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Crop Production Guide Series

Benefits of a Preemergence Herbicide Program

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The use of preemergence herbicides at the time of planting is dictated by several factors. Larger-seeded annual broadleaf weeds and perennial weeds are poorly controlled by preplant incorporated herbicides such as Prowl and Treflan. The need for a soil-applied herbicide at planting may be warranted if a good postemergence herbicide option does not exist. If good postemergence options are available that will control the weeds in question, then preemergence herbicides are less critical. Areas with high weed pressure may benefit from additional help provided by a preemergence herbicide to enhance overall success of the postemergence herbicide. It is well documented that early-season weed control is most critical. Therefore, the use of a preemergence herbicide can provide good insurance in the event that a timely post emergence application cannot be made. **However, the potential exists for crop injury when soil-applied herbicides are used on sandy textured soils.**



Herbicides applied preemergence are generally applied prior to emergence of both the weed and the crop, although crop tolerance may allow some preemergence herbicides to be applied after crop emergence. The length of soil activity varies by herbicide, herbicide rate, rainfall/irrigation, soil texture, soil organic matter, and pH. Since these factors vary for each herbicide, it is very important to carefully follow label instructions and make sure that your soil type allows for the use of the preemergence herbicide in question. All preemergence herbicides applied to the soil need rainfall or irrigation for activation.

Listed below are the options for herbicides that may be applied preemergence in cotton and peanuts. A few comments will be made for each herbicide. For complete information, please read the herbicide label.

COTTON. **Caparol** at planting provides good control of several small-seeded broadleaf weeds and annual morningglory. Do not use on sand or loamy sand soils. **Command** may be used preemergence in cotton if Thimet or Di-Syston insecticides are used in-furrow and placed with the cottonseed at planting for “safening”. Command has excellent activity on cocklebur, spurred anoda, Venice mallow, and other difficult-to-control annual broadleaf weeds, but the lack of proper safening has been an issue for some growers. **Cotoran** provides good broad-spectrum control of several annual broadleaf and grass weeds including annual nightshade, Venice mallow, and spurred anoda and has activity on cocklebur and morningglory. In west Texas, do not use on sand, loamy sand, or fine sandy loam soils.



Diuron (Direx, Karmex) applied at planting controls many annual broadleaf weeds and some grass weeds. Do not use on sand. **Dual Magnum (Dual II Magnum, Cinch)** controls annual grasses and small-seeded broadleaf weeds and has good activity on yellow nutsedge. Do not use on sand and loamy sand soils. Do not use in Gaines County. **Prowl (Pendimethalin products)** in addition to preplant incorporated applications may be applied at planting or up to 2 days after planting. The addition of Prowl at planting will

improve annual grass and small-seeded broadleaf weed control. **Staple** applied preemergence has good activity on many small-seeded broadleaf weeds such as pigweed and annual morningglories. Preemergence combinations of Staple plus Caparol or Direx broaden the spectrum of residual activity compared to these herbicides applied alone. **Zorial** provides good control of several annual broadleaf and grass weeds including spurred anoda and velvetleaf. Do not use Zorial in conventional or conservation tillage systems in areas with more than 65% sand. Zorial is often mixed with other preemergence herbicides to broaden the spectrum of control.

Herbicides such as **Gramaxone Max, MSMA, Roundup (several), and Ignite** may be used to control emerged weeds prior to crop emergence. Because these herbicides do not have soil activity, weed control is based on uptake and coverage of existing weeds.

PEANUT. There are a few herbicide options for preemergence applications in peanuts. **Dual Magnum (Dual II Magnum, Outlook)** controls annual grasses and small-seeded broadleaf weeds and has good activity on yellow nutsedge. Because some peanut injury has been observed following preemergence applications, these herbicides may also be used postemergence to avoid peanut injury at emergence. **Valor** is the newest preemergence herbicide in peanuts. Applications must be made within 48 hours after planting. Valor controls a wide range of annual broadleaf weeds including annual morningglories. Residual activity will last about 4 to 6 weeks after application.

Pursuit cannot be used preemergence in west Texas and New Mexico. Pursuit applications must be delayed until late cracking when peanut emergence has occurred. **Strongarm** cannot be used on soils with a pH of 7.2 or higher. **Gramaxone Max plus Basagran** may be used from ground-crack (GC) to 28 days after GC. Gramoxone has good broad-spectrum activity on many annual broadleaf weeds and will cause some burn on grasses and nutsedge. Basagran is added to this mix to help safenen the

peanuts from Gramaxone injury (however, some burn will still occur to peanut). This tank-mix does not provide any residual control, so control is based solely on weeds that have emerged at the time of application.

Rotational crop concerns will vary depending on which preemergence product is applied. Because these herbicides provide residual control, some rotational crop issues will occur with each of these products. Therefore it is important to read the label to determine how each of these herbicides will fit into your overall cropping management system.

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