



Successful Weed Management Systems Includes the Use of Dinitroaniline

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The use of dinitroaniline herbicides (Prowl, pendimethalin; Treflan, trifluralin; or Sonalan, ethalfluralin) often referred to as the yellow herbicides is the first step towards successful weed management programs in peanut and cotton production systems. The

strength of these dinitroaniline (DNA) herbicides is annual grass control (barnyardgrass, crabgrass, foxtails, panicums, etc.) and control of small-seeded broadleaf weeds such as Palmer amaranth (carelessweed and other pigweed species), Russian thistle (tumbleweed), and kochia (ironweed). Most larger-seeded broadleaf weeds, like annual morningglories, cocklebur, devil's claw, sunflowers, and perennial weeds (silverleaf night-

shade, field bindweed, lakeweed) are not controlled by these herbicides.

The rate of each DNA herbicide is dependent on soil type (the sandier the soil, the lower the recommended rate). High rates in sandy soil may injure crops. Check label for proper use rates and application methods



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Valor Performance in Texas Peanut - A Review of 2008

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Although Valor SX has been registered for use in peanut since 2001, many growers have little or no experience with this herbicide. Valor has exceptional activity on annual morningglories and sunflowers, and according to the label, other weeds controlled include kochia, common lambsquarter, and several pigweed species

including Palmer amaranth (carelessweed). Valor SX may be applied prior to planting or preemergence. Preemergence applications must be made within 48 hours after planting and prior to peanut emergence. Applications made after plants have begun to crack or after they have emerged may result in severe injury. Splashing from heavy rains or cool conditions at or near emergence may also result in injury and

even delayed maturity and yield loss. In 2008, several studies were conducted across the High Plains to gain experience with this relatively unused peanut herbicide. Most of these studies were done in grower fields and plot size ranged from four to eight rows by 75 to 1200 feet. The soil type and irrigation/rainfall after application varied by location, so the results cover a wide range of environmental conditions.

Successful Weed Management Systems Includes the Use of Dinitroaniline Herbicides—Continued

for your soil type and cropping situation. If soil conditions are extremely dry and large clods are present herbicide performance will be less effective with these herbicides. Keep in mind that when the DNA's were first introduced over 30



Proper incorporation enhances DNA performance

years ago, farmers were diligent with a two-pass incorporation prior to bedding and planting. This resulted in thorough mixing of the herbicide and excellent weed control. In recent years many farmers have cut back on incorporation to save time and money. Adequate weed control often occurs with these methods but herbicide failures have also arisen due to poor incorporation.

“Always carefully read and follow label recommendations.”

The DNA herbicides may be incorporated by mechanical means or by irrigation. Incorporation methods vary widely across the state. A double-pass method of incorporation is recommended on most labels with the second incorporation made at an angle to the first incorporation, but a single-pass is most commonly used. Mechanical implements used to incorporate these herbicides include a springtooth harrow, a disk, a double or single stalkcutter, and a rolling cultivator to name a few. The better the implement mixes and uniformly distributes the her-

bicide in the upper 1- to 2-inches of soil, the better the weed control. Treflan should be incorporated within 24 hours after application, Sonalan within 48 hours, and Prowl EC within 7 days.

Prowl H₂O must be incorporated prior to weed seed emergence. However, it is best not to delay this application at all if possible.

Prowl and Sonalan may be surface applied and then incorporated by rainfall or irrigation. Three-quarters to one-inch of irrigation is necessary to incorporate (activate) these herbicides. These products are very water insoluble and larger amounts of irrigation help to move them into the weed germination zone. Both Prowl and Treflan may be chemigated into the soil. These applications may not be the best way to incorporate Prowl, Sonalan, or Treflan, but may be the only way to use these herbicides in a reduced till-

age or no-tillage crop production system. It is still better to apply these herbicides in this method than to not include them at all. When surface applications followed by irrigation or chemigation methods are used, herbicide rates are generally higher when compared to mechanically incorporated methods. Research conducted at the AG-CARES farm north of Lamesa by researchers with the Texas Agrilife Research suggested that Prowl provided more consistent weed control when compared to Treflan when surface applied and watered in, but Treflan performed better than Prowl when chemigated.

Weed resistance to many of our postemergence herbicides has become a greater concern in recent years. Many areas of the country are experiencing more problems with weed resistances than most of Texas. This is likely due to the continued use of the dinitroaniline herbicides. Continued diligent and proper use of the dinitroaniline herbicides is one of the biggest tools we have to combat weed resistance issues. Always carefully read and follow label recommendations.

If you have any questions give us a call at 940.552.9941 ext. 233 or e - m a i l a t TBaughma@ag.tamu.edu.

Valor Performance in Texas Peanut - A Review of 2008— Cont.

Weed control observations were not made at these locations because the primary focus was crop response. Effective weed control was achieved at all locations because additional weed control inputs were made as needed over the entire test area so the only variable in the study was the Valor treatment. No differences in peanut yield were noted between the Valor-treated and untreated plots at any of the six locations (Table 1). For more de-

tailed results at each location, go to <http://peanut.tamu.edu/pdfs/Valor2008.pdf>. Results from these studies across the High Plains suggest that Valor is a safe option to peanut producers in our region. Although peanut injury has been observed in other states; and in the High Plains when rates exceeded labeled recommendations, and when a significant hail event occurred early season; we feel that this herbicide, when used according



Peter Dotray



Valor has shown good activity on Morningglory

to label requirements, is a good option for peanut growers for early-season weed control (4 to 6 weeks of soil residual activity). Consult the Valor label, Valent Corporation, or Texas AgriLife Re

search and Extension personnel for more information regarding this herbicide. Similar tests will be conducted in the 2009 growing season, thanks to the support from the Texas Peanut Producers Board!

Call Pete @ 806.746.6101 with any of your weed control issues.

Table 1. Peanut yield as affected by Valor in 2008.

Treatment	Rate lb ai/A	Prod. oz/A	Peanut Yield (lb/A)					
			AG-CARES	Brownfield	Lamesa	Levelland	Seminole 1	Seminole 2
Non-treated	---	---	4656	3867	4357	4327	5630	5849
Valor SX	0.064	2	---	---	4185	---	5938	6364
Valor SX	0.096	3	4710	4069	4159	4298	5796	6097
LSD _(0.10)			NS	NS	NS	NS	NS	16.52

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