



■ e ISSN-0976-6847

RESEARCH ARTICLE :

Effect of pre and early post emergence herbicides in soybean and its residual effect on sunflower and pearl millet in western zone of Tamil Nadu

■ **R. THIRUMALAIKUMAR, R. KALPANA, N.S. VENKATARAMAN, K. BALAKRISHNAN AND R. UMA SANKARESWARI**

ARTICLE CHRONICLE :

Received :

11.07.2017;

Accepted :

25.08.2017

How to cite this article : Thirumalaikumar, R., Kalpana, R., Venkataraman, N.S., Balakrishnan, K. and Sankareswari, R. Uma (2017). Effect of pre and early post emergence herbicides in soybean and its residual effect on sunflower and pearl millet in western zone of Tamil Nadu. *Agric. Update*, 12 (TECHSEAR-10) : 2819-2822.

KEY WORDS :

Pre and early,
Herbicides, soybean,
Residual Sunflower,
Pearl millet

BACKGROUND AND OBJECTIVES

Herbicide is the furthestmost successful technology forever developed. The period of time that a herbicide remains active or persists in the soil as well as crop is extremely important as it relates to the length of time that weed control can be expected. Due to the critical period of crop weed completion at early stage of soybean, there is need for pre emergence herbicides for prolonged effective weed control (Reddy *et al.*, 1998).

There is a need to identify newer molecules for selective management of weeds and to overcome the problem of acquiring resistance by certain weeds against recommended herbicides. In view of this, an attempt has been made to find the effectiveness of flumioxazine, a contact herbicide to broad spectrum weed control in soybean.

Flumioxazine (N-phenylphthalimide) is a

new molecule which acts on weeds by inhibiting protoporphyrinogen oxidase, an enzyme important in the synthesis of chlorophyll. Keeping these points in view, the experiment was taken with new herbicide molecule of PE Flumioxazine 50% SC in germination and growth of soybean and its residual effect sunflower and pearl millet.

RESOURCES AND METHODS

The experiment was conducted at Agriculture Research Station, TNAU, Bhavanisagar during 2013-14. The experiment was laid out in a randomized block design with three replications and eleven treatments. The soil of the experimental field was red sandy clay loam in texture belonging to *Typic Paleustalfs*.

The nutrient status of soil during start of the experiment was low in available nitrogen (215 kg/ha), medium in available phosphorus

Author for correspondence :

R. THIRUMALAIKUMAR

Department of
Agronomy, Agriculture
Chemistry & Research
Institute, (T.N.A.U.),
MADURAI (T.N.) INDIA
Email : thiruhid
@gmail.com

See end of the article for
authors' affiliations