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Weed management in Kharif crops

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Introduction

The incidence of weeds is very high in the Kharif season. Weeds, insects, and plant diseases especially cause great harm to crop production of the total annual loss of agricultural products, 45% is caused by weeds, 30% by pests, 20% by plant diseases, and 5% by other factors. When crops or species of economic importance are grown, many weeds or unwanted plants grow along with them, which cause huge damage to crop production and product quality. We call these undesirable plants weeds. Important crops in Kharif are paddy, maize, sesame, pigeon pea, urad, moong, and soybean, etc. Among all these crops, paddy is the main crop that is grown throughout the country, and its consumption is leading worldwide. For weed control, it is very important to know about weeds. In rain-fed fertile lands, one-year or multi-year weeds are often found in abundance. On the lower ground, grasses of the Motha class and broad-leaved weeds are often found.

Weeds found in Kharif crops are divided into three forms

1. **Narrow leaf weeds:** Weeds of this class are also called grassy weeds. The leaves of the weeds in this family are thin and long, and inside these leaves, similar stripes are found. These are also monocotyledonous plants like Sanwa, Kodo, Dubghas, etc.
2. **Broad-leaved Weeds:** Weeds of this class are generally dicotyledonous plants. Their leaves are usually broad, like Makoy, Kanakaua, wild jute, thousand grains, carrot grass, badi dudhi, thorny amaranth, etc.
3. **Motha class weeds:** The leaves of this class of weeds are long, and the stem is solid with three edges. Rhizomes are found in roots like Motha.

How to control weeds:

Farmers can control weeds in their crops by using various methods like traction, mechanics, chemicals, etc. But controlling weeds through traditional methods takes more time and cost; therefore, weed control can be done quickly and effectively through chemical methods, and this method is also economically beneficial.

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Appropriate timing of weed control: The damage caused by weeds in crops depends on the number of weeds, the variety, and the time of competition from the crop. In annual crops, if weeds are removed within 15-20 days of sowing, there is no significant impact on the yield, but if weeds are destroyed after 30-45 days of sowing, the yield decreases. Therefore, keeping crops free from weeds at the critical stage is more beneficial from an economic point of view, and this does not affect crop production much.

Loss from weeds – Weeds cause a huge reduction in yield by competing with crops for light, soil, water, nutrients, and air caused by various crops. The loss has been estimated at 80%. Along with the reduction in yield, weeds also provide shelter to the bacteria and insects causing crop diseases.

Weed control by chemical method- Detailed information about herbicides and chemicals used in some crops during the Kharif season is given.

1. **Paddy-**
   - Protilacure 750 g/hectare is used 0–3 days after sowing or after transplantation to control narrow leaf weeds.
   - Bensulfuran + Protilacure 660 g/hectare Sakri 0–3 days after transplantation for the control of leaf, broad leaf, and moth-type weeds.
   - Butachlor 1200–1500 g/hectare 0–3 days after sowing or 3–4 days after transplanting for control of broad leaf weeds after a few days**.**
2. **Maize-**
   - Atrazine 1000 g/hectare 0–3 days after sowing to control broad and narrow leaf weeds.
   - Topramezone 25–35 g/hectare for 15–20 days after sowing for control of broad leaf weeds.
   - Halosulfuran 60–80 g/hectare 20–25 days after sowing to control moth-related weeds.
3. **Pigeon pea, Urad and Moong –**
   - Pendimethalin: 1000 g/hectare 0–3 days after sowing on narrow leaves and for control of broad leaf weeds.
   - Quizalocop-Ethyl: 50 g/hectare 15-20 days after sowing for narrow leaf weeds.

For prevention Soybean-:

Metribuzin 350 g/hectare 0–3 days after sowing for broad and narrow leaves

For prevention of weeds.

Imazethapyr 100 g/hectare 20–25 days after sowing for broad and some narrow leaves.

For controlling weeds:

Cotton crops

- Alachlor 2000 g/hectare 0–3 days after sowing for broad and narrow leaves for the prevention of weeds.
- Butachlor 1000 g/hectare 0–3 days after sowing for broad and some narrow leaves for controlling weeds.
- Diuron 750 g/hectare 0–5 days after sowing for the management of broad leaf weeds.

Precautions in using herbicide chemicals-

- According to the crops, the right amount of water should be used to prepare the solution of the above herbicide chemicals (500–600 L/ha).
- Use a flat fan nozzle with a knapsack sprayer for spraying.
- Do not spray herbicide when there is a possibility of rain.
- Use chemicals in mixed crops according to the crops.
- Spray herbicide chemicals at the appropriate time.
- While spraying herbicide chemicals, your face should not be in the opposite direction of the wind.
- While spraying, gloves should be worn on hands, a mask on the face, glasses on the eyes, and long shoes on the feet so that the effects of herbicide chemicals can be avoided.
- While using weedicide in any field, there should be moisture in the field.