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Alabama A&M and Auburn Universities

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## News Letter October, 2010

### Upcoming Production Meetings:

#### Cover Crop and Deer and Hog Mega Fence Field Day

Date: Tuesday, October 12, 2010 near Atmore, Alabama

Time: 7:30 a.m. Meeting begins with "Home Made Cinnamon Rolls"

Place: Meet behind old Escambia Feed & Grain, ½ mile North on County Road 1, the Porch exit off of I-65.

The Field Day will feature two new dynamic cover crops, sunn hemp and tillage radish, as well as the deer and hog mega fence.

**Speakers:** Dr. Jorge Mosjidis, AU plant breeder, Dr. Dennis Delaney, AU Conservations, David Weaver with Green Tillage and possibly, Mark Taylor with Taylor Fence.

Seeing is believing: *I would like to encourage every grower who can possibly spare a little time during this busy season attend part or all of this Field Day.*

#### Production and Marketing Opportunities for Corn Producers

**Speakers:** Larry Gandy with Marshall Durbin and Gib Fugate with Great Heart Seed

**Place:** David's Catfish House in Atmore located on Highway 21 S in Atmore, Alabama

**Date:** Tuesday, November 9, 2010

**Time:** 10:00 a.m. through noon.

#### Production and Marketing Opportunities for Corn Producers

**Speakers:** Larry Gandy with Marshall Durbin and Gib Fugate with Great Heart Seed

**Place:** Fireman's Hall (Old Community Center) in Elberta, Alabama

**Date:** Thursday, November 11, 2010

**Time:** 7:00 p.m.

## Fertilizer Cartels: By Bob Taylor, Auburn University

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Modern farming depends on external inputs of fossil fuels and plant nutrients nitrogen, phosphorus, and potassium. Nitrogen fertilizer is refined from natural gas, potassium from mined potash salts, and phosphorus from mined phosphoric rock. The earth's supply of these resources is dwindling. The fertilizer industry has a history of cartel agreements. Phosphorus is dominated by a cartel sanctioned under the 1918 US Webb-Pomerene Act and a Moroccan monopoly. World trade in potash is dominated by an export cartel sanctioned by Canada and three companies in Russia that may merge. A New York Times writer recently said phosphorus is *"the gravest natural resource shortage you've never heard of."* Corporate and political control of essential plant nutrients may be the greatest strategic issue facing the US that you never heard of.

### "SWEET BLUE LUPINS"

Modern Agriculture may soon greatly depend on Growers producing their own fertilizers. The sweet blue lupin as a cover crop is one of the easiest and most profitable ways for growers to do this. One of Australia's answer to the world shortage and escalating prices of soil nutrients is the Lupin. There are over 1 million acres of Lupin presently produced in Australia. Australia originally received their seed source and production technology from the United States Department of Agriculture. For the past six decades there has been practically no seed source available for Lupin in the U.S.A.

The main use for this crop is to increase organic matter and supply nitrogen to next spring's crops. Lupin is a legume crop that is well known for adding organic matter and nitrogen to the soil. Lupins have not been grown in this area for the last 40 to 50 years. In the late 40's farmers grew it but the bottom fell out in the early 50's. *Some of the reasons for this included:* (1) for two consecutive years there were very early freezes around Thanksgiving and they killed the seedlings. (2) Chemical industry was changing from a war time economy to peacetime. A lot of chemical plants were built to produce ammonia for explosives and this was not needed any more. Nitrogen became available and farmers used more and more of it. (3) USDA discontinued supporting conservation practices for cotton production. All this has changed. New types of lupin are being developed for winter growth. The costs of Nitrogen have skyrocketed and USDA is supporting conservation tillage.

*The benefits of lupin in a rotation are:* (1) They add organic matter to the soil. Our soils tend to be low in organic matter because of temperatures and humidity. The advantages of organic matter are that it increases soil tilth and increases water absorption and the soil does not crust as badly. (2) A further benefit is the Nitrogen. Most people think of Nitrogen contribution first and the organic matter second, but in our conditions the organic matter contribution is very important. In terms of Nitrogen contribution, it can go up in ideal situations to 200 pounds per acre. Auburn University and USDA have been studying the use of cover crops in cotton rotations for a number of years. In all of these studies lupin comes out ahead.

Lupin is adapted to acid soils. You will hurt other crops before lupin. It is fairly efficient at extracting phosphorous out of the soil. It produces very tiny roots and they produce citric acid that buffers the immediate environment on the roots and they actually raise the pH and make phosphorus available. They also have a deep taproot that mines for Potash that is in the subsoil. Bad fertility does not hurt this crop.

The ideal time to plant lupin is four weeks prior to the first killing frost. October 1 would be the starting date. Following peanuts and cotton, of course, you can't always do this. If you delay planting, increase seeding rate to compensate for later planting. December 7 would be the absolute latest planting date. Lupins really start fixing Nitrogen when they start to bloom. It is a Legume and the seed are high in protein. So the plant's Nitrogen fixation starts just as that plant starts to produce seed. Prior to that time you will not receive the benefit of added Nitrogen to your soil. Killing the crop after bloom when the plant is 2 feet tall will release about 200 units of Nitrogen. Waiting until the crop is 4 feet tall can release as much as 375 units. That is why lupin is primarily used in a cotton rotation. Corn is planted earlier and usually would not allow enough time for Nitrogen fixation. A grower may consider it with a later planted corn crop. Plant the lupin early and plant the corn late or plant corn and plan on side dressing it with additional Nitrogen.

The seeding rate is 50-60 pounds per acre. If you increase to 70-90 pounds, you will get higher mass for weed kill. Use a good seeding rate with 90 pounds per acre if you want to get complete suppression of winter weeds. The cost is about \$55-\$65 per bag. It is a cheap source of organic matter and Nitrogen.

Be sure to inoculate the Lupin seed before planting in order for the plant to perform at full capacity and you receive the maximum benefits. There is an inoculant for Lupine N-DURE , by Microbials, LLC.

Seeding depth is critical. You can easily plant it too deep. Plant it  $\frac{1}{4}$  to  $\frac{3}{4}$  inches deep and closer to  $\frac{1}{4}$ . The cotyledons actually emerge underneath the soil and the plant tries to push those first leaves out through the soil. If they are too deep, the plant does not have enough energy to do this. The plant will emerge readily when planted shallow. It will actually germinate and emerge if the seed is flooded by soil on three sides. You can plant with a grain drill, but plant as shallow as possible. With 36-inch rows you have better control over depth. Either method is acceptable.

No weed or pest management is required for this cover crop. Nematodes do not appear to be a major problem with this crop. Nematodes are a problem with clovers and vetches. However, if you already have a problem with nematodes, lupins would probably aggravate that problem. Rotation is a must, as this crop has diseases as most crops do. A three-year rotation is recommended. **Caution:** Lupin is a host for white mold, a very damaging disease on soybeans and peanuts. If you grow peanuts or soybeans on your farm, be sure to place the Lupin cover crop ahead of corn or cotton and not peanuts or soybeans.

For conservation tillage, you can kill it with Round-up or Paraquat. One quart of Round-up works great. Lower or increase the rate according to mass. After application of Round-up you have to wait two weeks to give the plant a chance to die. Then you roll it to firm up the soil. It works best to have a roller the same width as your planters. Plant it in the same direction as the roller. You need to wait three weeks from Round-up application to planting for decay organisms to not affect your next crop.

Sweet Blue Lupin can be cut for hay. It will make hay and a high quality silage that will rival excellent alfalfa. You can get 12–14 tons of 65% moisture silage per acre. It will ensile very well. Livestock love it.

Lupin is excellent for wildlife. Deer will walk a mile for it. In fact if you have sweet blue lupin with deer in the area, you will not be able to keep them out of it. If the deer do not eat it all, the turkeys will finish it off.

Seed presently can be purchased through Tucker Farm Supply in Frisco City (251) 267-3104.

## “Cover Your Soil This Winter”

Do not underestimate the “Power of the Raindrop and Wind” on your bare soil this winter. Conservationists tell us these two elements have more damaging effect on our soils than we realize.

One of the best ways and easiest methods of recapturing the residual Nitrogen from peanuts and soybeans is to plant tillage radish and at the same time cover your soil. From Virginia north growers are planting 150,000 acres of tillage radish at this time in order to provide winter cover for their crops. In the South growers can plant tillage radish and recapture the residual N from peanuts and soybeans. The radish when terminated in the spring will release the N in a form that is more readily available for the next crop, while providing deep tillage to the soil, reducing nematodes and provide a winter cover for your land. The tillage radish may also be planted into winter pasture mixes to enhance grazing while tilling the soil.

## Wheat the Next Crop to Be Planted

As everyone knows wheat seed is in tremendous shortage this year. However, I will include the results of our On The Farm Wheat and Oat Tests conducted in 2010. It is important to report research information to growers even if sometimes it is not very useful, due to shortage of seed supply.

### Wheat Variety Test 2010 of the Top Seven Varieties

*Cooperator:* Rod, Walt, David and Will Richardson in Washington County, Alabama

*Auburn University Grain and Precision Ag Specialist:* Dr. Brenda Ortiz

*Regional Extension Agronomist:* Richard L. Petcher

Replicated Three Times, Plots size was 13 x 800 feet

**Planted:** December 23, 2009

**Harvested:** May 28, 2010

Variety	Awnes	Plant Height	Test Weight	Yield in Bushels per Acre adjusted to 13.5 % Moisture
AGS 2060	Yes	34 inches	60	55.1
Terral 821	Yes	28	60	51.1
Baldwin	Yes	28	60	49.6
Terral 482	No	32	60	49.5
AGS 2035	Yes	29	60	47.5
Ogelthorpe	No	25	60	41.3
AGS 2026	No	27	59	40.9

**Sponsors:** The Alabama ALFA Wheat and Feed Grain Commission, Jimmy Clemmons with Plantation Seed, Trey Cash with Terral Seed Company and Ryan McKenzie with Crop Production Services.

## Oat Variety Test 2010

*Cooperator:* Walt, David, Will and Rod Richardson in Washington County, Alabama

*Auburn University Grain and Precision Ag Specialist:* Dr. Brenda Ortiz

*Regional Extension Agronomist:* Richard L. Petcher

**Date Planted:** December 23, 2009

**Date Harvested:** June 8, 2010

Plot sizes were 13 x 800 feet and were replicated 3 times.

Yield is corrected to 13.5 % moisture. Test weight of 32 was recorded on all 4 varieties.

Oat Variety	Yield in Bushels per Acre
Horizon 201	71.2
Plot Spike LA9337	67.6
Horizon 270	67.1
Trophy	51.6

*Gratitude is expressed to the sponsors:* Alabama Wheat and Feed Grain Commission, Plantation Seed and Terral Seed Companies.

## Wheat Planting Tips

Since many growers have not been able to purchase as much wheat seed as they had hoped, here are a few tips on stretching your seed. Research primarily in Arkansas, but in Mississippi and Louisiana also have shown very little difference in final wheat yield from a 40 pound to 140 pound per acre seeding rate at planting. Management of your crop is more important. Thirty five seed per square foot with a final stand of 25 seed per square feet is the planting recommendation. One tiller per square foot is typically equal to one bushel at harvest. Twenty five plants that make 3 tillers each should theoretically yield 75 bushel wheat. Likewise, 20 plants with 5 tillers each should yield 100 bushel wheat. Growers can cut back seeding rate and still expect respectable yields. Typically the higher the seeding rate the less tillers per plant and the lower seeding rate the higher the plants per acre. So a grower can stretch his seed over more acres.

**Several important factors:** Know your seed per pound when calculating seeding rate. Bennie and Matt Watson for example found 5,000 seed per pound difference in their several different varieties of wheat planted a few years ago. So focus seed per square foot and acre verses pounds of seed per acre. When cutting back seeding rate, only plant under ideal conditions. Consider applying a little fall Nitrogen to get faster seedling growth before winter. And keep weed competition at a minimal. If you as a grower are not comfortable cutting back the seeding rate, try it on a few acres and test this for yourself before doing this on large scale.

## Peanut Harvest

At present peanut percentage of harvested acres is difficult to predict as some growers are finished while others are just getting started. Yields and grades for the most part in some areas are excellent while in others are very disappointing. The disappointments are coming from areas without adequate rainfall and injuries from the Burrower Bug.

### BURROWER BUG ON PEANUTS

The Burrower Bug returned to our peanuts in 2010. Hope this information helps even though it is too late for this year. Keep this information and scout your peanuts for Burrower Bugs next year.

The information for this article was given to me by Ed Kane, Consultant in Baldwin County, Ron Weeks, Auburn University Peanut Entomologist and Roger Baine with Anderson's Peanuts.

This insect was the cause of over a half a million dollars of damage to peanuts in Southwest Alabama in 2007. Burrower bugs have been a problem in the Wiregrass on several occasions during the last 10 years, but on a much more sporadic nature than in SW Alabama. It has been an almost unknown and easily forgotten pest of peanuts. However, it did not go away this year. Knowledge gathering and plans for defense for next year should be taken. The burrower bug can be found in small numbers in every peanut field in Southwest Alabama. They overwinter as adults in residue and debris in and around fields. They have piercing-sucking mouthparts and feed on the seed seeking a protein source for food. Rainfall and moist conditions during Mid-July through August will usually keep them from causing significant damage. In years of hot dry weather in July and August the burrower bug is attracted to peanut fields of high organic matter and litter and shows up in higher numbers in those fields. The insect then sucks on the peanuts in search of food and moisture. The damage cannot be seen on the outside of the peanut. In fact you must look under the skin of the peanut to see the damage. The burrowing bug damage looks similar to stinkbug damage on soybeans. The kernel will first turn a cream color and then a yellow. Several months after the damage the kernels turn black. If 2.6 % of your kernels or 3 out of 100 kernels are affected the peanuts go Seg II. Seg II peanuts sell for only 35% of the loan value of peanuts. That brings their value down to \$125 per ton. That is a tremendous loss to a peanut grower.

What can a grower do next year to protect his peanuts from the burrower bug? Burying the litter is the safest method. Burrowing bugs typically do not affect fields with no litter. However, litter on the top is beneficial in detracting TSWV on peanuts. High organic matter is also a real plus in upping field productivity. Another options is to scout your suspect fields (fields with high organic matter, litter or close by a field that had burrower bugs last year) for the burrowing bug starting in July or whenever the peanuts are pegging and the drought has started. Scout for the insect under the peanut plant and in the first two inches of the soil. The burrower bug is about a quarter of an inch long, is black and has hair on its back legs. When pinched this insect puts out a smell, much like a stink bug. It almost looks like a black beetle. However, the burrower bug is the only insect that follows this description and puts off the stinking odor. The threshold number is when more than two bugs per row feet are found on or in the soil during pod fill. The labeled insecticides are used as a preventative treatment and are Lorsban15 G, Clorphyrifos 15G and Nufos 15G applied over the row. Applying this insecticide requires a significant rain to activate them and

spread them in the soil in order for the chemical to take full effect. Waiting on a good rain can often be chancy. These are the only controls that I know of at this time.

## Cotton Harvest

Southwest Alabama is fortunate as we have cotton to harvest, while most of the cotton acres in Alabama did not receive adequate rainfall to make a crop. The cotton crop did take a loss due to stress in weather this season. The cotton is turning out better than growers thought it might, but not nearly as good as they had hoped for.

## Soybean Harvest

Soybean Harvest is also proceeding along with cotton and peanuts. This year the Soybean Asian Rust apparently skipped us. Rust was found in Sentinel plots, but due to dry weather never appeared in growers fields. In all this was a light disease year for soybeans. As soybean acres stay up, however, the disease issues will most likely increase. Growers are encouraged to select only varieties with the best yield as well as disease and nematode packages for next year.

If you need assistance through your county office, contact:

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Again, I hope this information has been helpful to you.

Sincerely,



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