

# NEWSS News Supplement

## Collegiate Weed Science Contest

August 2010

The NEWSS Collegiate Weed Science Contest Held at Homer C. Thompson Vegetable Research Farm in Freeville, NY.



The 2010 Weed Contest, hosted by Cornell University, was held in Freeville, NY on July 27. Nearly 100 students, representing 10 different institutions including Penn State, North Carolina State, University of Maryland, University of Guelph, Ohio State, Michigan State, Purdue, University of Florida, and University of Illinois, competed in the contest. The weather was perfect; the farm looked beautiful and the plots for the contest were in excellent condition for identification. Many thanks to the organizers, Robin Bellinder, Toni DiTommaso, and Russ Hahn, for putting on such an outstanding event!



### Highlighted

- WEED ID REVEALED
- GROWER PROBLEM SYNOPSIS
- CONTEST PHOTOS
- CONTEST WINNERS
- TEAM PHOTOS
- VOLUNTEERS & SUSTAINING MEMBERS

### Inside this issue:

ORIENTATION	2
WEED ID	3-6
SPRAYER CALIBRATION	7-10
HERBICIDE ID	11-13
GROWER PROBLEMS	14-19
WINNERS	20-21
VOLUNTEERS & SUSTAINING MEMBERS	23

# NEWS Supplement

## Orientation Dinner Held at the Robert Trent Jones Golf Course





**Weed Identification Answer Key**



1) Smooth crabgrass 2) Yellow toadflax 3) Common chickweed



4) Japanese knotweed 5) Horsenettle 6) Broadleaf dock



7) Hairy galinsoga 8) Red sorrel 9) White campion

# NEWSS News Supplement

---

## Weed Identification Answer Key

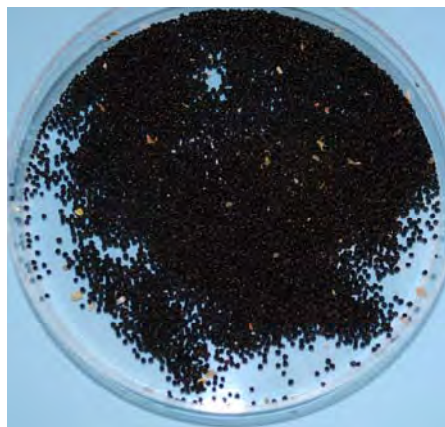
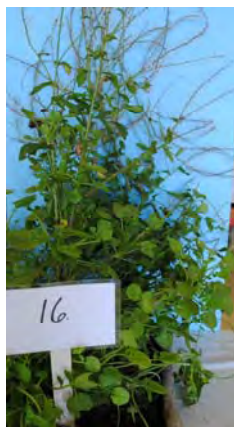
European  
buckthorn  
not pictured



10) European buckthorn 11) Fall panicum 12) Spiny sowthistle



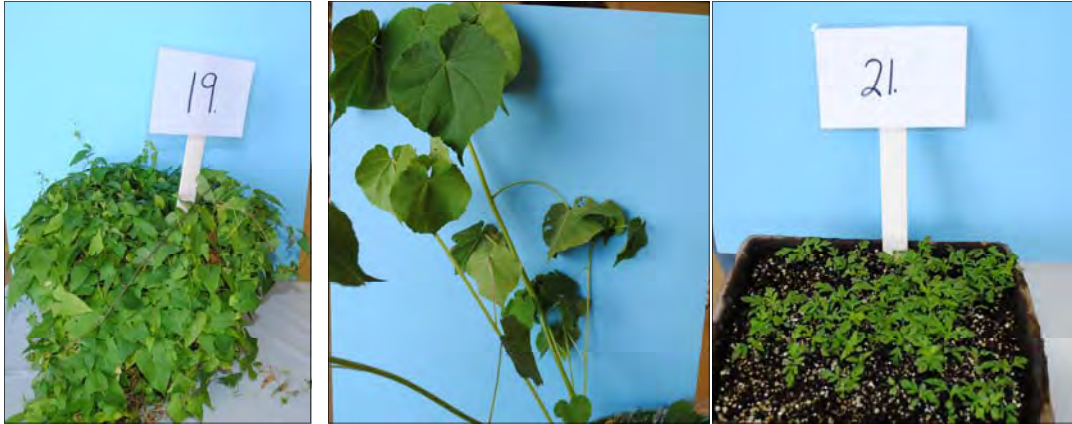
13) Smooth bedstraw 14) Eurasian watermilfoil 15) Green foxtail



16) Yellow rocket 17) European swallowwort 18) Common purslane



**Weed Identification Answer Key & Student Participation**



19) Hedge bindweed 20) Velvetleaf 21) Common ragweed



22) Common mallow 23) Broadleaf plantain 24) Horseweed 25) Field bindweed



# NEWSS News Supplement

## Weed Identification: Students demonstrate their identification skills





Sprayer Calibration



## Written Calibration Problems Answer Key (Part A = 50 points)

### Multiple Choice (circle the correct answer):

1. It is generally most appropriate to spray a pesticide in early afternoon rather than early morning. (2 pts)
  - a) True
  - b) False**
  
2. Which type of spray tip would be a poor choice if spraying fertilizers frequently? (2 pts)
  - a) Ceramic
  - b) Polymer
  - c) Brass**
  - d) Stainless steel
  
3. What type of spray tip would be best for spraying a post-emergence systemic herbicide? (2pts)
  - a) TwinJet
  - b) AI Teejet**
  - c) Turbo FloodJet
  - d) XR Teejet
  
4. A cone-type spray tip is a poor choice for banded herbicide applications because it does not provide equal distribution across the spray band. (2pts)
  - a) True**
  - b) False
  
5. Of the spray tank mixture components listed below, which should be added first if water is the carrier? (2 pts)
  - a) 2 EC Insecticide
  - b) Nonionic surfactant
  - c) 3 SL Herbicide
  - d) 80 DF Fungicide**
  
6. If a farmer is spraying Dual II Magnum herbicide (EC formulation) with his sprayer set up with TT80015 nozzles, what screen size should he use? (2 pts)
  - a) 50 mesh
  - b) 100 mesh**
  - c) 200 mesh
  - d) No screen is needed since it is a liquid herbicide formulation
  
7. What is the most important feature of the Extended Range (XR) spray nozzle? (2 pts)
  - a) Compatibility with automatic rate controllers
  - b) Color coded
  - c) Available in 80 and 110 degree spray angles
  - d) Excellent spray distribution over a wide pressure range**
  
8. If you are using a 11002 flat spray tip and the pressure is decreased from 30 psi to 15 psi, the spray angle would\_\_\_\_\_. Circle the correct answer. (2 pt)
  - a) increase
  - b) decrease**
  - c) remain unchanged
  - d) both increase and decrease



# NEWSS News Supplement

---

## Sprayer Calibration—Word Problem Answer Key

**WORD PROBLEMS – SHOW ALL WORK! (round answers to nearest hundredth)**

1. A flush of common lambsquarters, redroot pigweed and common ragweed seedlings emerge in your soybean field because your pre-emergent treatment of flumetsulam/metolachlor (BROADSTRIKE-DUAL ) did not work well. The infestation is too heavy to control with a cultivation so you decide to apply a herbicide. Due to the soybeans being in the third trifoliolate leaf stage, you choose acifluorfen (BLAZER ) which is an effective rescue treatment for the control of broadleaf weeds in soybeans.

Information provided:

BLAZER 2 lb acifluorfen ai/gal [240 g ai/L]

Recommended BLAZER dose 0.53 lb ai/A [593.6 g ai/ha]

Your field 74 acres [30 ha]

Your spray volume 27 gal/A [252.6 L/ha]

Your tank volume 500 gal [1892.5 L]

a) How much BLAZER (gal or L) is required to treat the field? (3 pts)

**19.61 gallons or 74.1 litres**

b) How many tanks are required to treat the field? (3 pts)

**4 tanks**

c) How many gallons or litres of BLAZER must be added to each full tank? (3 pts)

**4.91 gallons or 18.53 litres**

---

2. Your neighbor sees that you truly have a solid understanding of herbicides and shows you his field of soybeans which was treated with imazethapyr (PURSUIT ) but allowed the escape of barnyardgrass, foxtails, and quackgrass. Since he planted at 30 in. (76.2 cm) rows, he's contemplating a custom cultivation which he suspects would be cheaper than treating with sethoxydim (POAST ) and the surfactant MERGE which is especially effective against quackgrass.

Information provided:

POAST 1.5 lb sethoxydim ai/gal [180 g ai/L]

Recommended POAST dose 2.3 pt/A [2.7 L/ha]

Neighbor's field 62 acres [25 ha]

Recommended MERGE dose 1.7 pt/A [2.0 L/ha]

a) How much POAST (gal or L) is required per acre (or per hectare)? (2 pts)

**0.29 gallons or 2.7 litres**

**and** to treat the whole field? (2 pts)

**17.98 gallons or 67.5 litres**

b) How much MERGE (gal or L) surfactant would be required to treat the entire field? (2 pts)

**13.17 gallons or 50 litres**

c) Determine the cost of POAST application and the cost of cultivation if: (3 pts)

POAST \$90.00/gal [\$23.80/L]

Spraying \$6.00/A [\$14.83/ha]

Cultivation \$10.00/A [\$24.71/ha]

MERGE \$25.00/gal [\$6.61/L]

**Herbicide application = \$ 2,319.45 (metric calculation = \$ 2, 307.75 – because of rounding off)**

**Cultivation = \$ 620**

d) Compare the likely effects **next year** of using cultivation versus herbicide application. So, what do you recommend him to do **this year**? Why. (2 pts)

## Sprayer Calibration—Word Problem Answer Key

3. You are now asked to become a certified field sprayer for your region whereby afterwards you can be hired by local producers for your services and hopefully earn a decent salary to be able to pay back your substantial college debt.

Information provided: Tractor type John Deere 6400 Gear Low 4 @ 2700 rpm

Sprayer type Vicon LT800

Pressure @ 2700rpm 40 psi [276kPa]

Nozzle spacing 15.75 inches [40 cm]

Time to cover 165 ft [50.3 m] 21 seconds

Avg. vol./21 sec. 16.54 fl.oz. [489.09 ml]

a) What is the spray rate (GPM or Litres per minute) for this sprayer? (3 pts)

**0.37 GPM or 1.39 L/minute**

b) The volume rate on the BASAGRAN FORTE (bentazon+adjuvant) product label indicates a spray volume of 21.5 gal/A @ 40 psi [201 L/ha] @ 276 kPa is required for optimal efficacy. What must be done to adjust the spray rate? Be specific. (3 pts)

**Increase tractor speed to 6.49 MPH or 10.37 Km/h**

4. A grower planted her 220-acre (89 hectare) corn field in Columbia County, NY with a 4-row planter; each row was 30 in. (76.2 cm) apart. Johnsongrass, ranging from 10 to 15 inches (25.4 to 38.1 cm) in height infests the field. The grower would like to spray Beacon 75 WDG (primisulfuron) as a post emergence broadcast. Each individual packet of Beacon weighs 1.52 oz. (43.06 g). A new John Deere sprayer with a 500-gallon (1892.5 litre) tank and 18 in. (45.7 cm) nozzle spacing was filled with water, then 24 rows each 1000 ft. (304.8 meters) long were sprayed at 5 mph (8.05 km/h). The Beacon application rate is 0.5 packet per acre (1.23 packet per ha). After spraying the 24 rows, there were 486 gallons (1839.5 litres) remaining in the tank.

a) What is the broadcast application volume in gallons per acre (litres per hectare)? (3 pts)

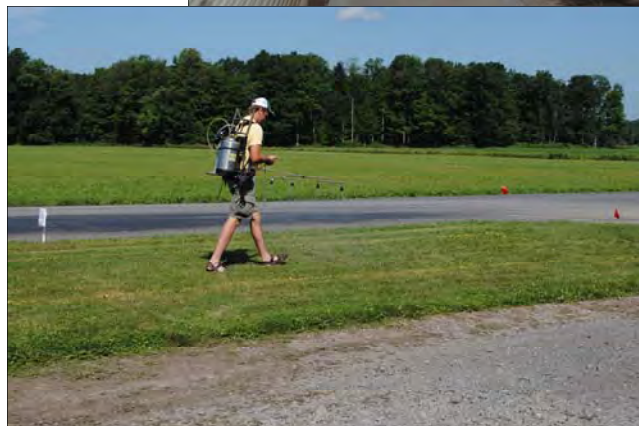
**10.14 gal/A or 94.64 L/ha**

b) How many Beacon herbicide packets should be added per tank? (3 pts)

**24.6 packets/tank**

c) What is the Beacon rate in lbs ai/A (g ai/ha)? (2 pts)

**0.036 lb ai/A or 39.72 g ai/ha**





# NEWSS News Supplement

## Herbicide Identification





Herbicide Identification





**Herbicide Identification Answer Key**

	Mode of action	Herbicide Family	Common name	Most correct characteristic
1	<i>PPO inhibitor</i>	<i>Pyrimidinedione</i>	<i>Saflufenacil</i>	<i>Rapid foliar burn-down and soil residual activity</i>
2	<i>Seedling root inhibitor</i>	<i>Pyridazine</i>	<i>Dithiopyr</i>	<i>Movement in run-off water is unlikely</i>
3	<i>HPPD inhibitor</i>	<i>Isoxazole</i>	<i>Isoxaflutole</i>	<i>Resistant weeds are not a problem for this herbicide</i>
4	<i>ALS inhibitor</i>	<i>Sulfonylurea</i>	<i>Chlorimuron</i>	<i>Labeled for noncrop areas</i>
5	<i>Photosystem II inhibitor</i>	<i>Triazine</i>	<i>Atrazine</i>	<i>Both foliar and root absorption</i>
6	<i>Seedling root (or shoot) inhibitor</i>	<i>Chloroacetamide</i>	<i>Metolachlor</i>	<i>Most susceptible weeds fail to emerge from soil</i>
7	<i>Plant growth regulator</i>	<i>Phenoxy</i>	<i>2,4-D</i>	<i>Research started under wartime secrecy</i>
8	<i>PPO inhibitor</i>	<i>Diphenyl ether</i>	<i>Lactofen</i>	<i>Labeled for white mold suppression in soybeans</i>
9	<i>Cell membrane disrupter</i>	<i>Bipyridilium</i>	<i>Paraquat</i>	<i>Highly persistent in soil</i>
10	<i>Fatty acid synthesis</i>	<i>Cyclohexanedione</i>	<i>Clethodim</i>	<i>There are about 40 weeds resistant to this site-of-action</i>

Possible points:      40                                  20                                  30                                  10      = 100

Note that photos on previous pages do not correspond with the answer key above unless the plot number is pictured.

# NEWSS News Supplement

## Grower Problems



### [synopsis of problem #1 \(peas\):](#)

The farmer had a problem with his peas which had very few leaves but mostly tendrils. He was blaming this on the herbicide applied post - Basagran and Thistrol. He complained that he had another field planted the same time and sprayed with the same material, and it looked completely normal. What students did not know, however, was the issue was not with the herbicide but with the type of pea planted. The one with few leaves and mostly tendrils is an afila variety. They have been bred for this trait. The tendrils provide enough photosynthesis that the yields are similar, plus they have a more upright nature allowing easier harvest. We were hoping that students would ask if the peas the farmer said were planted at the same time were the same variety. If they asked that and suggested that perhaps the problem was that one variety was more susceptible to the herbicide, they received partial credit - at least they identified two different varieties. For full credit they needed to suggest that these were two varieties and one was an afila type. There was nothing wrong and the peas should yield fine.



### [synopsis of problem #2 \(peas\):](#)

The problem that we worked with was field peas that had one half of the plot, that represented a field that had delayed maturity compared to the other half of the plot (a hypothetical separate field sprayed on the same day with only Basagran). The field with the delayed maturity was sprayed with Raptor herbicide. The problem was that the Raptor label requires the addition of Basagran herbicide to prevent crop response, when adding NIS or UAN. We stated that we added both of these additives to Raptor. We omitted the Basagran and we wanted the students to determine that this was the most likely cause of the crop response.



### [synopsis of problem #3 \(cabbage\):](#)

Prior year snap beans were planted in June and as a herbicide program, Reflex was applied post-emergence for control of broadleaf weeds. This year in May, cabbage was transplanted after the ground was tilled. A Dual Magnum application was made 24 hours after transplanting. After two weeks of planting, the cabbage began to show chlorosis with some plants dying. After four weeks, 50% of the plants were dead and the other 50% were not growing. Solution: Reflex has an 18 month rotation to cabbage. Grower should have read the label as to rotational restrictions and planted a labeled crop based on the rotational limitation.





## Grower Problems



### [synopsis of problem #4 \(tomatoes\):](#)

In the student problem, the grower had planted corn and applied 3oz of hornet. The crows came through and cleaned out his corn. He lightly tilled up his field, replanted his corn, and reapplied 3 oz of hornet, a legal and recommended application. The corn crop was excellent, as was the weed control. The following year the grower plowed up the field, and transplanted his tomatoes 13 months after the 2nd Hornet application. The tomatoes were severely stunted, with auxin damage (twisting, clubbing) on the growing points of the new tissue, or flat out dead as a result of the clopyrild in the Hornet. Students who looked at the label would have seen under rotational restrictions that potatoes (a close relative to tomatoes) had an 18 month plant back restriction, also under the plant back restriction tomatoes could have fallen under the "Others" categories which would have been 26 months. The final question posed to the students was "what should I plant back in this field??" Back to the rotational chart, it lists many crops that could have been planted back in the 13 month interval.



### [synopsis of problem #5 \(goose damage in corn\):](#)

The solution to the "problem" was goose damage. The grower was incorrect in thinking that a late application of Poast had hurt the crop. Note, the literature said that Poast applications are safe at all stages up to tasseling. The key clues were the type of damage (mechanical or vertebrate) and goose feathers visible on the soil and attached to some leaves (these feathers were specifically shown to the participants). The solution for this year and next would be to try different ways to keep the geese away and see what works: scarecrows, loud sound-maker, plant another crop that they are attracted to.



### [synopsis of problem #6 \(peppers\):](#)

An extension agent is called in to look at a field of peppers where random plants are lodged over and broken off at their base. Two weeks prior, an organic farmer had sprayed vinegar, as an in-row application directed to the base of the pepper. At that time, weeds were killed and the plants looked great. Students were to recognize that the vinegar, a high strength acid with a contact-based mode of action, scarred the stem at the time of application. Once plants grew larger, a combination of wind, rain, and plant weight caused these weakened stems to break or plants to fall over. Student could recommend minimizing vinegar contact with the stem or shielding of pepper stems.



## Grower Problems



### [synopsis of problem #9 \(horseweed in soybean\):](#)

The grower was setting up a corn/soybean rotation for his fields, but had only been growing soybeans for 2 years and was experimenting with no-tillage. Soybean field was sprayed with glyphosate (full-labeled rate for the situation) and Prefix (for residual control). Roundup Ready soybeans were planted the next day. Glyphosate was applied post-emergence (same formulation, full-rate) about 4 weeks after planting. The farmer did all of his own mixing and spraying and used his own equipment. The equipment was calibrated and coverage was good. The student was to identify the healthy remaining plants as horseweed/marestail (*Conyza canadensis*). Horseweed was the only surviving plant indicating that resistance may be involved. The grower wanted to know how the horseweed seed ended up in this particular field. There had been no previous issues with horseweed in this or other fields and none of the neighbors had horseweed problems.

The solution was that horseweed seed are very small and capable of very long transport in the lower atmosphere. The seeds settled out in his field but tillage would have controlled the problem in previous years. The density of horseweed was sparse and would have no impact on soybean yield so additional management of the remaining plants was not justified. Collecting seeds and testing for resistance would be appropriate. Next year the farmer should rotate herbicide mode of action with products that effectively control horseweed. With resistance in the area, and the mobility of horseweed seed, the grower needed to implement resistance management on all his fields. The adjacent field that would be planted to soybeans next year was very likely infested with glyphosate-resistant horseweed seeds. Soybeans should be planted in narrower rows to increase the soybean competitive ability of surviving horseweed.



### [synopsis of problem #10 \(forage sorghum\):](#)

Forage sorghum seed was not treated with the safener 'Concep' prior to planting and pre-emergence application of Dual Magnum (S-metolachlor). The product label clearly indicates that sorghum seed MUST be properly treated with Concep or severe crop injury or death may occur. The first decision was to determine the crop that was actually planted. About 80% of the contestants erroneously assumed the planted crop was corn! Even though corn and sorghum seedlings resemble one another, sorghum is much more sensitive to S-metolachlor than corn and requires the use of the seed treatment safener, Concep. Once the crop was correctly identified, then unsafened sorghum symptomology respective of S-metolachlor (stand reduction, twisting plants, improper unfurling of leaves, stunting, etc.) helped ascertain the problem.



### [synopsis of problem #11a \(sugar beets\):](#)

Supposed Dual Magnum Injury to Sugar Beets  
Symptoms were variable stand, PRIMARILY in the form of stunted plants, rather than stand loss. The pattern of symptoms was variable and not associated with seeding or spraying patterns. Some plants were fine and weed control was good. Questioning would reveal that planting was timely, Dual application was labeled and timely, weather was favorable for activation, and cultural practices were optimal (variety, seeding, seedbed quality, fertility, non-weed pest management). Soil tests revealed adequate fertility and a pH of 7.1. The previous crop was field corn that had been treated with 2/3 oz/ac of Accent. Review of the Accent label would reveal that the plantback interval for sugar beets in soil with pH > 6.5 is 18 months. The issue was nicosulfuron carryover.

The solution was to ride out this crop. Rotation restrictions would be past for 2011.





**synopsis of problem #11b (sweet corn):**

The field of corn was stunted and showing severe signs of chlorosis. The corn was approximately 12 inches tall and had received a post-emergence broadcast application of Accent herbicide. The variety planted in the field was Merit sweet corn, a variety that is highly sensitive to Accent herbicide. It was very evident that this particular field of corn was not going to recover from the herbicide injury.

The solution to the grower problem would be to read the herbicide label carefully prior to the herbicide application. It clearly states on the Accent herbicide label "Sweet corn hybrid sensitivity to Accent is highly variable, and not all hybrids have been tested for crop tolerance. Contact your Dupont representative for information on local sweet corn hybrids that have been evaluated with Accent." In the future, do not apply Accent herbicide to Merit sweet corn.

**synopsis of problem #12 (soybean stand reduction & injury):**

soybean crop response to off-label application of Sharpen herbicide.



Conventionally tilled soybeans (V2-V3) with some stand reduction & stunting, severe but variable necrosis on one side of the hypocotyl & both cotyledons was observed. (Slight & variable necrosis on unifoliates; trifoliates were healthy). Sharpen herbicide was custom applied. Close observation of hypocotyls & cotyledons of dug plants, orderly inquiry of management practices, weather, and labeled use of Sharpen (label was available to read: "Sharpen may be applied preplant surface up to preemergence ... DO NOT apply when soybean has reached cracking stage or after emergence or severe crop injury will occur.") was needed to solve the problem. Soybeans were exposed (cracking/hooking) at time of application. The solution was to report that there may be some yield loss, but remaining stand is recovering well and should compensate for stand loss. So the recommendation was: do not replant.

Future recommendations included following labeled usage and advising custom applicator to pay closer attention to labeled uses and crop stage. Tillage was not the main point of this problem, but label says Sharpen is for burndown, so not much utility in conventional tillage, and a residual herbicide is recommended.

**synopsis of problem #15 (turfgrass):**



The grower is a lawn care operator who had been contracted to establish turfgrass on a large lawn area for an impatient property owner. Since the land owner wants quick results sod was used to establish the area and 10 days later much of the sod is dead. The grower used labeled rates of Tenacity (mesotrione) herbicide the day after laying sod, and blames tenacity for the poor appearance of the sod, and the student is the company representative on the call. In this case there were several things that the grower did that caused the establishment to fail. The sod was harvested from an old home lawn site to save cost on the sod, since he was renovating the other lawn anyway. Although a rain did fall 4 days after laying the sod, irrigation should have been applied the day of establishment because the sod dried out causing much of the sod to die. Tenacity did not cause Kentucky bluegrass in the sod to die, no irrigation soon after laying sod is why the bluegrass died. Much of the sod used in this case is contaminated with bentgrass, which Tenacity is labeled to control. Tenacity is causing some bleaching on the bentgrass and other weeds present. Proper solutions should have included: Tenacity was the wrong product for the situation, select a supplier of high quality sod for establishment in the future and be sure to irrigate to aid the establishment, or manage the client's expectations for a seeded establishment, because with a large area that is the best option.



## Grower Problems



### [synopsis of problem #16 \(dodder in cranberries\):](#)

Digital images were presented to the contestants of dodder, weeds, and cranberries (in various combinations) that were treated with Callisto. The grower explained that the dodder died in some situations but not in others. In the first year, Callisto was applied to a small weedy patch and the dodder died. In the second year, the grower used Callisto over more acreage and noticed the discrepancy in control. Cranberries are very tolerant of Callisto (there were pictures on damaged weeds and very healthy cranberries). When the dodder was attached to a weed that was susceptible to Callisto injury, the dodder died. When the dodder was attached to cranberry (not susceptible to the herbicide), the dodder was not affected. The contestant needed to know (or ask) that dodder is a parasite and obtains its nutrients (and other chemicals, like herbicides) from its host. Then, we were hoping the contestant would infer that since cranberry was not affected by the herbicide, it somehow detoxified the herbicide and did not pass on anything hurtful to the dodder. Susceptible weeds, however, either passed the herbicide in its toxic form to the parasite or the parasite died since the host died.

### [synopsis of problem #17 \(algae\):](#)



The dairy farmer in this problem sells certified organic milk and receives a premium price; he also has two daughters who harvest and sell rainbow trout to a local restaurant to help pay for college. The farmer and his daughters depend on their ten-acre hard water pond that is 20 feet deep with abundant ground water flow to provide drinking water for the cows and habitat for a thriving trout population. The pond however has a long history of excessive aquatic weed growth managed until three years ago by the use of herbicides before the farmer began selling certified organic milk. Former weed problems in the pond decreased until last year when a new aquatic weed appeared but remains unidentified by the experts. The plant grows to the pond surface, plugs the water pumps providing water to the cows and makes it impossible to harvest the trout by seining.

Identification of the plant as algae (the macro algae is *Nitellopsis obtusa* or starry stonewort) is an important first step. The plant did not have true leaves, stem or roots contrasted to a typical higher plant. Herbicide controls for algae species often involves copper compounds and this plant may be controlled annually by high concentrations of copper. This is not a treatment that should be used here because of the concern to produce organic milk, trout are very sensitive to copper, and the hard water reduces efficacy of copper on macro-algae. Physical control by hand rakes or mechanical harvesters can work as well as benthic barriers of fabric on the pond bottom or as a floating shade. Blue dyes to reduce light to the plant would not work because of dilution by high ground water flow. Plant eating "grass carp" may provide some relief.



### [synopsis of problem #18 \(blueberries\):](#)

Blueberry exhibiting interveinal chlorosis after an application of simazine

Although overapplication of triazine herbicides can induce interveinal chlorosis, so can certain nutrient deficiencies. A very common situation with blueberries and other ericaceous plants is that they are planted into soils with a pH greater than 5. This induces iron chlorosis that resembles triazine injury. Although simazine was applied after planting in this situation, it was applied correctly and according to label directions. It was the neutral soil pH that was the problem. A correct recommendation would have been to test the soil and make an adjustment with sulfur.



## Grower Problems

### synopsis of problem #19 (Japanese knotweed):

The problem dealt with the invasive plant Japanese Knotweed (*Polygonum cuspidatum*). The land manager had treated a few stems using the JK injector tool with Roundup Pro as per the label and then mowed the rest. Mowing is commonly used as a way to deplete the root reserves of a plant and make it easier to kill with an herbicide application. When the re-sprouts from the mowing were about 1 month old the land manager treated them with the same method as the original stems. The original, large stems died rapidly while the smaller re-sprouts were not succumbing as quickly. The reason for this is the needle on the injection tool is too large to work effectively on smaller stems (they crack or break off when impaled) and the amount of herbicide injected cannot be contained within the small stem.



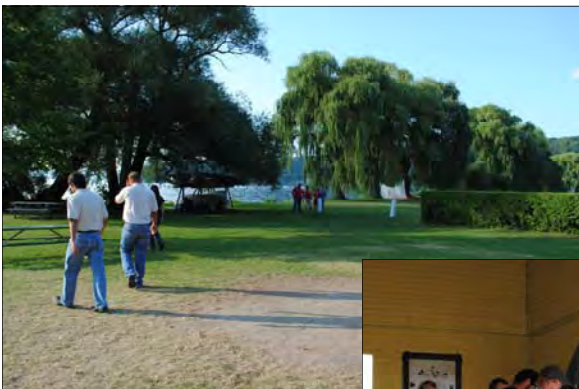
### synopsis of problem #20 (grapes):

My vineyard is three years old. We have had two successful growing seasons with adequate growth to our vines. This year there are strange symptoms on the leaves, the vines are not growing right, they seem stunted and deformed. Our spray program is the same as previous years, the weather and irrigation is similar as well. We also farm field crops adjacent to the vineyard, we have rotated crops here. First year soybeans, second wheat, third (present year) corn. We hired out all spraying of the field crops, and I unfortunately have no record of what was sprayed on the field and when. What is likely to be wrong with my grapes?

Answer: 2-4D, The symptoms on the grape leaves and the potential use of 2-4D on corn point to this chemical.



## Awards Banquet Held at Stewart Park



**Congratulations to the Graduate Winners!**



1<sup>st</sup> Place Team: Michigan State University:  
Dan Tratt, Alex Lindsey, Laura Bast

2<sup>nd</sup> Place Team: University of Florida:

Anna Greis, Sarah Berger, Courtney Stokes,  
Sergio Morichetti



3<sup>rd</sup> Place Team: Pennsylvania State University:  
Ben Crockett, Franklin Egan, Kristine Averill

**Graduate Individual:**

1<sup>st</sup> Place: Jason Parish, Ohio State University

2<sup>nd</sup> Place: Alex Lindsey, Michigan State University

3<sup>rd</sup> Place: Kristine Averill, Penn State University





**Congratulations to the Undergraduate Winners!**



1<sup>st</sup> Place Team: University of Guelph:

Thomas Judd, Blair Freeman, Eric Schroeders

2<sup>nd</sup> Place Team: Pennsylvania State University:

Ian Graham, Kelly Patches, David Harwick,  
Cory Chelko



3<sup>rd</sup> Place Team: University of Illinois:

Ross Recker, Sean Breen, Max Hendrickson,  
Matthew Carton



**Undergraduate Individual:**

1<sup>st</sup> Place: Cory Chelko, Penn State University

2<sup>nd</sup> Place: Dan Tratt, Michigan State University

3<sup>rd</sup> Place: Kelly Patches, Penn State University





# Team Photos





# Northeastern Weed Science Society

## Collegiate Weed Science Contest

The NEWSS Executive Committee along with Toni, Robin, and Russ would like to thank all those involved in making the 2010 Collegiate Weed Contest a Great Success!

We would like to personally thank the many volunteers (listed below) for your support of the 2010 Northeastern Collegiate Weed Science Contest held at the Homer C. Thompson Research Farm on July 27. Your commitment and willingness to support this educational event are sincerely appreciated.

We greatly appreciate the generous amount of time that you spent speaking with our student contestants and the valuable knowledge you provided as a volunteer. This year's contest boasted a record number of graduate and undergraduate students. The Northeastern Weed Science Society weed contest continues to be an excellent extra-curricular opportunity for students to learn and interact with other students, faculty, and industry professionals.

We thank you for your commitment to this highly enriching educational event. The support of each volunteer was integral in assuring the success of this event for the nearly 100 students who attended this year's contest. We believe this year's contest was a great success and enjoyed by all those who attended.

Volunteers:

Shawn Askew	Virginia Tech	Steve Reiners	Cornell University
Betsy Leonard	Cornell University	Carl Bannon	DuPont
Jeff Zelna	Syngenta	Erin Hitchner	Syngenta
Gregory Comeau	Dow AgroSciences	Brian Olson	Dow AgroSciences
Brian Caldwell	Cornell University	Sara Rostampour	Cornell University
Rakesh Chandran	West Virginia University	Jessica Drennan	Cornell University
Elson Shields	Cornell University	Mark VanGessel	University of Delaware
Steve Pyle	Syngenta	Mike Denis	Growmark FS
Greg Armel	University of Tennessee	Art Gover	Penn State University
Mike Hunter	Cornell Cooperative Ext	Todd Davis	Delaware Dept of Ag
Gar Thomas	BASF	Brian Boreman	Agricultural Consulting
John Willis	Monsanto	Dave Moody	Cornell University
Hilary Sandler	University of Mass	Margaret Smith	Cornell University
Robert Johnson	Cornell University	Neith Little	Cornell University
Marvin Pritts	Cornell University	John Orlowski	Cornell University
Jules Ginenthal	Cornell University	Melissa Bravo	Penn Dept of Ag
Kurt Brennan	Cornell University	Eric Shatt	Cornell University
Anita Deming	Cornell Cooperative Ext	Kathy Howard	Cornell University
Janice Degni	Cornell Cooperative Ext	Scott Morris	Cornell University
Erik Smith	Cornell University	Paul Stachowski	Cornell University
Pete Carta	Syngenta	Greg Hannig	DuPont
Keith Burnell	Syngenta	RJ Richtmyer	Cornell University
Luke Case	Ohio State University	Matt Ryan	Penn State University
Bryan Reeb	Ohio State University	Rob Nurse	Agri-Foods Canada
Stephanie Wedryk	Ohio State University	Edith Lurvey	Cornell University
Gary Schnappinger	Syngenta- retired	Barb Scott	University of Delaware
Bob DeWaine	Monsanto	Sarah Lincoln	Cornell University
Eric Sandsted	Cornell University	Steve McKay	Cornell University

Dave & other field hands at Freeville (who drove the wagons)

"Special thanks go to Larissa Smith and Glenn Evans for their exemplary work in assuring a successful contest. Larissa was the planning/event coordinator and oversaw many facets of the contest. Glenn was largely responsible for establishing the grower problems and herbicide identification plots. Other support personnel from Cornell who made significant contributions were Kathy Howard, R.J. Richtmyer III, and John Orlowski."

"Sustaining members donating to the weed contest (Platinum (\$2000 total) and Gold members (\$1000 total), where half of the contribution automatically goes towards the weed contest) were:

Platinum: BASF, Syngenta contributed \$1000 each to the contest

Gold: Dow Agrosiences, Monsanto, Dupont, Valent contributed \$500 each for the contest.