

# Weed Control Programs in Arkansas Corn

## 2014 Report

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### **Programs and New Products:**

Funding by this board has allowed for more than 35 weed control projects in corn to be conducted across Arkansas, specifically at Fayetteville, Keiser, Marianna, Newport and Rohwer. Several new and potentially new herbicides for corn were evaluated. Anthem ATZ, Instigate, Zidua, Keystone, Verdict, and Surestart have been evaluated for two seasons and provide other viable options that fit well with current weed control programs. Acuron, a new herbicide has been evaluated as a one-shot POST program for two years and appears to have broad-spectrum activity on a majority of our problem weeds in Arkansas. New (numbered) compounds were also evaluated for crop safety and weed control aspects.

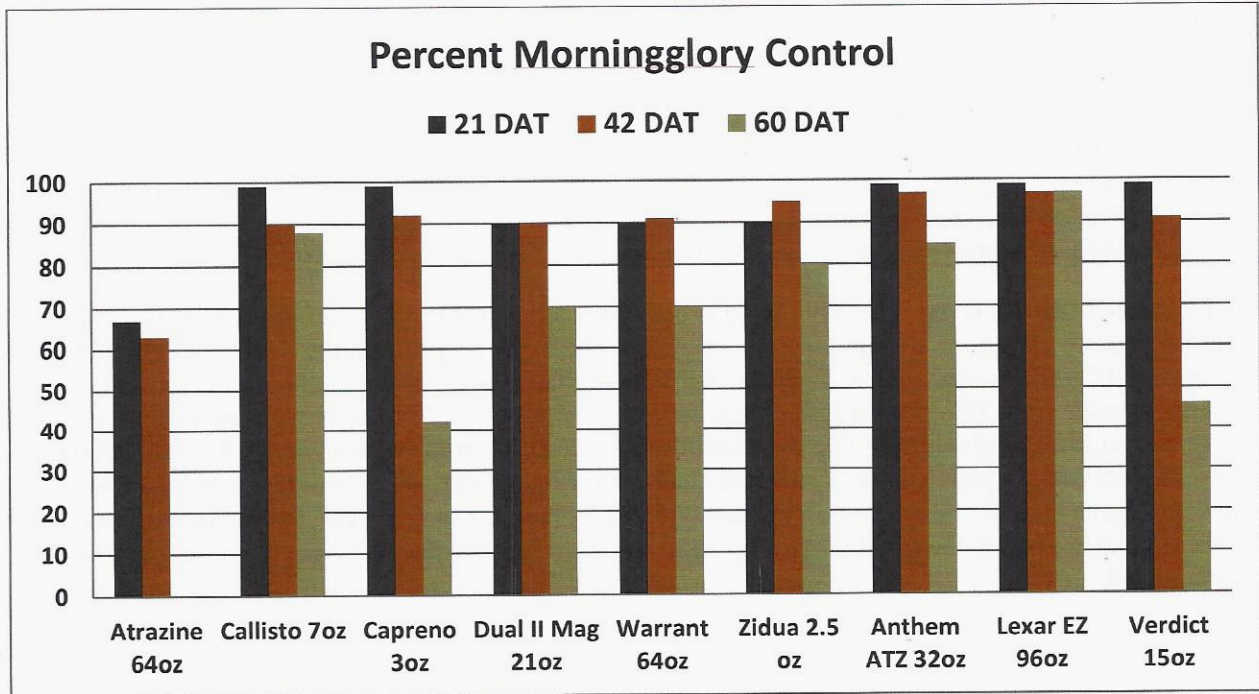
Verdict at 12 oz/A + Roundup applied PRE burndown in corn resulted in control of large marehail and gave excellent residual control early in the growing season. This fits well into a program where POST applications are applied early after corn emergence V1-V2.

The wet spring in 2014 shows why a two-pass approach is often needed in corn. Treatments where no PRE was applied this year had large weeds by the time POST applications could be made. The value of Dual, Zidua, or Verdict applied PRE in our plots was obvious in 2014. Several trials evaluated Zidua rates and combos/length of control, etc. Zidua appears to be similar to other related products like Dual II Magnum. Improved residual control of Palmer amaranth and large-seeded grasses was observed with Zidua at rates of 2.5 oz/A or higher compared to that of 1.3 pts of Dual II Magnum. Extended morningglory control is best with combinations of Callisto, or other mesotrione containing products, and Atrazine.

Figures 1-3 show the length of residual control provided by herbicides commonly used in corn. Results from 2014 indicate that products such as Dual II Magnum, Zidua, Anthem ATZ and Lexar provide excellent control of pigweed early (Figure 1). Generally products containing multiple modes of action such as Anthem ATZ or Lexar may provide the best control up to 60 days after application. Grass control was also increased if Dual II Magnum, Zidua or Anthem ATZ was applied (Figure 2). Atrazine continues to provide some grass control from a postemergence standpoint but does not provide much in regards to residual control of grass species. Warrant herbicide does not control grasses as well as Dual II Magnum and Zidua, especially when applied in cooler temperatures. Atrazine does however have good activity on morningglory species (Figure 3). However, length of residual for morningglory is not as good with atrazine as products containing mesotrione (Callisto). Callisto, Capreno, and Verdict all provided good control of morningglory species early. However, by 60 days after treatment, only Callisto or products containing mesotrione such as Lexar provided the best morningglory control (Figure 3).

Acuron is a new product that will be offered by Syngenta in 2015. Acuron is a combination of Dual II Magnum, Callisto, atrazine and bicyclopyrone. Acuron will provide broad spectrum control of most weeds present in corn fields. The Acuron label should allow for PRE and Post applications up to 12 in corn. Acuron will provide equivalent control as Lexar or Halex GT + atrazine (Figure 4). If producers choose to grow conventional corn hybrids, Acuron will offer long residual broad spectrum weed control when applied PRE.

**Figure 3.** Residual morningglory control with common corn herbicides 21, 42 and 60 days after treatment (DAT).



**Figure 4.** Glyphosate-resistant pigweed, morningglory and barnyardgrass control with Acuron PRE and Post applications

