

Corn Nutrition, Physiological, and Weed Management:

Weed Management

Weeds, if uncontrolled, may reduce yield by 50% or more. Any undesirable plant in a Maize field is a weed. Weeds compete with Maize for water, nutrients, light, space, etc., from the time the crop is planted until harvest. The problem of weeds in Maize is acute for the following three reasons:

- Frequent rains during the rainy season keep the soil moist and encourage several flushes for weeds,
- Hot and humid weather is ideal for the growth of weeds, and
- Wide crop rows provide ample space for weeds to get established.

Weed control is most critical up to 45 days after planting. A Maize crop kept weed free for up to 45 days after planting is almost similar in yield as that kept weed free for the entire crop season.

Weed Commonly Observed in Maize Crop

Grasses

- Madhana (*Eleusine aegyptiacum*)
- Takirghah (*Digitaria sanguinalis*)
- Makra (*Eragrostis tenella*)
- Hariyali (*Cynadon dactylon*)

Broadleaves

- Itsit (*Trianthema monogyna*)
- Tandla (*Digera arvensis*)
- Chulai (*Amaranthus viridis*)
- Congress (*Parthenium histirosporum*)

Sedges

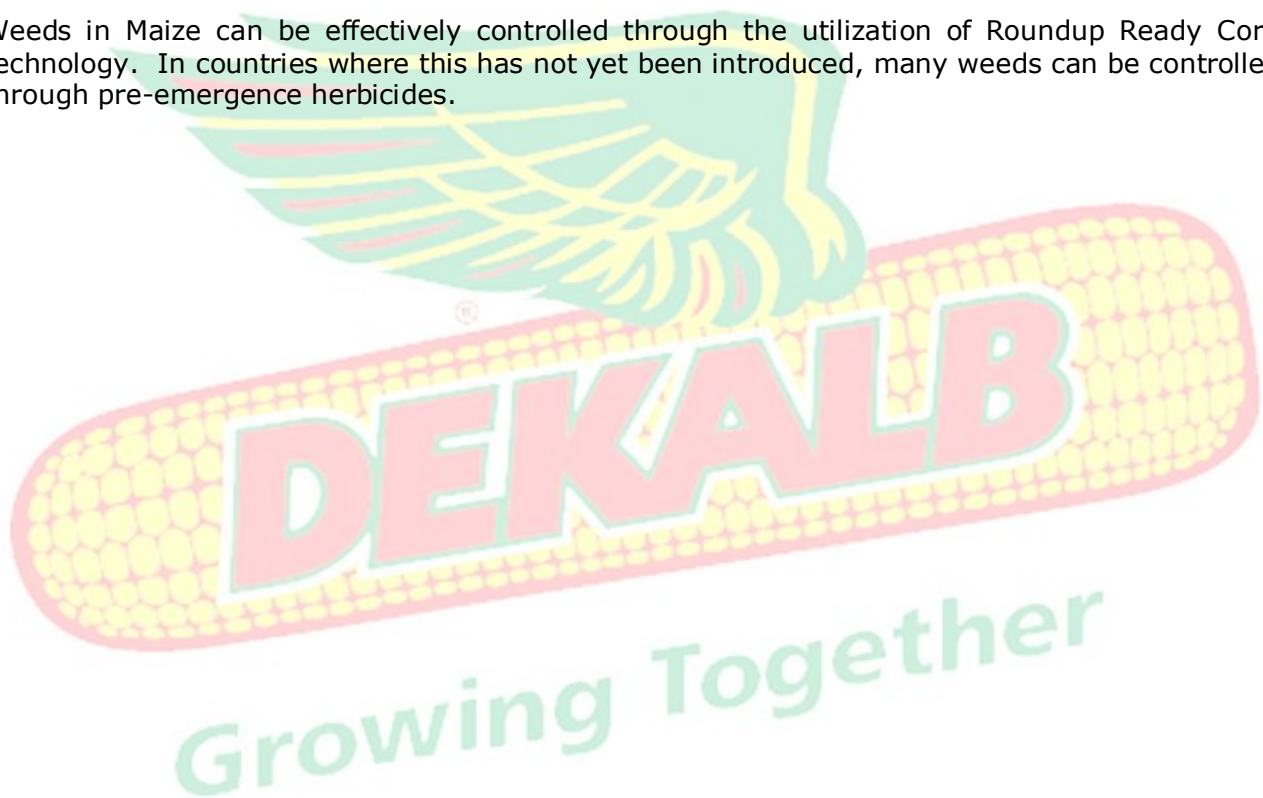
- Motha (*Cyperus rotundus*)
- Mothi (*Cyperus compressus*)

Mechanical Weed Control

The crop should be given two hand hoeings about two and four weeks after sowing. The crops sown in rows can also be hoed by bullocks or with a tractor drawn cultivator. A third hand weeding may be necessary if weed growth is high, following which the crop is earthed up to provide better standability.

Chemical Weed Control

Weeds in Maize can be effectively controlled through the utilization of Roundup Ready Corn technology. In countries where this has not yet been introduced, many weeds can be controlled through pre-emergence herbicides.



Sources and Links

Corn Growth & Development Prior to Pollination; Dr. R.L. Nielsen, Agronomy Department, Purdue University .

Corn Growth & Development Pertaining to Pollination; Dr. R.L. Nielsen, Agronomy Department, Purdue University .

Corn Growth & Development Pertaining to Grain Fill, Maturation, and Drydown; Dr. R.L. Nielsen, Agronomy Department, Purdue University .

How a Corn Plant Develops; Special Report No. 48, Iowa State University of Science and Technology Cooperative Extension Service Ames , Iowa .

Corn and Corn Improvement; Sprague, G.F. and J.W. Dudley. 1988 (3rd ed.), Agronomy Monograph #18. American Society of Agronomy, Madison WI.

Response of Corn to Uneven Emergence; Nafziger, E.D., P.R. Carter, and E.E. Graham. 1991. Crop Sci. 31:811-815.

Kansas State University, available online:

http://www.oznet.ksu.edu/kansascrops/corn_class.htm

CIMMYT Maize Program, Maize Diseases: A guide for field identification, 4th Edition. CIMMYT.

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