moisture so far, corn has not wanted for anything or been stressed
- Wants to know if this is gray leaf spot??
- Retailer told me that they sprayed off this same load in the field up the road yesterday and it looks fine.
    - Different hybrid in the other field
    - Sprayer sat overnight and they started here the following day.

What the student should identify:

- Student should identify atrazine + oil symptomology on the lower leaves of the corn plant and along leaf margins. Upper plant is healthy and unaffected
- Eliminate the possibility of tank contamination of Zidua PRO when switching from soybeans to corn
- Student should recognize that it's not HPPD symptoms. Symptomology is caused by the combination of atrazine in that tankmix and MSO adjuvant.
- Recommendation: we can see this from mixtures of EC formulations with atrazine and an MSO adjuvant, especially in the weather conditions we have had (cool, plenty of moisture causing thin cuticles on corn). Student should recommend no action be taken, as the corn will fine and the new growth is unaffected.

Grad 1
Resicore Contamination over soybean

Farmer and Judges:
Gery Welker & Matt Osterholt
Kurt Maertens & Kaitlyn Waibel

Situation:

- Early June. Southern Iowa.
- Student is the Corteva rep.
- Grower has soybeans showing speckling symptomology over whole field. While in field, grower notices for first time that there is also cupping on new growth. Does Enlist cause speckling and cupping of soybeans? Needs help diagnosing what is going on in the field.

Information the grower should know:

- Planted E3 soybean.
- Should not be drift from a neighbor, but the field is surrounded by trees and pasture.
- Entire field is consistently showing symptoms evenly.
    - The neighboring pasture sprayed with 2,4-D LV6 by the grower to control thistles. Wasn't concerned because of the E3 beans in the field. Can ask if drift from LV6 would cause cupping?
- Applied Enlist , SelectMax, EverpreX, and COC ~1 week ago to soybeans
- Operates own sprayer and sprays all of corn and soybean acres that they farm
    - John Deere R4038 with Exact Apply and is new to them this year
- This is the first field of soybean after corn POST and is the only field that has an issue.
    - Posts all corn with 60 fl oz/A of Resicore
- Mixes all loads for the sprayer one field at a time.
- Single rinsed sprayer before mixing soybean load.
    - Has never cleaned out screens before.
- Wants to replant the field if beans will die

What the student should identify:

- This is tank contamination and not drift
- Identify both HPPD symptomology (very subtle) and Stinger symptomology. Additional leaf burn is from mixture that was sprayed, separate from the contamination
- Determine that this is not a full rate of Resicore
- Need to address what a proper tank cleanout is supposed to be.
- Likely that the soybeans will survive and still produce a decent yield.

Graduate Problem #1

Resicore contamination on soybeans

BASF
We create chemistry

Grad 2
Hotload of Armezon PRO to wrong field

Farmer and Judges:
John Hinz & Brent Mansfield
Devin Hammer & Hunter Mendenwald

Situation:

- Late June, Iowa
- Student is BASF rep
- E3 soybeans have a clear issue after reloading the sprayer. Retailer needs assistance on understanding what happened. 120 acre field, first 80 acres were fine (first hot load) but the last 40 are the issue (2nd hot load)

Information the grower/retailer should know:

- Reloaded the sprayer here. Can clearly see that the next load is the problem.
- May try to mislead the student on something breaking loose in the mix. Prior to this field the sprayer was applying Flexstar to non-GMO beans
- Retailer runs multiple sprayers and does not mix in the field. All loads come to the sprayer as a "hot load".
    - 1st load: Roundup + Outlook. Second load was supposed to be the same. To the retailer and student, the actual second load is unknown at the time of the conversation
    - Actual 2nd load: Armezon PRO + ATZ – came as a hot load.
        - After identifying that HPPD and ATZ are the issue, need to acknowledge that there was another field showing no herbicide symptoms on the resistant waterhemp (likely where the other load went)
- The only two sets of chemistry leaving the plant that day:
    - Glyphosate + Outlook
    - Armezon PRO + atrazine + glphosate
- PRE on soybean field in question was Zidua PRO. Soybeans looked fine until after the POST pass.
- Weed control is not an issue because the application was proactive (before weeds were up).

What the student should identify:

- Identify HPPD + Atrazine damage. May not be able to ID actual product itself but that's okay
- Identify that wrong product came from the hot load and not the sprayer
- If the soybeans will survive and what next steps should be…
    - If the soybeans survive, there is very little that can be done as both HPPD and Pursuit on are on the acre. Replanting is not really an option. Retailer would call insurance to cover a mishap. Clearfield corn if you can find it??

Graduate Problem #2

Armezon PRO tanker to wrong field

BASF
We create chemistry

Grad 3
Drone contamination

Farmer and Judges:
Jared Roskamp & Doug Findley
Vince Davis & Kevin Hartman

Situation:

- Late May, northern Illinois
- Student is Bayer Rep
- Grower is angry because his corn is burnt, and he is convinced that the application of Laudis + Atrazine + Roundup just a couple of weeks ago is to blame. The top of the corn is speckled and burnt, and the pattern throughout the field is streaky. The corn was off to a great start, and the grower was really excited about his potential yield. He has been “pouring the coals to it this spring” to make sure it has everything needed to reach it’s potential.

Information the grower should know:

- Planted SmartStax corn
- No other corn fields are showing this issue, even though several have been sprayed with the same herbicide mixture.
- Considers himself “progressive” and has been “trying a lot of new things this year”
    - Sprayed Delaro about a week ago with new drone to push the yield in this field.
- Entire field is showing the same symptoms and pattern of symptoms. 80 acre field
    - Streaks show up on 30’ centers
- Retailer sprayed the Laudis. Sprayer was a dedicated corn sprayer with 100’ booms
- Has heard of 3 way mix of HPPD, ATZ, and strobi causing flash. Is that it?
- Grower is very worried about early-onset disease and wants to make sure it does not impact his corn. Has been burned by tar spot in the past
- Used it to spray Sharpen for burndown applications this spring. Mixes chemical in an old tote shuttle for his drone applications
- Used the same drone and mixing tank to spray Delaro on the corn field, has used Delaro in the past with no issues.
- Told his son to clean out the mix tank after burndowns were done, must not have happened

What the student should identify:

- Patterns in the field don’t match a ground sprayer pattern, if it was the Laudis + ATZ or tank contamination of the sprayer then the entire field should be showing the symptomology and way sooner
- Student will have to ask enough questions to trace it back to the drone and the mixing container
    - Was anything else sprayed on this field?
    - What are the “new things” the farmer is trying this year
    - What does he mean by “pouring the coals to the corn”?
- Corn will grow through it.
- Be sure to clean out drone and mix tank for drone in future.

Graduate Problem #3

Sharpen contamination in a drone fungicide application

BASF
We create chemistry

Grad 4
Failed termination of bad corn stand

Farmer and Judges:
Brady Kappler & Pamela Carvalho-Moore
Cade Hayden & Tyler Grigsby

Situation:

- May 1st, Iowa
- Student is BASF rep
- Grower planted corn, but shortly after that received heavy rainfall that led to poor and variable corn emergence. The grower wanted to kill off the corn stand and replant the field, so he attempted to kill the corn with Sharpen but the corn did not die.

Information the grower should know:

- Planted DoublePro corn, received several inches of rain in a heavy storm a couple days later
- The corn emergence was very low and variable, and he is not happy with it
- Knows that you can't spray Sharpen on emerged crops, has been told several times that "Sharpen will kill your corn or beans if they are emerged"
- Sprayed the corn with Sharpen + AMS + MSO a week ago (had some on hand from burndown spraying), and is starting to see the corn grow back
    - Has already planted the new crop the day before, is concerned about the old corn competing with the new corn
- Sprayed the field in the morning, and a small rain shower came through a couple of hours later
- Wants to know why the Sharpen didn't work
- Will ask if can use SelectMax to kill off the stand before the new corn emerges

What the student should identify:

- Corn is indeed not dying, regrowth is occuring
- Sharpen rainfast is 1 hour, so rainfall did not cause the problem
- Tell farmer that Sharpen, as a contact herbicide, is not a good option for terminating a corn stand
- Recommend spraying immediately with either Liberty + MTZ or gramoxone + MTZ before the new crop emerges
    - Can only recommend metribuzin if corn is not emerged and planted at least 1.5" deep
- Cannot recommend Select or other Group 1

Graduate Problem #4

Failed corn termination with Sharpen

Grad Final
Blended seed with Liberty + clethodim contamination

Farmer and Judge:
Mike Probst & Matt Osterholt

Situation:

- June 5th
- Student is BASF rep
- Grower has a field with a percentage of the plants that are almost dead, while the rest of the field looks terrible. Has been a busy spring and haven't been able to keep up very well with spraying and planting in between rains.

Information the grower should know:

- This is last field that was planted, and used up several bags of seed. To save time, seed was mixed together in the central fill unit.
    - Some of the corn was DoublePro and some Smartstax
- Likes the easy button of going back and forth between some corn and bean fields with this Liberty + Roundup mix
    - Grower sprayed Liberty 32 + Roundup 30 + Outlook 12 on the field because it was already mixed up for soybeans.
- Can elaborate on how much that they cannot run dicamba because they are afraid of it.
- Depending on how the plots look, may be able to go down an insect route or fertilizer damage from a topdress if we don't feel the problem is hard enough.
- Fights volunteer corn in some fields that had down corn last year, was using select max in some soybean fields either in the load
    - Loaded new load on top of a 30-50 gal leftover load from beans with clethodim
    - Not aware that the last tank was not completely empty and did not clean out

What the student should identify:

- Identify glufosinate injury on DoublePRO corn
- Determine that there are two different traits in the field
- Identify reduced rate of clethodim injury on SmartStax corn
- Determine that because the grower did not rinse between soybean and corn load

Backup 1

See & Spray Carryover

Farmer and Judge:

Situation:

- May 30th, Minnesota
- Student is Syngenta Rep
- Grower has soybeans that are showing small pockets of yellow/white leaves. Cannot understand where this is coming from. Owns their own sprayer and sprays everything themselves. Thinks they had a mixing issue and Tendovo was blowing out of the sprayer in surges…

Information the grower should know:

- Corn/Soy rotation
- Grower needs to disclose subtly that they have a See and Spray machine. Grower is pressure testing the machine for the 2nd year to learn about it. Like to go across these fields a lot and watch the technology work.
- PRE sprayed with S&S machine, but as a broadcast - Tendovo at 2 qt/A + Roundup
    - No issues were noticed during application – screens looked good and as applied maps looked consistent
- Planted E3 soybean after Tendovo was sprayed
- Symptoms just started showing up recently
- Corn last year was sprayed 3 times POST with new S&S machine. First two passes were Roundup and Diflexx. Last pass was done in Late June with Callisto @ 6 fl oz/A. Because we weren't spraying the whole field, the grower doubled the rate.
    - Final pass sprayed ~50% of the field
- Weather last summer/fall was very dry. And winter lasted longer than normal this year.
- Soil pH: 6.0-6.8 – lower pH can slow the breakdown of mesotrione

What the student should identify:

- HPPD symptomology
- Carryover risk from field history
- See and Spray pattern used last year should be identified
- Soybeans will likely grow through this symptomology – so unlikely need to replant
    - Wait and see to follow up on crop conditions
- Late applications and off label use of S&S should not be repeated.