

CRISP CO. AG NEWSLETTER – April 2011

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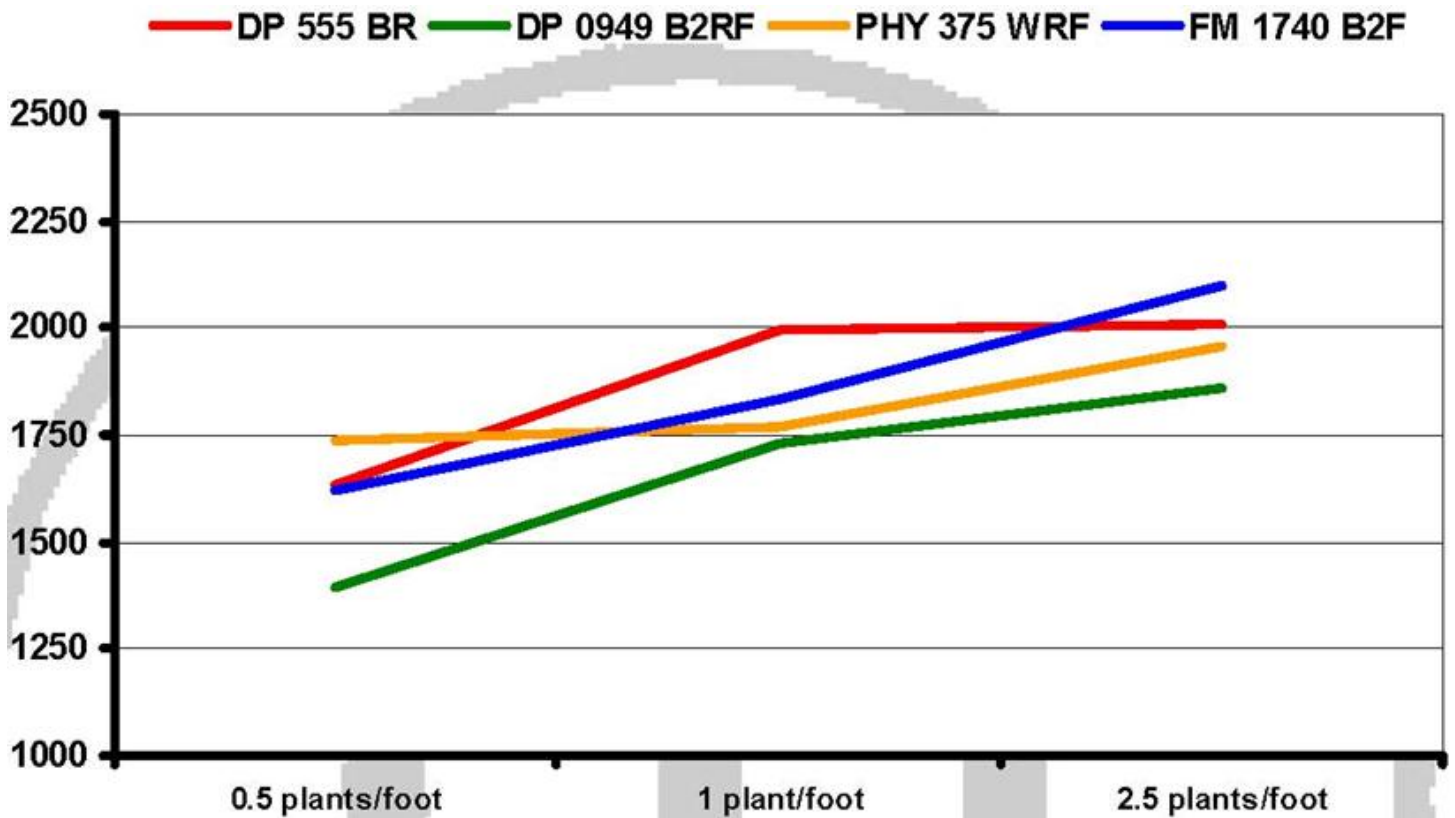
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Topics:

- Optimal Cotton Seeding Rates and Plant Population
- Are you willing to spray bare soil throughout the season to manage pigweed?
 - Planting into a pigweed free seedbed....do it or pay dearly!
 - Planting in April – Soil Temperature is Critical
 - Watermelon Fungicide Spray Programs 2011

Optimal seeding rates and plant population (*Collins and Whitaker*)

Recently, there has been some discussion regarding seeding rates of newer varieties, and whether or not the generally recommended seeding rate (2.5 seed per foot of row, or 2 seed every 9-10 inches hilldropped, for 36 to 38-inch rows; 2 seed per foot of row, or 2 seed every 12 inches hilldropped, for 30-inch rows) should be adjusted. In general, these recommendations can be adjusted up or down by 0.5 seed per foot, with a minimum of 2 seed per foot, depending on particular planting conditions. Most of the recent discussion seems to be in regards to reducing these recommended seeding rates for two logical reasons. Most modern varieties include technologies such as WRF, LLB2, and B2RF technologies, which are more expensive than what we have been dealing with in the recent past. In general, the first impulse for many growers is to offset these costs by reducing seeding rates. Secondly, the majority of these newer varieties appear to be larger-seeded and more vigorous in terms of germination, emergence, and early season growth than DP 555 BR. Since DP 555 BR was smaller seeded and somewhat weaker in terms of early season vigor, many growers are questioning the necessity of our currently recommended seeding rates for these newer varieties. Research was conducted in 2010 investigating the yield response of some modern varieties to final plant populations (Figure 1). These varieties were planted thick and then hand-thinned to achieve the final plant populations, therefore this data does not reflect yield responses resulting from actual seeding rates. The data from the first year of this research suggests that yields of all new or modern varieties increased as plant population increased up to 2.5 plants per foot. Therefore, the currently recommended seeding rates are still probably as low as we need to go, in order to achieve optimal yields without adversely affecting plant canopy architecture or structure. This is especially true, if germination and emergence problems occur. Erratic stands not only lead to potential yield losses, but also lead to delayed and inconsistent maturity, incomplete canopy closure, and poor harvest efficiency if the number of vegetative branches and stalk thickness are influenced by skips between plants. Keep in mind that our seeding rates are generally lower than in most other regions of the cotton belt, largely due to our warmer temperatures during planting season, and the length of our entire season which allows us to wait and plant when conditions are favorable.



Are you willing to spray bare soil throughout the season to manage pigweed? (Culpepper)

For the past 15 years, some growers enjoyed the ability of allowing as many weeds as possible to emerge and then spraying a little Roundup to kill them all. Of course, in Georgia, those days are long gone. In fact, the mentality of the Roundup Ready cotton grower must change. The new approach should follow the concept of overlapping residual herbicides (Figure 1), from planting until cotton canopy closure. Examples of programs using the tactic of overlapping residual herbicides are provided in Figure 2 (note applications timings). In these examples, secondary residual herbicides are applied and activated prior to the previously applied residual herbicide reaching concentrations that no longer control pigweed. These programs are effective but application timing is critical (Figure 3).

Figure 1. Concept of Overlapping Residuals

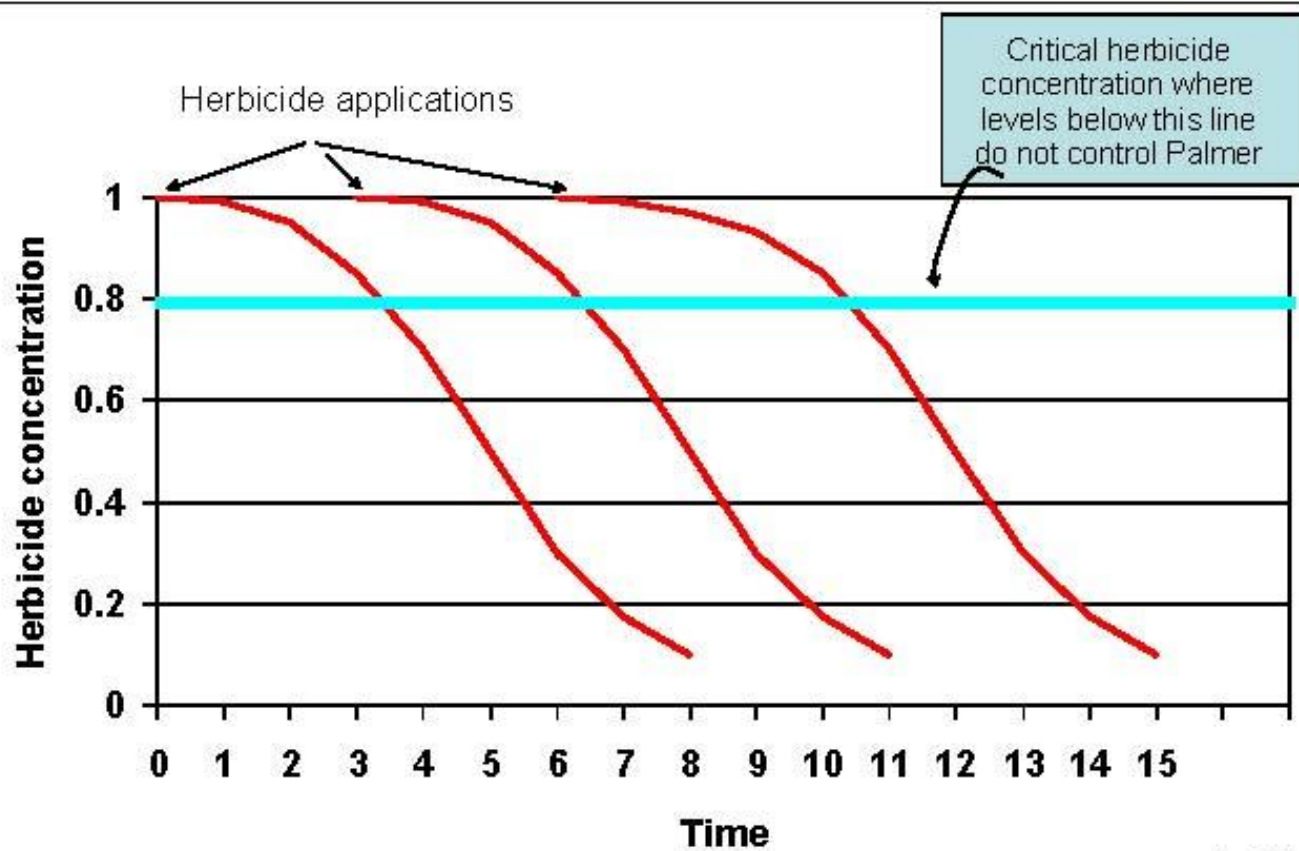


Figure 2. Controlling GR Palmer amaranth in RR conventional IRRIGATED cotton. 2011.

PRE	POST1 1-lf cotton	POST 2 5-6 lf cotton	Layby
1. Reflex + diuron 2. Reflex + Prowl	RU + Staple (emerged pigweed)	RU + Dual or Warrant	diuron + MSMA
3. Reflex + diuron 4. Reflex + Prowl 5. Reflex + Staple 6. diuron + Staple + Prowl	RU + Dual or Warrant	RU + Dual or Warrant	

Figure 3. Overlapping residual herbicides....can't be late or you will be hand weeding!!



POST 1 = 25 days after PRE

POST 1 = 17 days after PRE

Prowl + Reflex PRE, Roundup + Dual Magnum POST 1, Roundup + Warrant POST 2, Direx + MSMA layby in both plots. Only difference is timing of POST 1.

Planting into a pigweed free seedbed - do it or pay dearly! (Culpepper)

Georgia growers should be well aware that there is no chance for economic sustainability if they decide to plant cotton into fields infested with emerged glyphosate-resistant Palmer amaranth. The use of diuron or Valor preplant can assist growers in avoiding this concern.

For diuron, mixtures with paraquat (Gramoxone, other) provide the most effective control of emerged Palmer amaranth (Figure 1). When applications using the appropriate water volume and spray tips are made, Palmer (5 in or less) control is excellent. Diuron, if activated by rainfall or irrigation, will also provide two to three weeks of residual control.

Valor is less effective than diuron in controlling emerged plants but Valor is far superior to diuron in providing residual control. In fields that will not be planted for an extended period of time or in fields with tremendous pressure, Valor will provide greater residual control and this control will last for a longer period of time.

Regardless of the burndown program, scout fields prior to planting and control all emerged pigweeds before planting. Remember that waiting until after planting to control emerged pigweed often leads to escaped plants due to soil from the planting process covering these pigweeds.

Be certain to follow plant back intervals as suggested on respective labels (Figure 2).

Figure 1. Controlling 5 inch Glyphosate-Resistant Palmer amaranth at Burndown. Macon Co., GA.

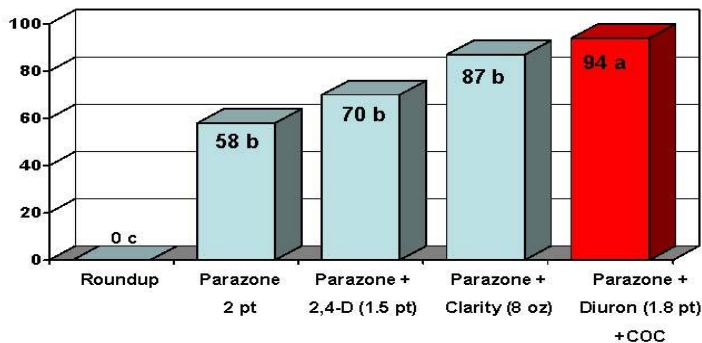


Figure 2. Plant back interval for Valor.

Strip-Till Production: Apply Valor at least 7 d ahead of planting as long as the strip operation occurs between applying Valor and planting.

No-Till Production or No-Tillage after application:

1. <30% residue: 28 days and 1 inch rain
2. >30% residue: 21 days and 1 inch rain

Planting Peanuts in April – Soil Temperature is Critical

Our current peanut cultivars, Georgia-06G, Georgia Greener, Georgia-07W, Tifguard, and Florida-07 all have approximately three times more resistance to TSWV than Georgia Green. Because of that resistance growers are encouraged to plant some of their acreage in April. HOWEVER, make sure the average four-inch soil temperature is a minimum of 65 degrees. You can check soil temperatures at three locations in Crisp County at www.georgiaweather.net

Lower quality seed will be more susceptible to lower soil temperatures. Any growers that plant seed that has a lower germination rate (mid to lower 80's) should wait and plant when the soil temperature has stabilized in the 70's. And as always, plant in good soil moisture to ensure rapid germination and plant emergence.

Watermelon Fungicide Spray Programs 2011

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As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack watermelon during the growing season(s) in Georgia.

Spray Schedule = Start 1 week after transplanting, then use 7 day schedule if raining once a week.

Spring		Fall	
Spray No.	Fungicide(s)/disease activity	Spray No.	Fungicide(s)/disease activity
1.	Chlorothalonil ¹ /GSB Actigard and/or copper fungicide ² /BFB	1.	Chlorothalonil ¹ + Folicur ³ /GSB Actigard and/or copper fungicide ² /BFB
2.	Chlorothalonil/GSB copper fungicide/BFB	2.	Chlorothalonil/GSB copper fungicide/BFB
3.	Folicur ³ /GSB or chlorothalonil/GSB Actigard and/or copper fungicide/BFB	3.	Chlorothalonil + Folicur OR Inspire Super/GSB Actigard and/or copper fungicide/BFB
4.	Chlorothalonil/GSB copper fungicide/BFB	4.	Chlorothalonil/GSB copper fungicide/BFB
5.	Folicur OR Inspire Super/GSB copper fungicide/BFB	5.	Chlorothalonil + Folicur OR Inspire Super/GSB copper fungicide/BFB
6.	Topsin + mancozeb/ANTH + GSB Quintec or Torino or Endura or Procure or Rally/POW	6.	Switch + mancozeb/ANTH + GSB Quintec or Torino or Endura or Procure or Rally/POW
7.	Folicur OR Inspire Super /GSB Presidio or Revus/DOW or PCAP	7.	Topsin + mancozeb OR Inspire Super/ANTH + GSB Presidio or Revus/DOW or PCAP
8.	Topsin + mancozeb/ANTH + GSB Quintec or Torino or Endura or Procure or Rally/POW Presidio or Revus/DOW or PCAP	8.	Switch + mancozeb/ANTH + GSB Quintec or Torino or Endura or Procure or Rally/POW Presidio or Revus/DOW or PCAP
9.	Folicur OR Inspire Super/GSB Presidio or Revus/DOW or PCAP	9.	Topsin + mancozeb OR Inspire Super/ANTH + GSB Presidio or Revus/DOW or PCAP

¹ Chlorothalonil (Bravo, Echo, Equus, etc...) may cause rind burn if sprayed within 21 day of harvest.

² Actigard and/or Copper is used prior to fruit set if bacterial fruit blotch is an issue.

³ Folicur (any tebuconazole) should be used at 8.0 fl oz when sprayed each time with a seasonal limit of 24 fl oz.

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: BFB = bacterial fruit blotch; GSB = gummy stem blight; POW = powdery mildew; DOW = downy mildew; ANTH = anthracnose; PCAP = Phytophthora crown and fruit rot.

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