Irrigation System Prep For Peanut Production (Wesley Porter)

There is about a month before everyone begins to get serious about getting their peanuts planted. Thus, now is the best time to do routine and preventative maintenance on equipment, specifically irrigation systems to ensure they are top shape once the crop is planted. Once the crop is planted the irrigation systems will be needed and a lot of them will run near continuously during times of no rainfall. There are two important factors that need to be considered before you get your peanuts planted. One is an overall irrigation system check and the other is specifically focusing on uniformity and distribution of your system. First go through a check list that includes all main components on your irrigation system to ensure they are working properly. Some of these components can include but do not have to be limited to the power units, pumping system, intake line, pipes and drains, electrical system, system alignment, safeties, tires, gear boxes and drive shafts and lines, and the switches on the auto stop feature. Once you have checked all of these components now it is time to start the system and finish checking components. Start up the pump and check the line pressure, flow, sprinklers, end gun and booster pump, regulators, drain valves, check for visible leaks, and test the auto stop and reverse features. The system flowrate and application rate are represented in Figure 1. It is important to remember due to increasing travel speed as we move to the end of the pivot the system flow rate will go up, but the application depth should remain consistent. This is achieved with properly sized sprinkler packages.
It is important to note that it can be very difficult to detect differences between individual sprinklers and banks of sprinklers on a pivot visually so it is strongly recommended that an application uniformity test be performed on the center pivot to detect any discrepancies along the tower length. A UGA Factsheet titled *Evaluating and Interpreting Application Uniformity of Center Pivot Irrigation Systems* is a very good step by step guide to completing this process. By following these suggestions you should have a properly operating pivot ready to go for the upcoming production season.

**Timely Notes on Disease Management for 2016 (Kemerait)**

Though still approximately 6 weeks away from the general start of the planting season, there are issues regarding management of diseases and nematodes affecting peanut that deserve attention now.

1. **Choosing the right variety.** Most of our acreage will be planted in ‘Georgia-06G’ and this continues to be an excellent variety. I recognize that seed for ‘Georgia-12Y’ is generally
unavailable; however I encourage growers who are concerned about white mold to plant some if they can. Likewise, growers with root-knot nematode problems are encouraged to consider planting at least some of their acreage in ‘Tifguard’ or ‘Georgia-14N’, remembering that Georgia-14N is a later-maturing variety. Growers are encouraged to consult the 2016 version of ‘Peanut Rx’ to determine the predicted risk to tomato spotted wilt, white mold and leaf spot diseases given the variety they plant and their production practices. With this information they can make a better informed decision on their disease management program.

2. **Decisions regarding nematode control are critical now.**

Growers who anticipate a problem with peanut root-knot nematodes and who plan to apply a nematicide will likely use Telone II or Velum Total. The primary consideration in choosing between a resistant variety, Telone II and Velum Total is the size of the population of nematodes in a field.

The economic threshold number, that “magic” number that draws the line between when damage from the nematodes is worth treating and when it is not is “10/100cc soil”. Velum Total (18 fl oz/A) is generally recommended where a grower would have used Temik 15G, 10 lb/A at-plant, which would coincide with “low-to-moderate” nematode populations. Defining “low-to-moderate” populations is unsettling, but I would say anywhere from 10-100 root-knot nematodes per 100cc soil in a FALL-collected sample would be “in the ballpark”. As numbers increase beyond 100/100cc soil, I think a resistant variety or Telone II becomes increasingly important. Also, given that the root-knot nematodes are generally “clumped” in a field, it is likely that even a field
described as “low-to-moderate” will have significant “hot spots” in it. Telone II should be applied in-row at 4.5 gal/A in-row 10-14 days ahead of planting with special awareness of soil conditions during this El Niño season. The possibility of frequent rain events could make fumigation challenging. An insecticide for management of thrips is still required when Telone is used but not when Velum Total is applied. Velum Total should be applied at 18 fl oz/A for peanuts and the product can be mixed with other fungicides and inoculants without concern. Whether choosing Telone II or Velum Total, accurate calibration and precise application are critical for maximum success. Growers should ensure that equipment is properly put together and tested for calibration.

3. By now, most growers are aware that Tilt-Bravo will be generally unavailable this season and the issues concerning sale of peanuts treated with propiconazole (the active ingredient in Tilt) to the European market could affect other products as well. For example, it is not clear how Artisan, a combination of flutolanil and propiconazole will sold this season; however Convoy (flutolanil alone) will be in ready supply. Syngenta will likely recommend a tank-mix of Bravo and Alto to replace Tilt-Bravo; products like Priaxor will also perform well in this early-season spot. As we move beyond planting, additional discussion regarding leaf spot management will be proposed.

4. White mold is of special concern this year, both because of anticipated short-rotations and because of the severe outbreak we had last year. Growers are reminded that early-season applications of Proline and, perhaps, Elatus can help to manage this important disease. Banded applications are typically made approximately 3-5 weeks after planting. NO
QUICK UPDATE ON EL NINO (PAM KNOX, AGRICULTURAL CLIMATOLOGIST)

The climate of Georgia this winter has been strongly influenced by El Nino, which is related to cooler and wetter conditions than usual in the Southeast in the winter and spring when an El Nino is occurring. While December did not follow the pattern this year, with much above temperatures, the rest of winter has settled into a more typical El Nino regime. This is expected to continue through spring, which may mean wet conditions in the fields for the next few months. This may lead to delays in planting which could hurt yield, according to the peanut planting date tool at www.agroclimate.org.

El Nino is already starting to diminish and is expected to return to neutral conditions by May or June before swinging to the opposite phase, La Nina, later this summer. La Nina is associated with dry and warm conditions, which could hurt crop development later in the growing season, but could help with harvest. The only exception is in areas that are hit by tropical storms, which are often more numerous in La Nina years. If a La Nina does develop, next winter is likely to be warmer and drier than usual, leading to the possibility of drought returning to the Southeast in 2017.

HOW WILL GEORGIA’S RISING PECAN ACREAGE AFFECT THE LONG-TERM MARKET FOR PECANS? (LENNY WELLS)

I can’t tell you how many times I have been asked about or heard someone comment on the great potential for the pecan market to bottom out a few years down the road thanks to all the new acreage being planted. Make no mistake, anything that goes up is bound to come down at some point, but just how far down do you expect pecan prices to fall? The answer to this question depends on your level of optimism. There are a number of things to consider in all this to truly make an educated guess about the future of the pecan market.

Foremost on this list of considerations would have to be our export market, which as everyone knows is currently driven by China. China’s economy has many people concerned but the Chinese demand for pecans has remained strong in the face of this downturn in their economy. In addition, the fundamentals for long-term growth of the tree nut market, including pecans, in China are in place. There is an excellent article explaining the details of the optimistic outlook for the tree nut market in China available here: China’s Potential as an Export Market for Tree Nuts. The greatest unknown factor we face in the Chinese export market is our future political relationship with China. We all hope
this remains strong but if anything goes wrong here all bets are off. In addition to China, aggressive marketing of pecans is taking place in India, Turkey, and South Korea among others to help grow the world-wide demand for pecans.

Another important aspect that many of the naysayers are probably not considering is the potential of the Federal Marketing Order for pecans and the impact this could have for domestic consumption. Growers will be voting on the referendum most likely within the next month. Federal Marketing orders for pecan have been attempted in the past but none has had the unified support the current proposed program has garnered to date. If the FMO does indeed get voted in, pecans will, for the first time, have significant funding to launch a national marketing campaign on par with some of the other tree nuts, which have reaped great rewards with their own programs. This will allow the pecan industry to get the message out regarding the remarkable health benefits of pecans on a large scale, which is a necessity for increasing domestic demand.

The other necessity for increasing domestic demand for pecans (and this may be the trickiest part) is a solid, consistent supply of pecans. Currently, we do not have the pecans available in the U.S. to develop as large and sustainable a market as we would like to see. This makes it difficult to coax large companies within the food industry to develop, produce, and market products using pecans as ingredients. I hear people constantly groaning that when all these trees we've planted come into production, we won't be able to give pecans away. If we continued down the same path marketing our crop as it has been done for the last 100 years, they would be correct. But, the fact is, we need the increased production to develop the market we need for pecans. There will likely be growing pains along the way, as we try to balance increasing the demand for the crop with increasing our production, but this is a good problem to have.

And what about that increasing acreage? Just how much is it increasing and what does this mean for the future volume of pecans produced? Other states are planting pecans but from what I hear, probably not at the scale Georgia is planting. So, let's look at Georgia to illustrate this point since Georgia produces about 30% of U.S. pecans. It is extremely difficult to pin down exactly how many acres of pecans we have because of orchard turnover, new plantings, unclear distinctions between managed and hobby orchards, and the complications brought about by the proliferation of yard trees and their inconsistent production.

All this makes Georgia's pecan acreage virtually impossible to accurately determine. The most recent U.S. Census of Agriculture (2012) placed Georgia's pecan acreage at 123,415 acres. That same year, the UGA Farm Gate Survey accounted for 163,933 acres. So, let's shoot for somewhere in the middle and say we have 140,000 producing acres. We tend to average somewhere around 95 million lbs of pecans annually. If you do the math using the 140,000 acres that's an average of only 678 lbs/acre. This number obviously takes into account production from hobby and non-managed orchards. Commercial producers in Georgia produce much more than this—usually close to twice that amount—but this brings into question, just how many of these trees being planted now will contribute significantly to future production?

Our survey estimates indicate somewhere around 20,000-25,000 new acres have been planted over the last 5 years in Georgia. At 678 lbs/acre, that's only another 17 million lbs, which would bring us up
to an average annual production of 112 million lbs. With a growing market I don’t think this number is any kind of death toll for the pecan industry. We need this production to develop the market we are striving to have.

And besides, tell me what other agricultural commodity appears to have this much potential.

**Pecan Federal Marketing Order Referendum (Lenny Wells)**

On March 8, the USDA mailed ballots to pecan growers in the 15 states that produce pecans. Beginning on March 9 and ending on March 30, growers will have the opportunity with their vote to express their preference for acceptance of the Federal Marketing Order for Pecans. In addition to expressing their preference, voters will indicate their average inshell production over the four production years of 2011, 2012, 2013, and 2014.

The FMO can be approved in one of two ways. Either 2/3rds of those growers voting approving the measure or 2/3rds of the volume of production voting in approval will cause the FMO to pass. The qualification for a grower to vote in the Referendum is either 50,000 inshell pounds of average production over the four years OR 30 pecan acres, including planted acreage not yet in production. *If a grower does not receive a ballot by Monday, March 14, he or she should contact the Southeast Marketing Field Office of USDA at the phone number noted below to have a ballot mailed:* *(863) 324-3375*

**Phylloxera Sprays (Lenny Wells)**

Bud break of pecan has arrived in south Georgia and if you have had problems with phylloxera in the past, it is time to consider making an application for this pest. The southern pecan leaf phylloxera, is a
tiny aphid-like insect that feeds on the foliage of pecan trees. The insects are rarely seen, but the galls that they cause are prominent. The southern pecan leaf phylloxera is primarily a pest on mature pecan trees, but it can be found on nursery and young trees. Overwintering eggs hatch beginning the first week of April and continue until the first of May. The newly hatched stem mothers crawl to the expanding leaves where they settle down and begin feeding. Feeding causes rapidly growing gall tissue which encloses the immature stem mother within a few days. Stem mothers mature by mid-April at which time they lay eggs within the gall.

Light populations are most probably of little consequence. However, each gall results in dead leaf tissue and numerous galls can cause premature leaf shedding. Hickory shuckworm uses phylloxera galls for first generation larval food.

Of much greater concern than leaf phylloxera, a separate species, stem phylloxera can be much more damaging. They produce a hard swelling or tumor like galls, one tenth to one inch in diameter on leaves, leafstalks, succulent shoots, catkins, and nuts of new growth. Heavy infestations can completely destroy an entire nut crop and the accompanying malformed and weakened, infested shoots reduce tree vitality to such an extent that damage may reduce the following years production. This is rarely seen in managed orchards but where it does occur it needs attention.

Imidacloprid is a good, inexpensive, systemic choice for phylloxera control. Phylloxera sprays should be applied just after bud break or no later than when the leaves are one-third grown. Once galls are observed it is too late to spray until next year.

**Pecan Herbicide Programs (Lenny Wells)**

With the arrival of budbreak, most growers are in the process of getting out herbicide strip applications. There are many herbicide options for pecan growers to choose from but here are a few things to keep in mind:

1. Glufosinate and Paraquat would be better selections for burndown than glyphosate under newly planted and young trees because they are contact materials and any potential drift would cause very limited and only temporary damage unlike the systemic glyphosate. Just be sure to protect the bark from any herbicide.
2. Burn down herbicides should include glyphosate where grass is a major issue. Just be careful about drift where using this material under young trees. Paraquat and Glufosinate normally will not give long term control on a thick covering of Bermuda grass.

3. Include pre-emergent herbicides in your program. Again, we have many options here. Alion is an excellent pre-emergence material that gives long lasting control. It has a high price tag but it will significantly cut down on the number of applications you need to make, which offsets the cost. Use the 5 oz/A rate in the first year that you use Alion. After that, you can drop down to the 3.5 oz/A rate. Previously Alion was only labeled for trees 3 yrs of age or older. I was recently told by Bayer representatives that this has now been changed and this material can be used on 1st year trees and older. We have tested it for a number of years on 1st year trees at high rates and have never seen a problem.

4. Flumioxazin (Chateau) is also an excellent pre-emergence herbicide for use on trees from the 1st year on up. Its residual is not quite as long as Alion but it gets pretty close. Even if you are using Alion, rotation between Alion and Flumioxazin from one year to the next is a good idea to manage resistance and limit the over-use and buildup of indaziflam (Alion) in the orchard.

5. We have many other options for pre-emergence which can be utilized in pecan orchards. These include Surflan, Simazine, Prowl, and Diuron. Isoxaben (Trellis) and rimsulfuron (Metric, Solida, and Pruvin) are recent additions to this arsenal. Of these, Surflan, Prowl, Isoxaben and Rimsulfuron can be used on 1st year trees and up. Trees must be 2 yrs old for Simazine and 3 years old for Diuron. Also, do not use Diuron on sandy soils. Consult the current UGA Pecan Spray guide here for a complete list of herbicides available for pecan and their uses.

6. Tank mixing burndown and pre-emergent herbicides will reduce the number of trips made over the orchard but be sure to have at least 75-80% bare ground when using a pre-emergence material. Most of them need good soil contact to be effective.

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