



*Alabama A&M and
Auburn Universities*

Richard L. Petcher
Regional Extension Agronomist for SWAL
Baldwin County Office
302A Byrne Street, Bay Minette, AL 36507
(251) 847-2295; Cell (251) 202-1009; SL 7*145
Email: petchrl@auburn.edu



NEWS LETTER DECEMBER 2008

Upcoming Production Meetings:

Farm Day 2009

Place: Walnut Hill Community Center, 7850 Highway 97, Walnut Hill Florida

Date: Thursday, January 29, 2009

Registration from 8:00 to 8:30 a.m.

8:30- 9:00 Dr. Dennis Delaney and Dr. Kathy Lawrence, AU Soybean Pathologist speaking on Soybean nematodes and diseases.

9:00-9:15 Dr. Tim Reed-AU Soybean Entomologist, Soybean insect control.

9:15-9:30 Dr. Barry Brecke UFL Weed Scientist, Weed control in soybeans.

9:30-9:45 BREAK

9:45-10:30 Dr. Dennis Delaney, AU Soybean Agronomist, Soybean management practices.

10:30-11:00 Dr. David Wright, UFL Agronomist, Cover crops, double cropping and late planted crops and fertilizer efficiency.

11:00-noon Dr. Dewey Lee, UGA Grain Specialist speaking on maximizing corn production.

Noon-one LUNCH

1:00- 2:00 Dr. Steve Harrison LSU Small Grain Breeder and Grain Specialist. High yielding wheat.

CEU, CCA, and Commercial Applicator Points, Industry Booths and Demonstrations

This meeting is in cooperation with the Alabama, Florida and Georgia Extension Systems

For more information contact- Libbie Johnson – 850.475.5230

Walnut Hill is just in the edge of Florida about 10 miles south of Atmore. From I-65 take highway 21 south. When you come to Florida, highway 21 turns into highway 97. Continue for about 10 more miles. The Community Center will be on the east side of the highway.

Much of this letter will be simple reminders that most corn producers know. However, it might be worth taking a few minutes to read over these short articles.

ALABAMA A&M AND AUBURN UNIVERSITIES, AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING

The Alabama Cooperative Extension System offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability

CORN PRODUCTION TIPS 2009

Corn is the first crop in the spring to be planted in South Alabama. In 2008 there were 240,000 acres of corn harvested in Alabama, with an estimated average yield of 92 bushels per acre. There were 17,000 acres of corn harvested with an estimated yield of 135 bushels per acre in Southwest Alabama. Most growers produced one of their better corn crops. Corn is a good rotation and has less input of time and money than cotton or peanuts. The risk of drought is a real downer with corn, unless you have irrigation. Hopefully this year will bring a bumper crop with no droughts or hurricanes and decent prices. .

Weather is the biggest factor affecting corn; however, there are a number of things that a grower can do to up his odds of making a good crop.

Selecting your corn hybrid is top priority. There are some excellent varieties to choose from. Is it worth spending ten dollars more for one variety over another? If that variety yields 10 more bushels per acre than a cheaper variety, over 4 acres that would be 40 more bushels. At \$4.00 per bushel that would be \$160 minus the \$10 difference in purchasing cost which would be \$150 more profit to you by planting the higher yielding, more expensive variety. If you are planting very much corn, 100 acres or more it is also important to select several hybrids with different maturities to spread out your risks.

University Corn Variety Test information.

Alabama: www.alabamavarietytesting.com

Georgia: <http://www.swvt.uga.edu/>

Mississippi: <http://msucare.com/crops/corn/index.html>

Louisiana: www.lsuagcenter.com This information might be helpful especially to growers in Baldwin and Mobile Counties.

Next month this news letter will have each corn companies list of their top six hybrids for Southwest Alabama.

Fertility, of course, is a major key to making good yields. Know your soils and their yield potentials. One of the best ways to do a good job and save money is to soil test. Soil testing is essential in this fertilizer crisis. Be sure to take a good representative sample. If you are using poultry litter, this is the place to use it. Corn needs 1.3 units of Nitrogen for every bushel of corn produced. In lower yielding environments growers typically apply 160 units of Nitrogen. Three to three and a half tons of chicken litter will usually supply this. Watch your corn, if you get plenty of rain you may still need to side-dress with some nitrogen. Corn grows well in soil with a pH of 6.0 to 6.5. Corn is inhibited by a soil pH less than 5.7. Apply the Phosphate and Potash before or at planting. Magnesium is also essential for corn growth. Add Magnesium either by applying dolomitic lime or apply 25 to 50 lb. of elemental Magnesium per acre before planting. Sulfur is also essential for corn production. Corn grown on sandy soils often suffers from sulfur, zinc and boron deficiencies whereas on clay soils it is usually fine. Remember to add these nutrients, especially when planting on deep sandy soils. Starter fertilizer is a real plus especially when planting early. Research shows the use of a starter fertilizer to pay 80 % of the time.

With the fertilizer crisis we are in there are several management practices that a grower can implement to more efficiently use fertilizer inputs. Research conducted by **Dr. David Wright** in Florida showed that by applying fertilizer directly in the row or close to the row the fertilizer rates could be cut in half for Phosphorus and Potash and still make the same grain yields. The 2/3 rate of Nitrogen placed in the row and then sidedress near the row would give similar yields as the full Nitrogen rate. Wright suggests that

farmers experiment with this on their own farms. You do this by splitting a field, part of the field with the full rate broadcast and part of the field with reduced rates placed near or close to the row.

In the November 5, 2008 Southeast Farm Press, **Dr. Mark Alley**, Soil Scientist with Virginia Tech explained efficient fertilizer use as the key to managing higher fertilizer prices. He had several suggestions, one of the main ones being to avoid surface applications of Nitrogen. Knifing or coultering in the fertilizer is a slower process of course than broadcasting or dribbling in the fertilizer. But this cuts down on the nutrients that may volatilize and better assures that the crops get what they need. He also explained that many of our soils are already high in phosphorus and that growers might cut back on their phosphorus applications and focus more on the nitrogen and potash the nutrients that your crops also need but are probably truly lacking in our soils. Of course this must be based on soil test knowledge of your soils.

Another key is earliness. It is very important to book your seed corn early. If you want to get the varieties you want it is a must. Plant early. There is a sizeable yield increase by simply planting early. Plant as soon as the soil temperature is 55 degrees or more at two inches depth for at least four days before planting. Planting early helps you escape insect, disease and heat pressure. When planting very early plant a full season corn as they will have more strength to go through the stress of cold weather than the early season hybrids. Plant early, harvest early, sell early and take to the market early.

Row Orientation: When possible and easy to do plant your rows East and West. This allows the corn plant to intercept as much sunlight as possible. This costs nothing but will increase your yields.

Planting depth is also important. One and a half inches is perfect. Planting deeper gives stand problems, and planting shallow gives stalk anchoring problems. If you plant shallow, plan to harvest early, as your corn may lodge.

Planting speed is important. Going too fast can be a problem.

Planting population: This works in opposite direction to rainfall. If you run out of water and your plant population is too high you are in big trouble. Typically for irrigated corn 26,000 to 32,000 plants/acre are recommended for most intensively grown hybrids. Typically for dryland production the range is from 18,000 to 20,000. Higher populations will produce higher yields in good rainfall years, however, the stress of higher plant populations above 20,000 in drier years reduces yield in comparison to years of adequate rainfall. Plant 10 % more seed/acre than your desired plant population.

Row Width: A four year UGA test showed a 20 inch row spacing to out yield the 30 inch by 10 bushels and out yield the 36 inch row spacing by 20 bushels per acre. Little to no advantage was found in planting twin row 36 inch corn over single row 36 inch corn in South Georgia.

Rotation is another key. Not only is rotation good for peanuts and cotton, but it is also important for corn.

Irrigation is another real plus. If you are irrigating, remember to irrigate when ear size potential is determined. That is at leaf stage 12-17. Don't wait until corn is tasseling and expect to make much of a difference then. Corn only takes 25 inches of water to make its maximum yield. The problem is we get plenty of rain, but not at the right time to always benefit the corn.

Soil insecticides or seed treated insecticides can pay off especially if planting no-till, behind pasture, using a lot of manure or planting late. See Dr. Kathy Flanders towards the end on Corn Seed Treatment Insecticides.

Keeping your corn weed free is a must. There are many herbicides labeled for corn. Atrazine and or Dual preplant, then Atrazine, Accent or Beacon post are some of the standards. Roundup on Roundup Ready corn of course is also very affective and is being used on most of our acres. Research has shown that the Roundup Hybrid usually out produces its parent conventional line by about two bushels per acre. See Dr. Mike Patterson's article on Corn Weed Control for more information.

Harvest on time. Starting harvest when corn is 21 % moisture will give you a better yield because of less shattering and better quality than if you wait until it is 15 %. This added yield will usually pay over extra drying costs.

There are many other strategies to making a good corn crop, but these are just a few tips that may be helpful to you.

Another useful source of information is the UGA Corn Production Guide.

<http://www.caes.uga.edu/commodities/fieldcrops/gagrains/2008CornProductionGuide.html>

Here are the web sites for the **Auburn University Integrated Pest Management Guides** for cotton, corn, small grains, peanuts and soybeans: These are very helpful in finding information on controlling insects, disease and weeds on these crops.

<http://www.aces.edu/pubs/docs/indexes/anripm.tmpl#handbook>

APPLIED SCIENCE REPORT

On Farm variety testing research can be very helpful and make good field demonstrations for agronomic practices in our area. Research is conducted at the university and research stations. These however, are done on grower's fields and typically on a larger scale. Often they are as much a part of a verification program for our area as they are research.

**2008 Alabama On-Farm Corn Hybrid Program
Dryland Roundup Test
Test Location: Washington County
Farmer Cooperator: Rod Richardson
Regional Extension Agent: Richard Petcher
Alabama Cooperative Extension System**

Planted: March 27, 2008

Row Spacing: 36 inches

Tillage: Conventional

Soil Type: Bama Fine Sandy Loam

Harvested: August 21, 2008

Number of Rows Harvested per Hybrid: 8

Previous Crop: Corn

This was a single strip test and not replicated at this location. Hybrids were provided by participating seed companies based upon their top two choices for this area. Each hybrid was planted in a single strip the length of the field. Plot length averaged 1060 feet. Test was affected by a mid-to-late season drought. Some lodging was observed but not in a significant amount between

hybrids. The lodged corn was harvested by the combine. This was a non-replicated, single strip test; therefore, producers are encouraged to consider several sources of information when making hybrid selections.

Table 1. Corn Hybrid Yields with Poncho 250 Seed Treatment

Hybrid	Technology Trait(s) ^a	Advertised Maturity (days)	Harvest Moisture (%)	Yield @ 15.5% moisture (bushels/acre)
Terral TV25BR23	RR2/YGPL	113-115	16.7	141.4
Terral TV26BR41	RR2/YGPL	115-117	16.8	138.1
Pioneer 31P40	RR2	119	15.2	135.2
Dyna-Gro 58K02	RR2	119	16.7	131.4
Dyna-Gro 58K40	RR2	117	17.0	127.6
DeKalb DKC69-71	RR2/YGCB	119		126.7
Pioneer 31G65	RR2	119	16.4	125.4
DeKalb DKC67-23	RR2/YGCB	117	16.8	120.3
Trial Average				130.8

^aTrait Key: RR2 = Roundup Ready® 2 Corn; YGCB = YieldGard® Corn Borer; YGPL = YieldGard® Plus.

Table 2. Corn Hybrid Yields with Cruiser Seed Treatment

Hybrid	Technology Trait(s) ^a	Advertised Maturity (days)	Harvest Moisture (%)	Yield @ 15.5% moisture (bushels/acre)
CropLan 799 RB	RR2/YGCB	117	18.5	134.6
CropLan 6831 RBtCRW	RR2/YGCB/YGRW	112	17.7	132.0
Trial Average				133.3

^aTrait Key: RR2 = Roundup Ready® 2 Corn; YGCB = YieldGard® Corn Borer; YGRW = YieldGard® Corn Rootworm.

Appreciation is expressed to Rod Richardson, the Alabama Wheat and Feed Grain Commission, and the participating seed companies for supporting this test. Appreciation is also expressed to Rudy Yates, Regional Extension Agent, for his assistance.

CORN WEED MANAGEMENT: GLYPHOSATE-RESISTANT PIGWEED

Mike Patterson and John Everest
Extension Weed Scientist

This is an update on information sent earlier this year. The number of herbicides available for weed management in field corn has increased recently and we now have more tools than ever for weed management. Roundup Ready and Liberty-Link corn are now available that allow the use of glyphosate (Roundup, etc.) or glufosinate (Ignite), respectively on these genetically modified varieties. Ignite has activity on Roundup-resistant palmer amaranth. Callisto (mesiotrione) from Syngenta is a relatively new herbicide registered for use in field corn, sweet corn, and yellow popcorn. This herbicide is classified as a “carotenoid biosynthesis inhibitor” and turns affected weeds white, similar to what Solicam (norflurazon) does in cotton. Callisto has activity on a wide variety of broadleaf weeds including

glyphosate-resistant palmer amaranth. Callisto is used at the rate of three fluid ounces per acre postemergence and five to seven fluid ounces per acre preemergence and may be mixed with atrazine (either preemergence or postemergence) or with preemergence grass herbicides like Dual, Harness, Outlook, Intrro, Surpass, etc. (products that all have good pigweed activity). Read the label for precautions against using Callisto with organo-phosphate insecticides. **Impact (topramezone) from AMVAC is also a relatively new herbicide registered for postemergence weed control in all types of field, sweet and popcorn. It is also classified as a “carotenoid biosynthesis inhibitor” and has activity on weeds resistant to the ALS herbicides (like resistant palmer pigweed) and several annual grasses like goosegrass, crabgrass, and broadleaf signalgrass. Impact is used at 0.75 fluid ounce per acre and applied with crop oil concentrate either alone or tank-mixed with atrazine. It can be tank-mixed with a wide variety of registered corn herbicides. Impact may be applied with nitrogen fertilizer at rates up to 2.5 gallons of 28% solution per 100 gallons of spray mix. There are no re-crop restrictions that would cause problems for small grains or cotton, peanut or soybean.**

Because corn is a grass, herbicides like dicamba (Clarity, Distinct, etc.) and 2,4-D can be used after the crop has emerged to control broadleaf weeds. Products like Accent or Beacon can be used to control johnsongrass and selected other annual grasses in non-transgenic and genetically modified corn. Atrazine (Aatrex, etc.) has been around for over 40 years and is still the backbone of preemergence weed control in many corn fields. Atrazine can provide control of glyphosate-resistant pigweed as well as other annual weeds and grasses. Corn is very tolerant of atrazine which allows its use either preemergence or postemergence after the corn has emerged. Atrazine has post activity on small weeds if a crop oil concentrate is added. Simazine (first cousin to atrazine) has preemergence activity but no post activity. Simazine is better on annual grasses and less effective on annual broadleaves than atrazine.

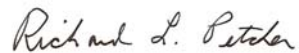
Option (foramsulfuron) from Bayer is a relatively new product that provides postemergence control of several annual and perennial grasses and some broadleaf weeds. Option can be sprayed over-the-top of field corn early postemergence (before V6 stage) at the rate of 1.5 ounces per acre with methylated seed oil (MSO) either alone or with several other registered postemergence herbicides. Read the label for precautions against using Option with organophosphate insecticides. Option has grass activity on small Texas panicum, goosegrass and field sandbur. Sandea (halosulfuron) from Gowan has good nutsedge activity and can be applied over-the-top of corn from spike to layby stages. Finally, some older herbicides like Evik, Gramoxone, and Lorox can be applied in the middles, on corn a minimum of 18 inches tall, using a hooded sprayer for non-selective control of several broadleaf and grass weeds.

CORN SEED TREATMENTS: Dr. Kathy Flanders, AU Grain Entomologist

The seed of most corn hybrids is pretreated with various insecticides and fungicides. Seed treatments don't protect corn all the way through the growing season. They are really designed to protect the seedling in the first 30 days after planting. More than 20 different insects, including white grubs, wireworms, southern corn rootworms, seed corn maggot, and chinch bugs. Poncho (clothianidin) and Cruiser (thiamethoxam) are the two insecticides used most often to treat corn seed sold in Alabama. The 250 rate of either material provides protection against moderate infestations of most seedling pests of corn. Some farmers may want to order their corn treated with a higher rate of insecticide. For example, farmers in SW Alabama who have had problems with billbugs in the past might want to choose the 1250 rate of Poncho or Cruiser. Sugarcane beetle can cause serious problems, especially in new fields that were in pasture, hayfield, or CRP land in 2008. Corn in these new fields would also benefit from seed treated with the 1250 rate. Farmers in Baldwin and Mobile Counties who have had problems with early season stink bug damage would probably benefit from choosing the 1250 rate. Other fields

that are at risk from heavier than normal damage from early season insects are those that are in conservation tillage, or those that are planted to corn in 2009, following corn in 2008. These fields might benefit from corn seed sold with the 500 rate, which will provide more consistency under heavier insect pressure. The 500 rate is new this year and will not be available from all seed dealers or on all hybrids. Cutworms can damage early season corn, particularly in fields in conservation tillage, or with a green cover crop or heavy infestation of winter weeds. Seed treatments alone can't prevent all damage from cutworms, because the cutworms can cut quite a lot of seedlings before they succumb to the seed treatment. The best management practice for cutworms is to burn down green foliage early, so that there is a weed free month before the corn is planted. The next best strategy is to spray the corn at or just before planting with an inexpensive synthetic pyrethroid.

Again, I hope this information has been useful to you. And have a Merry Christmas and a Happy New Year.



Richard L. Petcher
Regional Extension Agent
Agronomic Crops