Products, Labels & Legislation

Tom Starkey
Southern Forest Nursery Management Cooperative
Auburn University

Information Presented in 2012

- **Mergers**
  - HB Fuller & Forbo Adgesives
  - SunGro & Fafard
  - Syngenta & Pasteuria Bioscience
- **New Products**
  - Osmocote Bloom – miniprill
  - New Peters low pH fertilizer
- **New Labels**
  - Hurricane WDG – Syngenta
  - Proline


NEW

Labels


ZAPPIT
Directions for Use
EPA Reg No. # 555-555
CAUTION
First Aid
Active Ingredients

Another source……

Restricted Use Pesticide

Due to Toxicity to Fish and Aquatic Organisms

For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

GROUP 3A INSECTICIDE

Permethrin 3.2 AG

INSECTICIDE

ACTIVE INGREDIENT:

Permethrin*.....36.8%

OTHER INGREDIENTS***.....63.2%

TOTAL:.....100.0%

**cis/trans* ratio: Max. 42% (±) *cis* and min. 58% (±) *trans*

****Contains petroleum distillates.

Contains 3.2 pounds permethrin per gallon as an emulsifiable concentrate.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See booklet for additional Precautionary Statements, First Aid, and complete Directions for Use.

EPA Reg. No. 83222-3

NET CONTENTS: 1 GALLON

DIRECT AG SOURCE™

Manufactured For:
Direct Ag Source, LLC
30473 260th Street • Eldora, IA 50627

7

EPA 031212/Rev C

Another source……

HELENA®

TAPOUT®

Selective Grass Herbicide

ACTIVE INGREDIENT:	BY WT.
*Clethodim	12.6%
OTHER INGREDIENTS	87.4%
TOTAL	100.0%

Contains Petroleum Distillates
*(E)-2-[1-[[(3-chloro-2-propenyl)oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one
Contains 0.97 lb. Clethodim per gal.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor immediately for advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (800) 424-9300, collect day or night, for emergency medical treatment information.

NOTE TO PHYSICIAN: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid, which can cause pneumonitis. If ingested, probable mucosal damage may contraindicate the use of gastric lavage. May pose an aspiration pneumonia hazard. Contains petroleum distillate.

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND COMPLETE DIRECTIONS FOR USE.

EPA Reg. No. 5905-578 AD 021811
EPA Est. No.: First letters of product batch code indicate producing establishment:
5905-AR-1•WA; 5905-GA-1•CG; 5905-IA-1•DI; 5905-CA-1•KC

Manufactured For
HELENA CHEMICAL COMPANY
225 SCHILLING BOULEVARD, SUITE 300 • COLLIERVILLE, TENNESSEE 38017

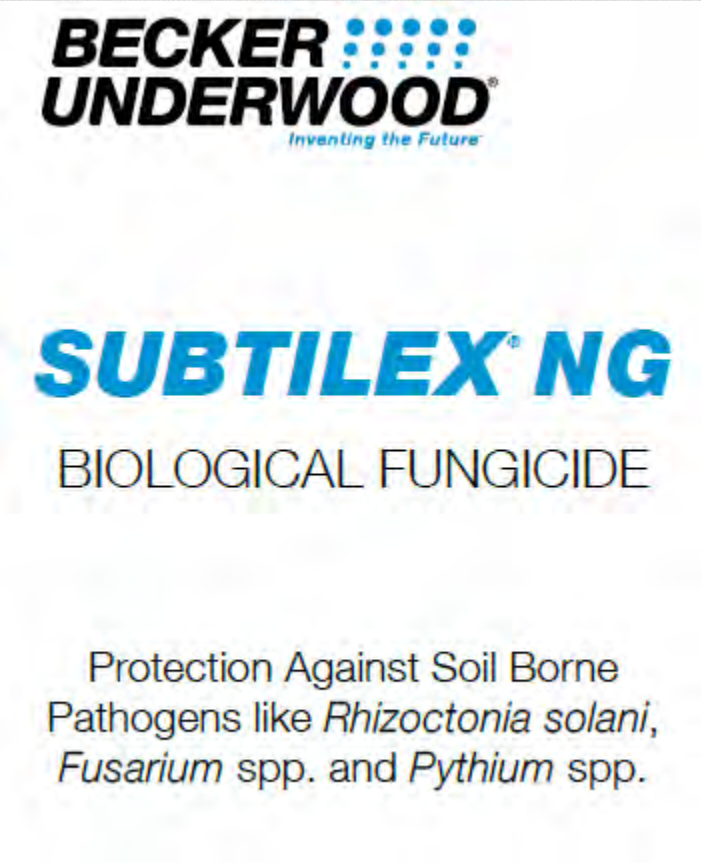
CONIFER TREES

TAPOUT® can be used to control labeled grasses in Christmas tree farms, conifer nurseries and conifer plantations (but not in forests).

Common Name	Scientific Name
Arborvitae, American	*Thuja occidentalis*
Cedars	*Cedrus* spp.
Cypress	*Taxodium* spp.
Fir, Douglas	*Pseudotsuga menziesii*
Firs	*Abies* spp.

Common Name	Scientific Name
Hemlock, Canadian/Eastern	*Tsuga canadensis*
Hemlock, Western	*Tsuga heterophylla*
Pines	*Pinus* spp.
Spruces	*Picea* spp.
Yew	*Taxus* spp.

Container Nurseries –for media



Subtilex® NG bio-fungicide protects against soil borne pathogens. The *Bacillus subtilis* bacteria rapidly surfaces, multiplying and growing with the roots, as well as producing metabolites that preventively limit growth and development of disease organisms which provides a level of protection against diseases like *Rhizoctonia solani*, *Fusarium* spp. and *Pythium* spp

New Labels to Consider

GRANDEVO® PTO

- ❑ Bioinsecticides offers complex modes of action to control a broad spectrum of chewing and sucking insects and mites.
- ❑ Easy on beneficial's
- ❑ Long residual
- ❑ 4-hour REI / 0-day PHI
- ❑ Approved for field and greenhouse applications

GRANDEVO® PTO

Crop	Target Pest	Application Method	Product Use Rate per Application
Ornamentals **Herbaceous Ornamentals** Flowering Plants Foliage Plants **Woody Ornamentals** Broadleaves, Shrubs and Trees Conifers, Shrubs and Trees	Armyworms Azalea caterpillars Bagworms Budworms (including tobacco, blackheaded, jack pine, spruce) California oakworms Diamondback moths Ello moths Elm spanworms Fall webworms Greenstriped mapleworms Gypsy moths Io moths Leafrollers (including omnivorous, fruittree) Loopers (including hemlock) Mealybugs Oleander moths Peach twig borers Pecan nut case bearers Pine tip moths Redhumped caterpillars Saddle prominent caterpillars Saddleback caterpillars Tent caterpillars Tussock moths (including Douglass fir, western) Webworms (including mimosa)	Foliar	1 – 3 pounds per acre or 1 – 3 pounds per 100 gallons of water
	Aphids Azalea lacebugs Lygus Mites Thrips Whiteflies	Foliar	2 – 3 pounds per acre or 2 – 3 pounds per 100 gallons of water

Sulfloxaflor – Insecticide for Lygus Bug

The EPA's Final Decision on the New Active Ingredient Sulfoxaflor – May 6, 2013

The EPA has granted unconditional registration for sulfoxaflor.

The use of sulfoxaflor on barley, bulb vegetables, canola, citrus, cotton, cucurbit vegetables, fruiting vegetables, leafy vegetables, low-growing berries, okra, ornamentals (herbaceous and woody), pistachio, pome fruits, root and tuber vegetables, small vine climbing fruit (except fuzzy kiwifruit), soybean, stone fruit, succulent, edible podded and dry beans, tree nuts, triticale, turfgrass, watercress and wheat.

TRANSFORM™

A NEW SULFOXIMINE INSECTICIDE

Transform™ Insecticide: A New Option for Tarnished Plant Bug Control in Cotton

Dow AgroSciences LLC

LATMC, Alexandria, LA, 2011

Dow AgroSciences

Transform™ WG

Insecticide

Sulfoxaflor Attributes

- Broad Sap-feeding spectrum
  - Active on aphids, plant bugs, whiteflies, planthoppers, scales and other sap-feeders
- Effective at low use rates
- Fast acting, with extended residual control
- Will be a valuable rotational partner with other chemistries
- Spectrum & properties suggest excellent fit in IPM programs
- Effective on insect populations resistant to a variety of other insecticides
- Exhibits good formulation flexibility
  - 2 lb/gal SC and 50% WG formulations anticipated

Specimen Label

Dow AgroSciences

Transform® WG

INSECTICIDE

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips in barley, canola (rapeseed), cotton, root and tuber vegetables, potatoes, soybean, succulent, edible podded, and dry beans, triticale, and wheat.

Group	4C	INSECTICIDE

Active Ingredient:
sulfoxaflor 50%
Other Ingredients 50%
Total 100%

Contains 50% active ingredient on a weight basis.

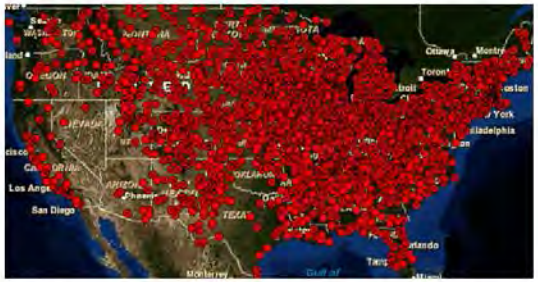
Products

Business mergers/acquisitions/focus

- Bayer CropScience – focus on seed treatment (new products and acquisitions) resulted in the largest profit sector for the company in 1st quarter 2013
- BASF – late 2012 acquired Becker Underwood a leading provider of technologies for biological seed treatment as well as seed treatment colorants and polymers
- Nufarm – late 2012 acquired Cleary Chemical Company

March – May, 2012

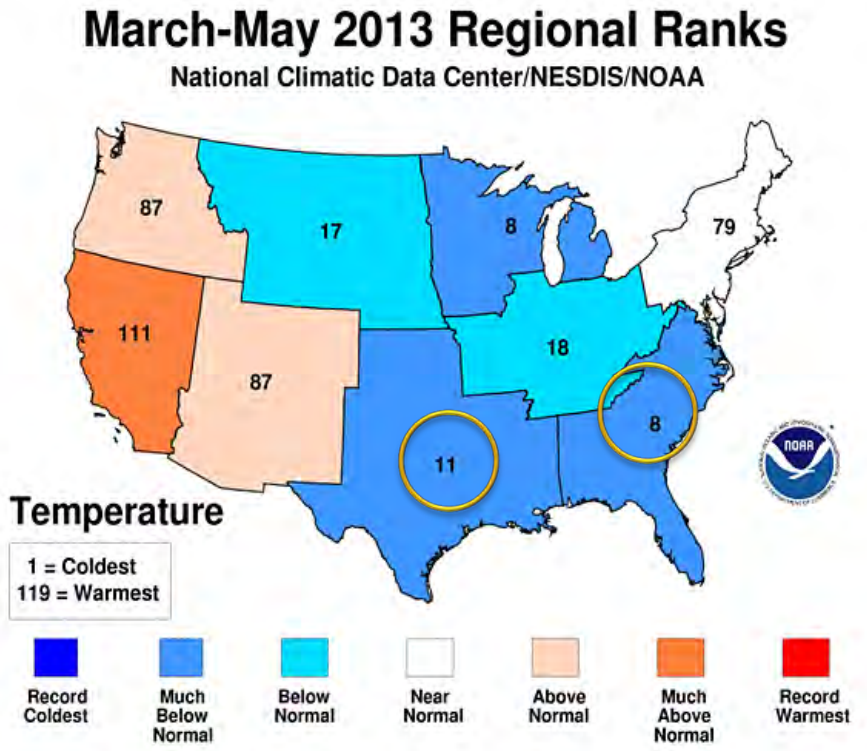
Hottest Spring for 118 years



The number of warm temperature records set in March 2012. This is a combination of 7,775 daytime records and 7,517 nighttime records.

March – May, 2013

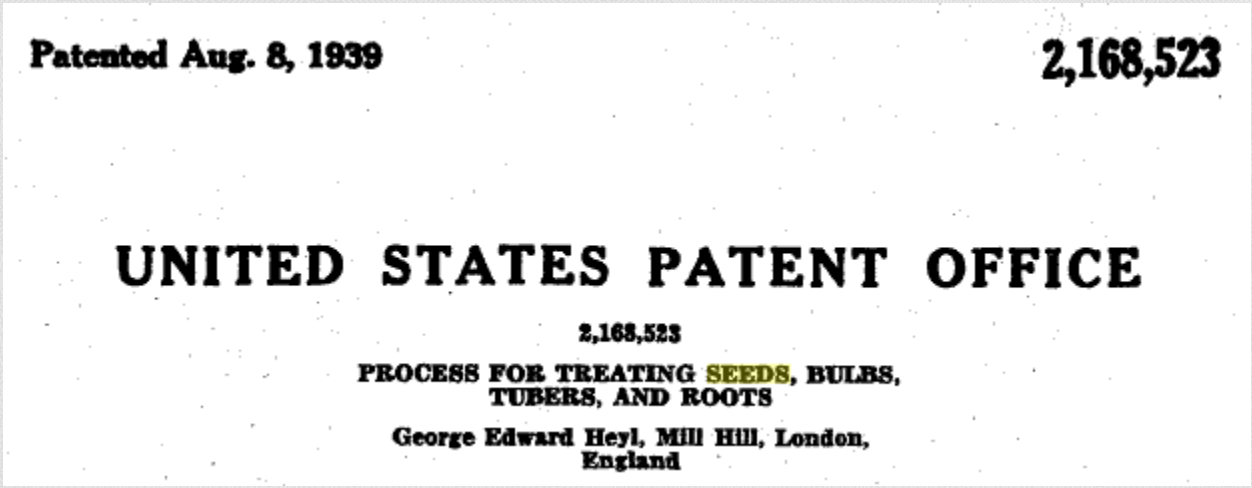
8^{th} and 11^{th} coldest spring in 119 years



Seed Polymers – a substitute for latex?

Latex in Nurseries

- **Dow Latex** 512-R (512-L, 630, 636, 2028) – diluted 1:9 with water



Patented Aug. 8, 1939 2,168,523

UNITED STATES PATENT OFFICE

2,168,523

PROCESS FOR TREATING SEEDS, BULBS, TUBERS, AND ROOTS

George Edward Heyl, Mill Hill, London, England

Current use of latex

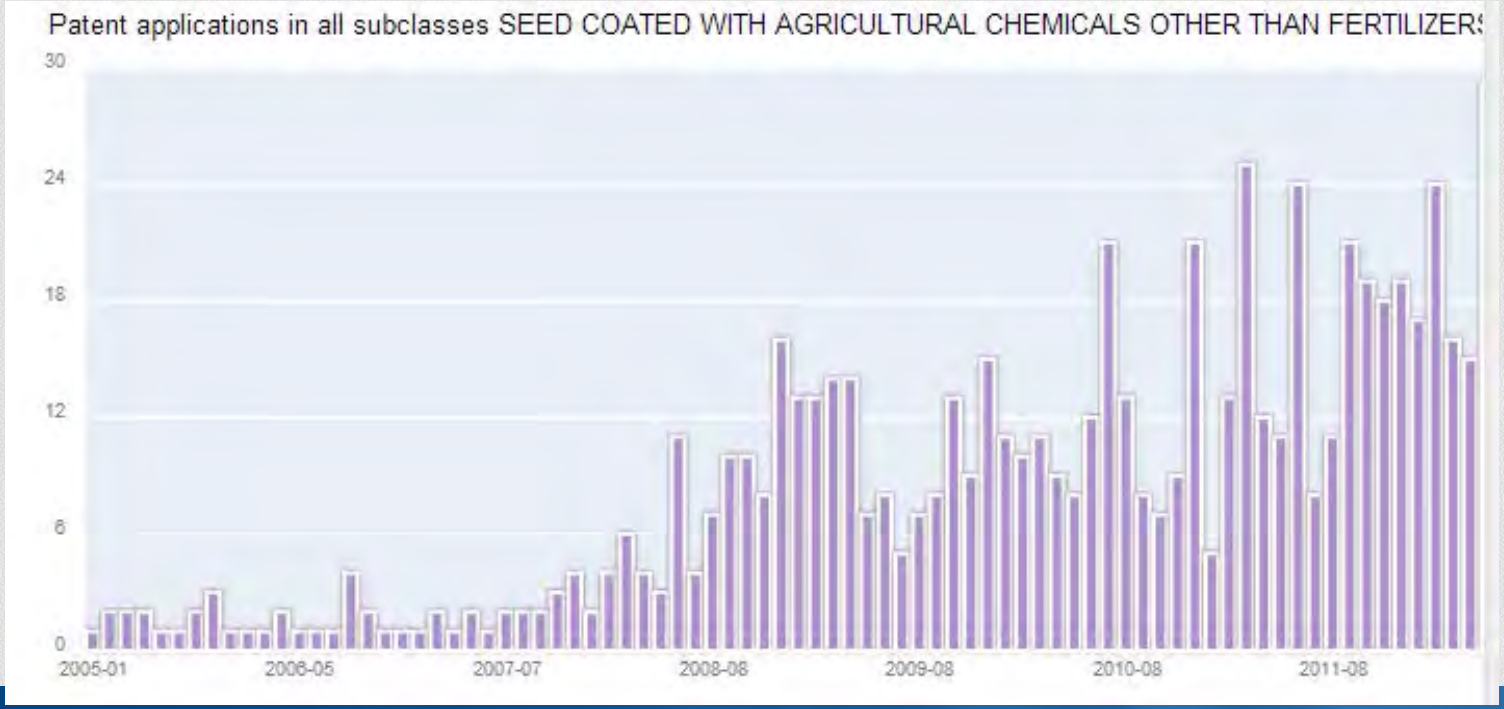
- >80% of all nurseries use latex
  - ~ 1/2 buy latex from local paint store
  - ~1/2 use Dow latex
    - “Still using latex I bought > 15+ years ago”
    - “Twisted arm and bought some from another nursery”
    - “Not an easy task to buy from DOW, especially small quantities.”
    - “DOW sent small quantity free”

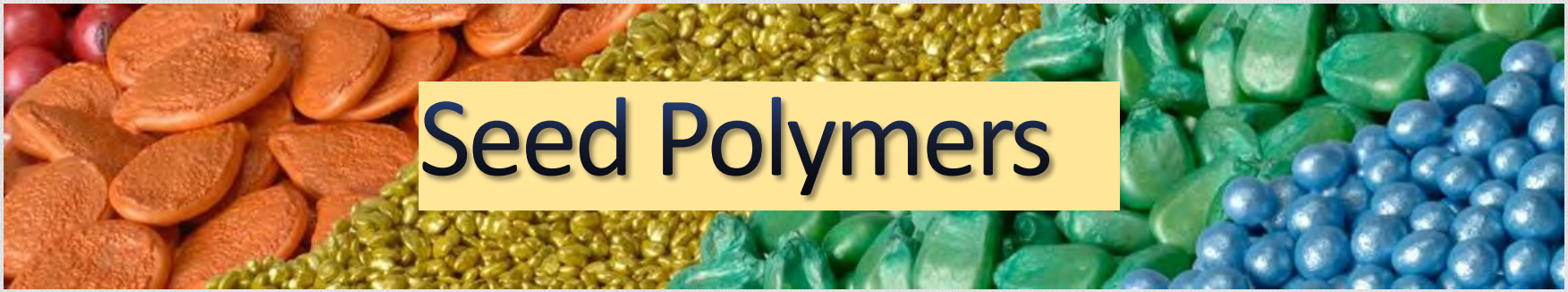
Current use of latex

- Some concerns:
  - Finding latex – at least DOW latex
  - What is a good latex?
  - Clumping of seed after drying
  - Worker Protection concerns - “dust off” during sowing

Another option??
Seed Polymers in Agriculture

- Last 5-10 years enormous amount of research on seed treatment





Seed Polymers

- Last 5-10 years enormous amount of research on seed treatment
- Ability to protect seed treatments
- To reduce “dust-off” concerns (an EPA concern)
- To enhance plantability
- Desire to enhance seed appearance & ID

Seed Polymers

- “Seed polymers are a bit like force fields: You cannot always see them, but they are there to protect.”
- To protect the growing number of pesticides and biologicals being applied to the seed.
- Provides uniform coverage of other seed treatments

Seed Polymers

- Polymers can help reduce the possibility of skips and doubles when planting – no clumping or stickiness. Increases seed drop accuracy
- Compatible with major fungicides, insecticides, inoculants and colorants

Seed Polymer

BECKER UNDERWOOD
Inventing the Future
Now part of BASF

CF CLEAR

HOME » PRODUCTS/SERVICES » SEED COATINGS » POLYMERS

Polymer seed conditioner film

CF Clear is a water-based, low-viscosity polymer that keeps actives on the seed, controls dust-off, improves application coverage, plantability, seed flow in seed facilities, seed performance, seed appearance and seed build up, all with easy clean up.

CF Clear gives you . . .

- Strong bond for active onto seed
- Reduced dust-off
- Improved plantability and seed flow
- Easy clean-up
- Low viscosity
- Water based

Packaging: 4x1 gallons (36 per pallet), 2x2.5 gallons (36 per pallet), 30 gallons (5 per pallet), and 260 gallons (1 per pallet).

CF Clear – Becker Underwood

Usage Chart*

CROP	CF CLEAR RATE fl. oz. / 100 lbs. of seed
Corn	0.10-0.50
Wheat	0.20-0.50
Soybean	0.20-0.80
Canola	1.00-2.00
Sunflower	0.04-1.00
Alfalfa	3.00-5.00
Edible Beans	0.20-0.50
Turf & Forage Grass	0.40-1.80
Peas	0.20-0.80

*Suggested rates. Some color variation may occur. Adjust the rates to obtain the desired color and coverage due to seed size, seed coat, conditioning equipment and total slurry.

Rev. 12/10. CF Clear™ is a trademark of Becker Underwood, Inc., Ames, IA.

www.beckerunderwood.com
801 Dayton Avenue, Ames, IA 50010 • 800-232-5907

BECKER UNDERWOOD®

Suggested rate for
pine seed (Lob/Slash) of 0.25 fl oz/50 lbs seed

AU Initial Test

- Slash pine
- 100 seeds/treatment, 4 replications
- 12 hr soak, 40 day strat
- Treatments:
  1. No seed coating
  2. Latex - @ 1% water volume
  3. CF1 - @ recommended rate of 1% (0.25 fl oz/50 lb seed)
  4. CF5 - @ 5x recommended rate

Research Toward Increasing Nursery Productivity


CF 1
CF 5
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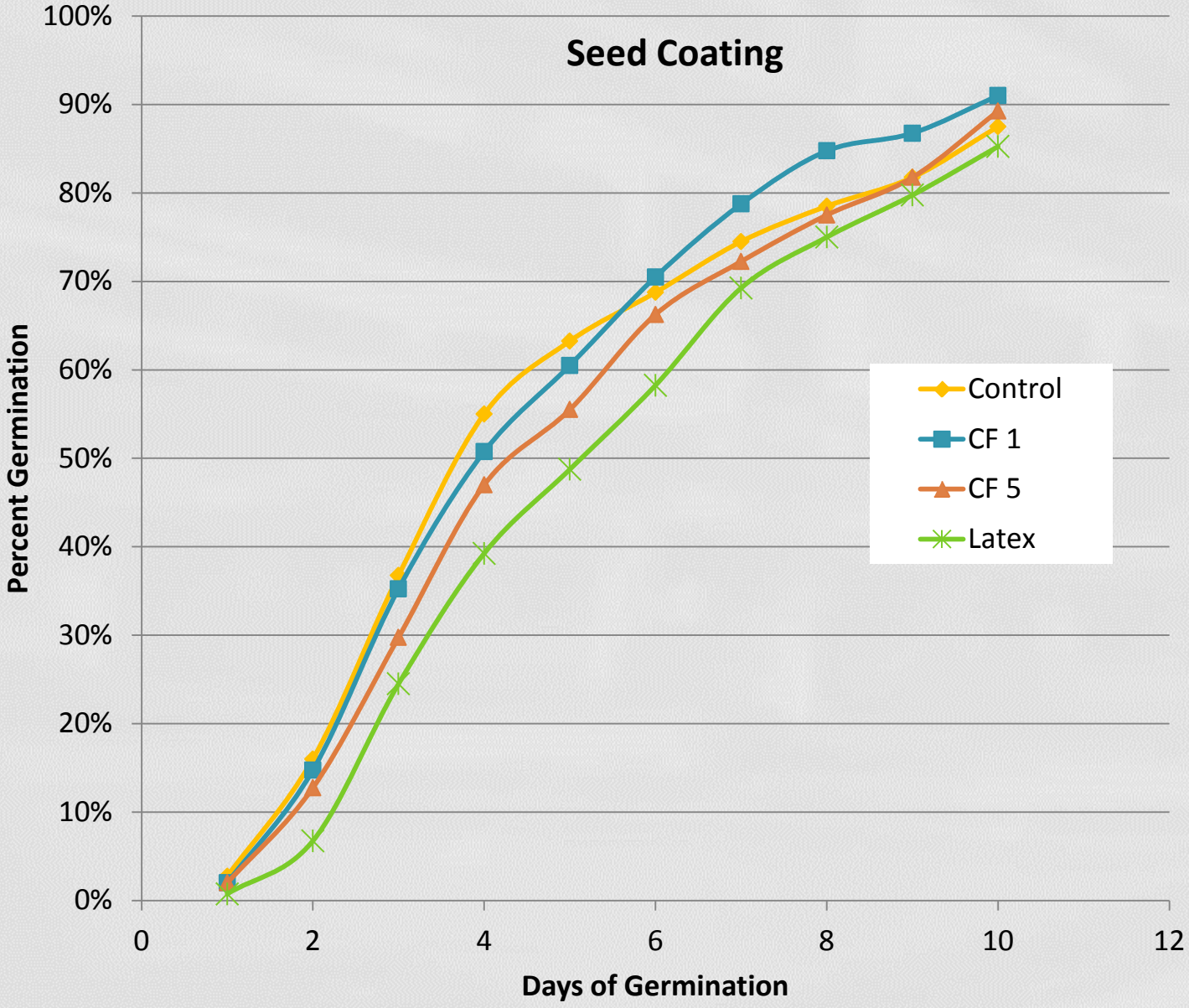
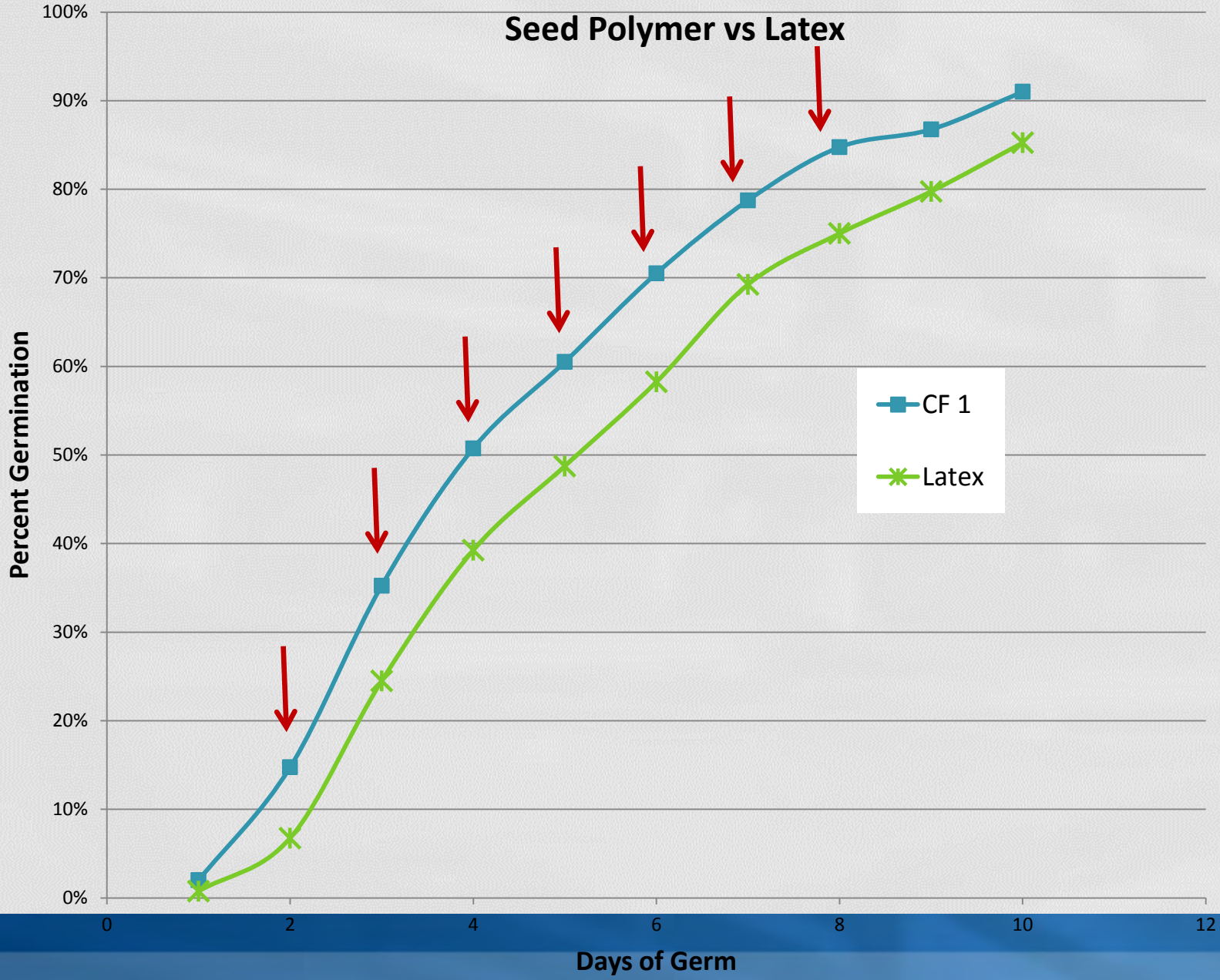

Seed Coating
Percent Germination
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
2
4
6
8
10
12
Days of Germination
Control
CF 1
CF 5
Latex

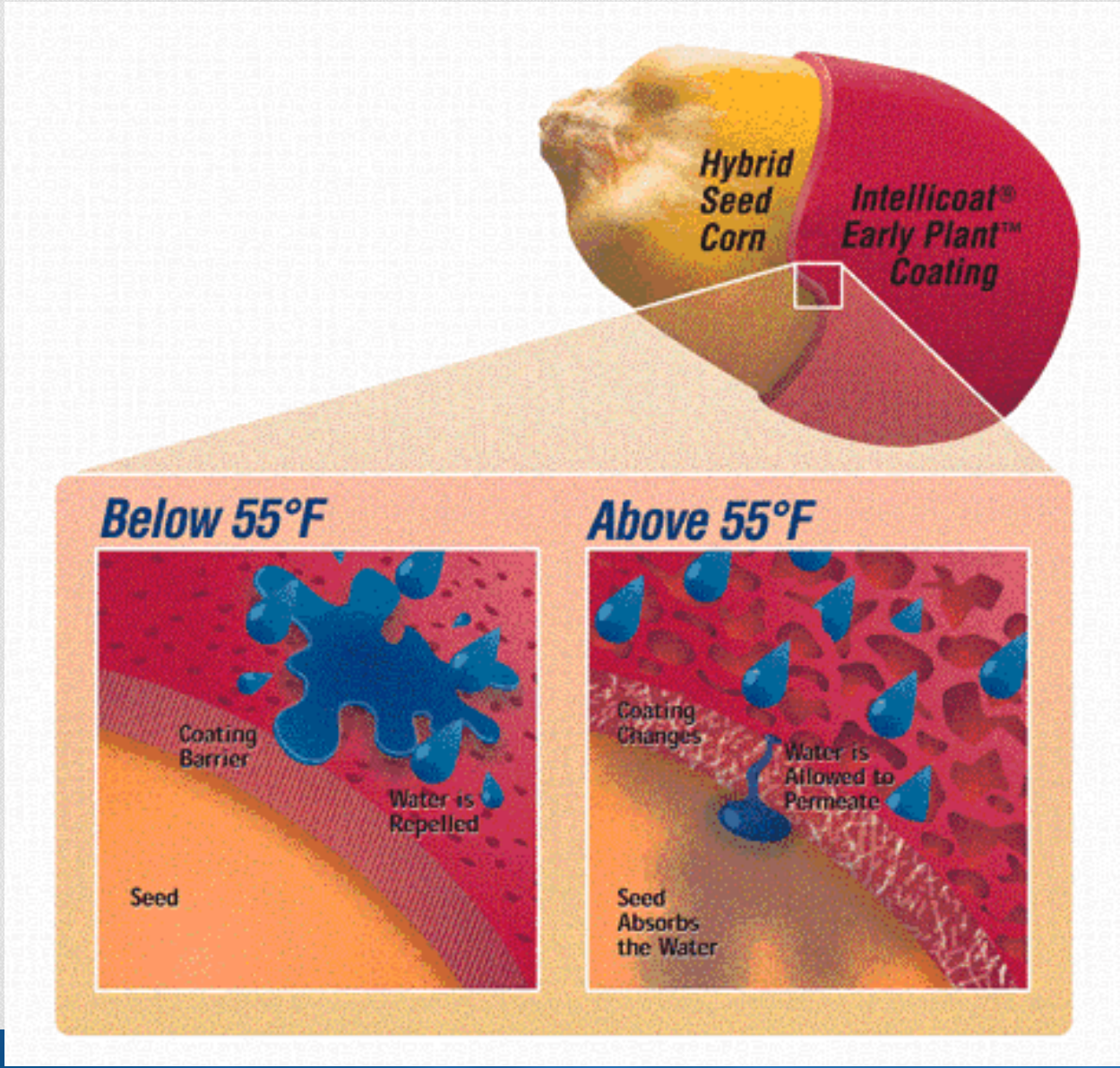

Seed Polymer vs Latex
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent Germination
0
2
4
6
8
10
12
Days of Germ
CF 1
Latex

Follow-up – Seed Plolymers

- We will be repeating this study using two different colorants plus polymer
- Propose a nursery study in next years work plan (Love gravity drop & Vacuum sower, Container vacuum drum).
- Manufactures recommended rate is 0.25 fl oz/50 lb seed for lob and slash.
- We have not yet tested it on longleaf germination
- Cost is ~ $60/gallon

HOT TOPICS in Ag

Temperature sensitive polymer coatings



And Pending Legislation

[Federal Register Volume 78,
Number 120 (Friday, June 21, 2013

We are proposing to consolidate the regulations concerning the issuance of permits for the importation and interstate movement of a wide variety of regulated plants, plant products, and other articles. We would also make corresponding changes to the regulations concerning permits for the importation and interstate movement of noxious weeds and the importation of honeybees and other beekeeping articles. We are also proposing to include new provisions in our regulations for the denial of a permit and the revocation of a permit once issued.

EPA Registration Reviews: Pesticide Dockets Opened for Review and Comment June 26, 2013

Dates

Comments must be received on or before **August 26, 2013**.

Captan (Case 0120)	EPA-HQ-OPP-2013-0296	Christina Scheltema, (703) 308-2201, *scheltema.christina@epa.gov.*

Upcoming Meetings: