

Hardin County Extension News Release

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Weed-free Soybean Fields Increase in 2022

By Mark Badertscher

Hardin County – Each year before soybean harvest, county Agriculture and Natural Resources Extension Educators conduct a county weed survey. The purpose of this survey is to determine the type and number of weeds that are infesting farm fields. Another reason is to develop an understanding of which weeds are becoming resistant to herbicides used by farmers. Once these determinations are made, weed scientists at The Ohio State University develop weed control programs which are then shared with local county Extension Educators to make recommendations for local farmers. The goal of these recommendations is to help farmers gain control of these weeds so that their yield-limiting impact is reduced, increasing production and profitability for the farmer.

Hardin County's weed survey was conducted September 29-30 by driving a standard route around the county. Stops were made every mile at each crossroad, checking the soybean fields from the road. Data on the type of weeds found and the degree of infestations were documented. This information was then summarized on a spreadsheet that was sent to the University. Details from this survey will be used as part of the pesticide recertification training January through March around the West Central Ohio Region.

A total of 105 fields were surveyed in Hardin County this fall. Waterhemp was found to be a problem in 23% of these fields, giant ragweed (21%), marestail (12%), giant foxtail/grasses (10%), volunteer corn (5%), and redroot pigweed (4%). The highest degree of infestation in individual fields were giant foxtail/grasses, redroot pigweed, waterhemp, and giant ragweed. Fifty percent (50%) of the 105 soybean fields surveyed were found to be weed-free which was an improvement over 2021. This year's increase of weed-free fields and lower degree of infestations as compared to last year can be attributed to better use of advanced weed control

programs and cooperative weather for timing of herbicide applications. Fields were evaluated as weed-free, occasional (occasional individual weeds), large patches (patch of 8 or more weeds scattered in field), or widespread (numerous patches or individual weeds across the field) for each weed species in the field.

Local farmers have made progress identifying and managing waterhemp in county soybean fields. In 2022 this weed was in 23% of soybean fields checked, and it was also in 23% of the soybean fields checked in 2021. Waterhemp infested 35% of soybean fields checked in 2020. It was in 19% of the county soybean fields checked in 2019, 12% of the county soybean fields checked in 2018, while only being found in 4% of the soybean fields checked in 2017. This weed is a concern because it produces a minimum of hundreds of thousands of seeds per plant, germinates throughout most of the season, and requires greater herbicide costs to properly manage. If farmers find waterhemp in a field, they really should be treating it like Palmer amaranth and do not allow seed to spread. Ideally, these plants need to be prevented from producing seed with a comprehensive weed control program or remove escaped waterhemp plants before they produce seed.

Waterhemp plants now contain viable seed that can easily be spread across a field. Combines will spread this weed seed within a field or from field to field, so it is best to avoid patches during harvest or wait to harvest these fields last, thoroughly cleaning out the combine. Because the seeds are so small, it is difficult to remove all of them. Fields that have waterhemp infestations will require a strict pre-emergence and post-emergence program with additional residual herbicides during each application. Farmers will then need to rotate herbicide chemistries and modes of action yearly because of the extreme ability of this weed to become resistant to herbicides. If no action is taken in these infested areas, this weed will quickly take over a field, further increasing herbicide costs and limiting yield with the likelihood of spreading this weed to new fields.

Photo caption: Waterhemp has been found in 23% of Hardin County soybean fields checked for the past two years after reaching a high of 35% following three years of increases since 2017.