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Plan Ahead Before Planting Wheat

Dewey Lee, Small Grains

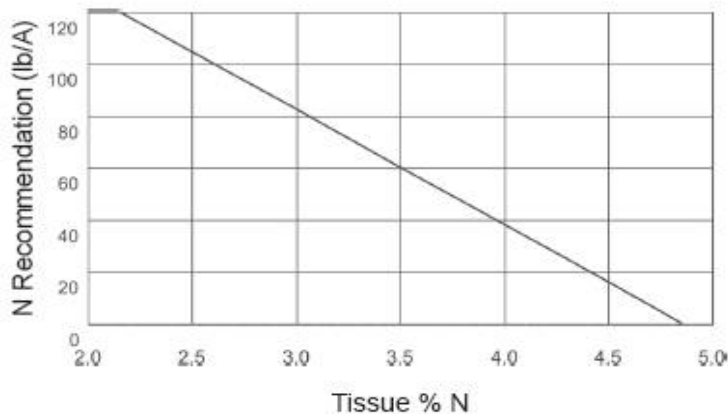
Currently the wheat market is sending strong signals to soft wheat growers that enough wheat is on supply to meet most needs this year. As of early October, a large negative basis (\$2.00 off July futures) remains in place significantly reducing the chances of profiting from this year's wheat crop. As the world market adjusts to this year's production and current economic crisis, soft wheat buyers have shown growers that the large supply of soft wheat (not hard wheat) is enough to meet the domestic demand. If growers reduce their acreage and ultimately the supply, the negative basis would soon diminish and prices would reflect more closely to the Board price of hard wheat. Considering the cost of seed, increase cost of fuel and chemicals and the unprecedented rise in fertilizer cost; it will take a \$5.50 to \$6.00 per bushel contract at average farm yields (55 to 60 bushels) for growers to show a real profit.

Before planting a single kernel, consider all your opportunities to meet this price per bushel or to reduce your cost while increasing yields. At current prices, a significant increase in farm yields will be necessary to demonstrate a good profit. However, if good contracts are at hand, then look for areas to reduce your cost while maintaining a potential 90 to 95% maximum yield.

Most inputs have an area that generally you can identify the potential to reach 90% maximum economic return to investment. Let's look at ways to achieve the most for the money.

1. Stay within the planting period of one week before and one week after your five year average first frost day. This represents the recommended planting date for your area.
2. Choose a recommended variety for your area, preferably one with good Hessian fly resistance and disease resistance. Check the production guide for variety characteristics.
3. Carefully examine your soil test levels and use those fields that you will be able to reduce fertilizer cost. Plan to apply a maintenance fertilizer only. Use no nitrogen behind a crop of soybeans or peanuts. Use no less than 20 lbs of nitrogen per acre behind a cotton crop. At the minimum, disk the residue deeply or chisel. Do not notill the wheat except behind conventionally planted peanuts. If your soils test low-medium, apply up to 40 lbs P per acre in the fall only and 40 lbs K per acre in the spring.

4. Kill your weeds early. Do not try and save a trip across the field by applying your herbicides with your topdress nitrogen. For wild radish, use Express Total Sol® and for radish plus other broadleaves, use Harmony Extra Total Sol®. Examine your options for good ryegrass control. There are several.
5. Scout for aphids during the first 60 days of growth and only spray if the aphid population meets the stated threshold in the Wheat Production Guide.
6. During the later days of January, begin counting tillers to determine the need for additional nitrogen applications for the proper tiller production. If tillers counts (a stem with at least three leaves) exceed 80 or more per square foot at Zadoks GS 25, then apply all remaining nitrogen at GS 30 (stem elongation). Usually this occurs during early to mid-February in the southern half of Georgia. In extreme N. Ga, stem elongation may not occur till early March. If the tiller count is less than 80 per square foot, then apply 30 to 40 lbs of N per acre to encourage tiller production prior to the onset of stem elongation. Complete the topdressing prior to 1st node stage. Nitrogen rates will vary according to the soil type, variety lodging resistance, irrigation capability, previous crop, etc. In general, total N rates range from 80 lbs N per acre to 120 lbs N. The figure below is a guide used by growers in North Carolina and Virginia to determine the need for nitrogen at GS 30 (or Feekes 5). A tissue analysis is needed for final N application determination. It is assumed that the average tiller count will be above 100 per square foot.



7. Scout for diseases in late March and early April. Use the resistance of the variety to your advantage. Only spray if the predicted weather forecast favors the continuation of the infection on varieties with poor to fair resistance. Consider the cost of each fungicide and its efficacy on the target disease and use ONLY if necessary. Chances though are good that most fungicides protect enough yield and or test weight to return at a minimum a breakeven price.
8. Harvest between 14% and 16% moisture.

Tramlines in Wheat Promote Timely Management

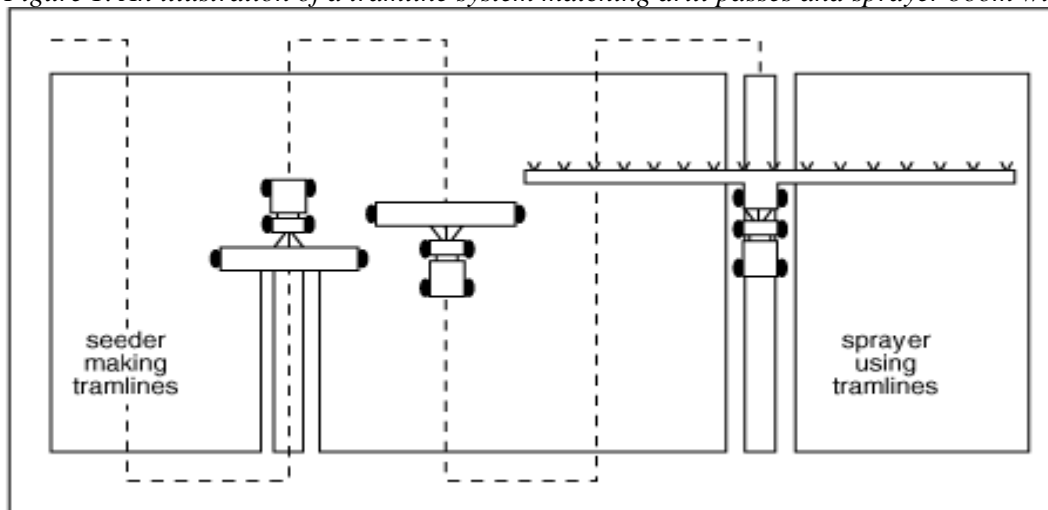
Dewey Lee, Small Grains

Given the current pricing environment for wheat, acreage is likely to decline this year. If you choose to plant wheat this fall, serious consideration should be given to creating tramlines at planting or soon after emergence of the crop. Tramlines will provide traffic areas which allow you as a grower to use repeatedly over the season without penalizing your wheat yields and at the same time promoting better and more timely management of inputs. How can tramlines help?

1. You to never drive over healthy plants.
2. You lose less yield due to tracking in a single area.
3. Equipment runs on compacted soil from tractor.
4. You expand your application windows by being able to get into the field quicker even after a rain.
5. Improves precision accuracy by eliminating skips and overlaps.
6. It's less stressful for operator and you can run at night more precisely.
7. It allows you to produces a higher yielding crop due to accuracy, timeliness and efficiency.

Tramlines are formed by blocking drill spouts that correspond to the width of the tracks of the sprayer tractor (Figure 1). Using tractors with narrow tires so only one drill row needs to be blocked is a recommended practice. Devices that automatically close the selected drill spouts on the appropriate planting pass through the field are available for most grain drills. Fertilizer and spray booms should be at least 40 feet wide to be economical. The distance from the first tramline to the edge of the field should be one-half the width of the sprayer.

Figure 1. An illustration of a tramline system matching drill passes and sprayer boom width.



Option: You can also form tramlines similar to the roadways (skip rows) established at planting without the investment of shut-off attachments on the drill. Do this by chemically killing wheat in rows that correspond to the needed tracks for applying fertilizer, chemicals, etc. This is done by using a drop nozzle behind the tractor tires and spraying the emerged wheat as it corresponds to the boom width of your equipment. For best results, conduct the chemical kill (use glyphosate) early enough to allow compensation from plants in adjacent rows.

MANAGING RYEGRASS IN WHEAT DURING THE 2008/2009 SEASON
Stanley Culpepper, Weed Scientist

By now, most growers are very comfortable using Axial, Hoelon, and Osprey to control ryegrass in wheat. Hoelon and Axial resistant ryegrass has plagued many growers until Osprey recently received registration. Unfortunately, there are alarming concerns that there are numerous ryegrass populations in Georgia that have already developed resistance to Osprey as well. Thus, these populations may now be resistant to Axial, Hoelon, Osprey and even PowerFlex, a new herbicide just labeled for Georgia.

It is crucial growers develop a long-term management plan rotating herbicide chemistry. The discussion below on new ryegrass management tools and Table 1 will help growers develop a long-term plan. For example, PowerFlex is a new ALS herbicide similar to Osprey. Growers should rotate PowerFlex OR Osprey with alternative chemistry; never treat the same piece of land two years in a row with these herbicides. Similarly, Axial and Hoelon are ACCase herbicides and growers must rotate these herbicides with alternative chemistry; never treat the same piece of land two years in a row with these herbicides.

Table 1. Herbicide modes of action used to control ryegrass in wheat.

Herbicide	Mode of Action	Note
Axial	ACCase inhibition	Will not control hoelon-resistant ryegrass
Axiom	Inhibition of very long-chain fatty acids plus photosystem II inhibition	Product quantity is limited, application procedure is critical; primarily provides residual control
Hoelon	ACCase inhibition	Very effective on non-Hoelon resistant ryegrass
Osprey	ALS inhibition	Slow acting, resistance is now likely in GA
PowerFLex	ALS inhibition	Will not control ryegrass resistant to Osprey
Prowl	Microtubule assembly inhibition	Provides only residual control

Several new herbicides have recently been obtained to manage ryegrass in wheat and will be discussed individually below.

PowerFlex: Limited research with PowerFlex, active ingredient pyroxsulam, has been conducted in Georgia. Use of PowerFlex is suggested on limited acreage until more experience is obtained. PowerFlex, according to the label, can be applied in wheat at 3.5 oz/A from the three-leaf stage until jointing. Apply after the majority of the ryegrass has emerged but before it exceeds the two-tiller stage. Add non-ionic surfactant at 1 qt per 100 gal spray solution.

In addition to ryegrass, the PowerFlex label claims control of several broadleaf weeds including Carolina geranium, common chickweed, hairy vetch, wild mustard and suppression of henbit. The label does not mention wild radish but two Georgia studies conducted last season suggest excellent control of radish up to 8 inches in height. For additional broadleaf control, PowerFlex may be mixed with Harmony Extra. Do not mix with dicamba, 2,4-D, or MCPA.

PowerFlex is a sulfonylurea-type herbicide, and similar to other sulfonylureas, PowerFlex works slowly. Symptoms appear two to four weeks after application; and four to eight weeks

may pass before ryegrass dies.

Labeled rotational restrictions include 1 month for wheat; 9 months for grasses including barley, field corn, grasses, millet, oats, popcorn, seed corn, sweet corn, sorghum and for broadleaves including alfalfa, canola, chickpea, soybean, dry bean, field pea, flax, lentil, mustard, potato, safflower, sugar beet, and sunflower. All crops not listed have a 12 month rotational restriction. Limited research in Georgia has shown no problem with double-cropped soybean or cotton planted behind wheat treated with PowerFlex in December or January.

Prowl H₂O: Prowl H₂O at 1.5 to 2.5 pt/A can be applied **postemergence** to wheat as long as the wheat is between the 1st leaf stage and the flag leaf being visible. Prowl does not control emerged weeds but can provide residual control of sensitive weed species if the herbicide is activated by rainfall or irrigation in a timely manner. Data on Prowl's ability to control broadleaf weeds like henbit, chickweed, etc. is currently limited with our hopes of generating more data this winter. The Prowl H₂O label does allow for mixtures with any labeled wheat postemergence herbicide.

In my mind, the two greatest uses for Prowl H₂O would include the following: First, a mixture of Prowl H₂O with a postemergence (Axial, Hoelon, PowerFlex, Osprey) annual ryegrass herbicide. In theory with this application, the postemergence herbicide would control the emerged ryegrass and the Prowl H₂O would provide residual control. However, it is worth mentioning that most ryegrass that growers see at harvest is not ryegrass emerging after their postemergence herbicide treatment but rather from ryegrass that was not controlled with their postemergence herbicide because the ryegrass was too large when treated.....Prowl H₂O will not help in this situation.

A second use for Prowl H₂O in wheat would be in a situation where the wheat emerges while the ryegrass is late to emerge. One could apply the Prowl H₂O over one leaf wheat and if activated by rainfall or irrigation it would provide residual control into the season improving the likelihood of making "timely" postemergence applications.

Axiom DF: For 2008, the availability of this product will limit its use. Those wanting to use Axiom need to review the label very carefully. Application rates vary based on soil type. Most GA growers will be using 6 to 8 oz of product per acre but again this should be determined from the label. Axiom should be applied in wheat from the spike stage up to the 3 leaf growth stage. If used properly, the herbicide can provide excellent control of radish, henbit, and chickweed.

Ryegrass control by Axiom will vary based on its stage of growth at application timing. If the application to wheat is during the spike wheat stage and this is prior to ryegrass emerging (assuming herbicide activation by rainfall or irrigation) good ryegrass control can be noted; however, if the ryegrass is emerged at the time of application control will be poor.

GRAIN CROP INSECT CONTROL

David Buntin, Grain Crop Entomologist

At-Planting Insect Management in Winter Wheat. In the September newsletter I discussed selecting a variety with good resistance to Hessian fly as the most effect method for control this insect in wheat. The September newsletter contains a table of listing varieties with good, fair and poor fly resistance. The August newsletter also had an article by Dewey Lee with descriptions and table of characteristics of wheat varieties. With the declining wheat prices reducing interest in wheat, there should be a good supply of resistant wheat varieties the plant this fall.

Factors that increase the risk of Hessian fly infestation are early planting, reduced tillage, planting in fields that had a wheat crop of wheat cover crop the previous year(s). If you are planting a Hessian fly-susceptible variety in these situations, I would recommend using an insecticide seed treatment. The seed treatment imidacloprid (marketed as Gaucho 600 and other brands) should be applied at the equivalent rate of 1.6 to 2.4 fl. oz. per 100 lb of seed (CWT). Bayer has Gaucho XT (imidacloprid plus fungicides) at 3.4 fl oz per CWT plus a 1.0 fl oz of Gaucho 600. New this year, Chemtura has registered Attendant 600 seed treatment, which is the same active ingredient and concentration as Gaucho 600. They also will have a product called Enhance AW soon as a hopper-box treatment at 4 fl. oz./100 100 lb of seed (full state registration may not occur in time for planting this fall). Enhance AW is similar to Gaucho XT but with a higher rate imidacloprid. Cruiser 5FS also is registered but should be used at the maximum label rate of 1.33 fl. oz. per CWT. This rate may still be too low for good control under heavy pressure. CruiserMaxx is not recommended because the insecticide concentration is too low for control of Hessian fly or aphids. For best seed coverage farmers should order seed treated by seed dealers, but Bayer CropScience has an on-farm treatment option for Gaucho.

Seed treatments will provide control for several weeks after planting but will not prevent infestation by Hessian fly in mid-winter or early spring. Attendant 600 and Gaucho also can be used on barley, oats, rye, and triticale seed. Enhance AW can be used on wheat, barley, and oats seed. Always follow all label directions and precautions.

For control of **aphids** to suppress barley yellow dwarf infection in the fall, consider using an insecticide seed treatment or foliar application of lambda or gamma cyhalothrin at about 25 – 30 days after planting. For seed treatments use Gaucho 600 or Attendant 600 at 0.8-1.0 fl. oz. per CWT or Cruiser 5FS at 1.0 – 1.33 fl. oz. per CWT. Gaucho XT at 3.4 fl. oz. per CWT and Enhance AW at 4.0 fl. oz. per CWT also provide an effective rate of insecticide. For foliar applications apply lambda cyhalothrin (Karate Zeon, Warrior, Silencer, Lambda, and similar products) or gamma cyhalothrin (Proaxis, Prolex). See the GA Pest Management Handbook or labels for rates. A middle range rate, for example Karate at 1.6 fl. oz. per acre, normally is effective. Other foliar insecticides, such as dimethoate, will control aphids but do not suppress BYD as well as the cyhalothrin products. The re-entry interval for the seed treatments is 12 hours and for the cyhalothrin products is 24 hours. Always follow all label directions and precautions.