

CHANGES IN THE OCCURRENCE OF COMMON MILKWEED IN IOWA CROP FIELDS IN THE PAST DECADE. Bob Hartzler, Professor, Iowa State University, Ames, IA 50011.

Members of the Asclepiadaceae family are the sole food source for the larval stage of monarch butterflies. The introduction of transgenic crops in the late 1990's created increased interest in common milkweed since it is the most prevalent milkweed species in the Cornbelt. Initial concerns were due to speculation that the adoption of herbicide resistant crops would dramatically reduce milkweed populations, potentially affecting monarch populations. Then, the publication of data suggesting that pollen from Bt corn might be harmful to monarch caterpillars feeding on milkweed near Bt corn fields created a large controversy regarding non-target impacts of transgenic crops.

An initial survey was conducted in 1999 to determine the prevalence of common milkweed in habitats across Iowa. In 2009, the survey was repeated, but with a focus on the occurrence of common milkweed in agronomic fields and adjacent roadsides. A slight increase in the percentage of roadsides infested with common milkweed was observed between 1999 and 2009, with 71% infested in the initial survey and 82% in 2009. Densities of common milkweed in infested roadsides were similar in the two surveys. In 1999, 52% of the corn and soybean fields surveyed had common milkweed present, whereas in 2009 common milkweed was found in only 7% of the crop fields. In addition, the number of common milkweed patches found in infested fields was reduced by more than 50%.

Although many factors may have contributed to the decreased occurrence of common milkweed in agronomic fields, it is likely that the widespread adoption of glyphosate resistant corn and soybean varieties and subsequent reliance on glyphosate is a major contributing factor. The potential impact this decline in common milkweed on monarch populations is unknown at this time.