

# TIMELY INFORMATION

## Agriculture & Natural Resources

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### SOYBEAN WEED MANAGEMENT: GLYPHOSATE-RESISTANT PIGWEED

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The number of herbicides available for weed management in soybean has increased in the past few years and we now have more tools than ever for weed management. Roundup Ready soybean varieties are now available that allows the use of glyphosate (Roundup, etc.) over-the-top for control of a broad range of weeds and grasses. Firstrate (cloransulam) and Python (flumetsulam), both from Dow AgroSciences and Synchrony XP (chlorimuron + thifensulfuron) from Dupont are relatively new soybean herbicides that can be used either preplant, preemergence, or postemergence for control of certain broadleaf weeds. Python has preemergence activity on sicklepod. **They are used at low rates and kill weeds by inhibiting the enzyme acetolactate synthase or acetoxy acid synthase.** Weed resistance to this class of chemistry has been found in certain species including palmer amaranth, a weed that has recently shown resistance to glyphosate in Georgia and other states. Scepter, Classic, and Pursuit provide good postemergence control of broadleaf weeds in soybeans, but also use the same mode of action as Firstrate, Python, and Synchrony. For this reason, mixing in herbicides with different modes of action, including some of the older soil residual products is a good idea if you suspect that any pigweed are escaping your postemergence herbicide treatments. Trifluralin, Prowl, and Sonalan are older dinitroaniline herbicides that **work through the soil to inhibit weed seed germination, and have excellent pigweed activity.** Products like Dual (metolachlor), Intrro (alachlor), and Outlook (dimethenamid) all have good pigweed and annual grass activity as soil-applied materials and **operate by inhibiting shoot growth of young weed seedlings.** LoroX (linuron) and Sencor (metribuzin) have been available for over 25 years but still have good soil-residual activity on a variety of weeds including glyphosate and ALS resistant pigweed when applied behind the planter and activated by rainfall or overhead irrigation. These products **kill weeds by interfering with the process of photosynthesis.** Valor (flumioxazin) is a newer soil-applied herbicide from Valent and provides good control of several annual broadleaf weeds including pigweed and also suppresses annual grasses. Valor **kills weeds by inhibiting the protox enzyme** and therefore is another good herbicide for managing herbicide resistant pigweed. Finally, materials like Cobra, Reflex, and Ultra Blazer provide good postemergence control of several annual broadleaf weeds like morningglory and pigweed, including glyphosate and ALS resistant pigweed species. Palmer pigweed grows rapidly and proper timing of postemergence herbicides is critical. Most postemergence herbicides must be applied before the weed reaches four inches in size in order to obtain control of the species listed on the label.

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