**Weed Management**

**Pre-Assessment Questions**

* What is a weed?
* How are weeds dispersed?
* What are some benefits of weeds in a cropping system?
* What are some of the characteristics of weeds that allow them to compete so well in cropping systems?
* Why control weeds?

**Definition - What is a weed?**

A weed is any plant, native or non-native, which interferes with crop production by doing more harm than good and has a habit of encroaching where it is not wanted.

**Weed Problems**

* Crop competition and its effect on crop yield and quality
* Nutrient competition
* Light competition
* Water competition
* Interference with harvesting operations
* Example: Weed roots such as bindweed wrap around sub-soil blades used for undercutting root crops during harvest

**Weed Benefits**

* Enhance soil structure
* Improve soil tilth
* Cycle nutrients
* Provide habitat for beneficial insects
* Improve soil water infiltration

**Weed Prevention Strategies**

* Improve soil tilth, aeration, water infiltration, and fertility to optimize crop growth and minimize weed pressure
* Thoroughly clean equipment before moving it from one farm or location to another
* Do not allow weeds to form seed heads and/or perennial rooting structures in the cropping system
* Thoroughly compost all imported animal manures to insure destruction of viable weed seed
* Filter surface irrigation water to avoid importing weed seeds
* Work with neighbors to eliminate or minimize the potential for spread of noxious and problematic weeds from adjacent lands

**Identification**

* Tour fields and identify most common weeds (star thistle, pigweed, purslane, chicory, wild lettuce, grasses, etc.)
* Pull or dig selected weeds and examine root system

**Management through Manual Cultivation**

* Demonstrate and practice proper techniques with various tools - wheel hoe, stirrup hoe, collinear hoe, and Mexican hoe. Discuss need for follow-up cultivation.
  + Benefits - eliminates weeds, stirs soil and breaks crust (allows for easier penetration of air and water)

**Weed Management - Field Exercise**

**Identification**

* Tour fields and identify most common weeds (star thistle, pigweed, purslane, chicory, wild lettuce, grasses, etc.)
* Discuss why weeds are threatening to production - competition for water, nutrients in soil, light, etc.
* Pull or dig selected weeds and examine root system

**Management through Manual Cultivation**

* Demonstrate and practice proper techniques with various tools - wheel hoe, stirrup hoe, collinear hoe, and Mexican hoe. Discuss need for follow-up cultivation.
* Benefits - eliminates weeds, stirs soil and breaks crust (allows for easier penetration of air and water)

Note: The above curriculum was obtained from Western Sustainable Agriculture Research & Education (SARE) Farm

Internship Curriculum and Handbook. For more curricula samples visit <https://attra.ncat.org/intern_handbook/>