Marco A. Pena Associate in Extension – Weeds/Agronomy Arizona Cooperative Extension University of Arizona

22 September 2022

Prefar (bensulide)

Prefar 4-E (bensulide) is one of the old standard selective preemergent herbicides that have been used on lettuce for more than 50 years. It was developed by Stauffer and first registered for lettuce in 1968, acquired by Zeneca (ICI) in 1992 and its now a Gowan product since 1996. It is one of the few organophosphates (OP) that are used as an herbicide.

Bensulide controls weeds by interfering with the normal germination and seedling development. It inhibits cell division at the growing points of the roots and does not translocate or move upward into the rest of the plant.

It is an emulsifiable concentrate that is applied at 4 to 6 qt. per acre and its only effective if the roots contact the herbicide soon after they have started to grow. It performs well on annual grasses, Purslane, Pigweed, and has activity on nettleleaf goosefoot and common lambsquarters.

Label recommendation is to spray to a well-prepared soil a uniform spray pattern in a 10-50 gallons per acre.

It is recommended to apply the higher labeled rates to heavier fine textured soils. Prefar works much better when incorporated with sprinklers and requires high volumes of water. It also works best in coarse textured soils.

It must be incorporated into the top inch or two of soil only where the roots would be exposed to the herbicide right after they have begun to grow.

It was reported in this Newsletter that a 2017 USDA survey showed that Prefar is used in 11% of the lettuce in AZ and CA. For the same period in Yuma CO approximately 58% of the lettuce was treated with bensulide.

The Vegetable IPM Team at the Yuma Agricultural Center will be conducting trials this produce season on the application timings and methods for this important herbicide. Stay tuned, we will share results of these evaluations with you.