**Methods in Weed Control**

**Myth #1: All fields need to be weed-free.**

**Reality-** Soil microbes need roots as a food source. Microbes do not discriminate between weed roots and non-weed roots. Weeds need to be controlled to not make an impact on economics. The fields do not necessarily need to be weed free!

**Myth #2: Chemical application is the best way to control weeds.**

**Reality:** Proper weed control is best accomplished with IPM- integrated Pest Management, which uses many methods of control.

**I. Cultural:**

*A. Eliminate Seed Sources:*

1. Till and crop
2. Seed highly competitive plants
3. Sometimes mowing can be effective in reducing seed production, timely and close to the ground. More than one mowing may be necessary to prevent tillers from producing seed. Mowing is useful for small infestations in pastures, roadsides, and waste areas where cultivation or herbicides are not feasible. Mowing also may reduce competition so that desirable perennial grass may reestablish.
4. On cultivated fields, destroy weeds before they produce seed.
5. Plant clean seed.
6. Use herbicides that do not kill established competitors.

B. Crop Rotation: Different weeds require different nutrients. Different crops use various nutrients from the soil. Rotating crops varies the nutrient levels in soil, preventing various generations of weeds.

**II. Mechanical:**

*Hand Pulling:* This is effective for small infestations, if it’s done prior to seed set.

*Mowing:* Mowing can be used at the bloom stage for control, but short plants are often missed with the mower. This allows them to produce seed.

*Burning:* If used in the spring when plants are at the dough stage, burning can be effective for removing both living plants and the litter that may contain seed. Burning in the spring also means the fire hazard is lower. Disadvantages include a loss in diversity, increased germination, erosion, or invasion of other weed species.

*Grazing*: This can be used on a repeated basis if it’s done early in the season. Grazing is most effective when its use is combined with another treatment option.

*Weed Barrier*- Organic or inorganic mulch is an effective barrier preventing seed germination, while allowing irrigation under or rain to penetrate for crop growth.

**III. Biological: Using other organisms to control weeds:** Plant allelopathy, bacteria, fungi, and other microbes..

**IV. Chemical:**Herbicides are chemicals used to control unwanted plants. in cropping and non-cropping systems.