

# TIMELY INFORMATION

## Agriculture & Natural Resources

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### CORN WEED MANAGEMENT: GLYPHOSATE-RESISTANT PIGWEED

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Several herbicides are available for weed management in field corn, and the number of products has increased recently so we now have more tools than ever for weed management. Roundup Ready and Liberty-Link corn are now available that allow the use of glyphosate (Roundup, etc.) or glufosinate (Ignite), respectively on these genetically modified varieties. Ignite has activity on Roundup-resistant palmer amaranth. **Callisto (mesiotrione)** from Syngenta is a relatively new herbicide registered for use in field corn, sweet corn, and yellow popcorn. This herbicide is classified as a “**carotenoid biosynthesis inhibitor**” and **turns affected weeds white**, similar to what Solicam (norflurazon) does in cotton. Callisto has activity on a wide variety of broadleaf weeds including glyphosate-resistant palmer amaranth. Callisto is used at the rate of three fluid ounces per acre postemergence and five to seven fluid ounces per acre preemergence and may be mixed with atrazine (either preemergence or postemergence) or with preemergence grass herbicides like Dual, Harness, Outlook, Intrro, Surpass, etc. (products that all have good pigweed activity). Read the label for precautions against using Callisto with organo-phosphate insecticides. **Impact (topramezone)** from AMVAC is also a relatively new herbicide registered for postemergence weed control in all types of field, sweet and popcorn. It is also classified as a “**carotenoid biosynthesis inhibitor**” and has activity on weeds resistant to glyphosate and the ALS herbicides (like resistant palmer pigweed) and several annual grasses like goosegrass, crabgrass, and broadleaf signalgrass. Impact is used at 0.75 fluid ounce per acre and applied with crop oil concentrate either alone or tank-mixed with atrazine. It can be tank-mixed with a wide variety of registered corn herbicides. Impact may be applied with nitrogen fertilizer at rates up to 2.5 gallons of 28% solution per 100 gallons of spray mix. There are no re-crop restrictions that would cause problems for small grains or cotton, peanut or soybean in the Southeast. **Laudis (tembotrione)** from Bayer Cropscience is also a new herbicide registered for postemergence weed control in all types of corn. It is a “**bleaching**” herbicide similar to Callisto and Impact and will help with resistant weed management. Laudis is used at the rate of 3 fluid ounces per acre with a methylated seed oil adjuvant and can be applied from emergence to the V7 stage. It can be mixed with a variety of other corn herbicides including atrazine or glyphosate (on Roundup Ready varieties). There are no re-crop restrictions that would cause problems for major row crops in the Southeast.

**Define (flufenacet) from Bayer can be applied preemergence or early postemergence to field and sweet corn for control. Define controls weeds by inhibiting shoot growth and is effective on several annual grasses like crabgrass, goosegrass, and signalgrass. It will also control small Florida pusley and spotted spurge. Define is applied at the rate of 12 to 16 ounces preemergence or 13 to 18 ounces postemergence. There are no re-crop restrictions that would cause problems for cotton, soybean, or peanut.**

Because corn is a grass, herbicides like dicamba (Clarity, Distinct, etc.) and 2,4-D can be used after the crop has emerged to control broadleaf weeds. Products like Accent or Beacon can be used to control johnsongrass and selected other annual grasses in non-transgenic and genetically modified corn. Atrazine (Aatrex, etc.) has been around for over 40 years and is still the backbone of preemergence weed control in many corn fields. Atrazine can provide control of glyphosate-resistant pigweed as well as other annual weeds and grasses. Corn is very tolerant of atrazine which allows its use either preemergence or postemergence after the corn has emerged. Atrazine has post activity on small weeds if a crop oil concentrate is added. Simazine (first cousin to atrazine) has preemergence activity but no post activity. Simazine is better on annual grasses and less effective on annual broadleaves than atrazine.

Option (foramsulfuron) from Bayer Cropscience is a relatively new product that provides postemergence control of several annual and perennial grasses and some broadleaf weeds. Option can be sprayed over-the-top of field corn early postemergence (before V6 stage) at the rate of 1.5 ounces per acre with methylated seed oil (MSO) either alone or with several other registered postemergence herbicides. Read the label for precautions against using Option with organophosphate insecticides. **Option has activity on small Texas panicum , goosegrass and field sandbur.**

**Sandea (halosulfuron) from Gowan has good nutsedge activity** and can be applied over-the-top of corn from spike to layby stages. Finally, some older herbicides like Evik, Gramoxone, and Lorox can applied in the middles, on corn a minimum of 18 inches tall, using a hooded sprayer for non-selective control of several broadleaf and grass weeds.

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