Introduction
In pastures, woody and herbaceous weeds can become troublesome. A weed is defined as a plant out of place and in pastures they may be toxic or unpalatable, compete for light, moisture, and nutrients, and take up space needed for desirable species. However, some weeds at certain growth stages can be nutritious.

Basic Principle and Life Cycles
Successful weed management begins with correct identification. Weeds can be classified as annual (completing their life cycle within one year), biennial (lives for two years), or perennial (lives for more than two years). There are winter annuals and summer annuals. Annuals and biennials reproduce only from seed, and perennials reproduce from seed and vegetative reproductive parts (rhizomes, stolons, etc.). Plants of all life cycles are easiest to control when they are seedlings. Annuals and biennials are much easier to control than are perennials.

Control Practices
Serious weed control problems should be taken care of before implementing or changing a grazing program. Pasture weed control includes cultural, mechanical, chemical, and biological management practices.

Cultural management consists of maintaining a dense, uniform, and vigorously growing sword. Good grazing management (leaving the appropriate stubble height and providing pasture rest periods) and maintaining optimal soil fertility are important weed control strategies. Continuous grazing at high stocking rates will weaken the stand and cause weed problems to increase rapidly.

Mechanical management includes mowing or clipping and hand digging. If this practice is repeated during the growing season, annual and biennial weeds can be reduced since the food reserves in the roots are depleted and seed production is reduced. Some graziers clip pastures after every grazing period to allow uniform regrowth and to weaken weed species. Mowing is less successful in controlling perennial weeds.

Chemical management starts with reading and following label directions. Weeds vary in their susceptibility to herbicides and the timing of application may affect the degree of control.

Annuals and biennials are most easily controlled when small. A fall or early spring herbicide application works best if biennials or winter annuals are the main problem. Apply translocated herbicides to control established perennials when these weeds are in the bud-to-bloom stage.
Herbicides can be broadcast or spot applied. Be sure to follow the grazing restrictions and reentry periods. Be aware of the rain-fast period for foliar applied herbicides. Remember that many pasture herbicides will damage legumes as well as control broadleaf weeds.

Details on herbicide options for pasture weed control are found in the current Illinois Agricultural Pest Management Handbook, available at University of Illinois Extension offices.

Biological management is the use of living organisms to control pests (weeds in this case). One example is the use of the musk thistle weevil to control the musk thistle. The weevil will not eradicate musk thistle but can certainly reduce their numbers. This strategy has been used especially in hilly, rough terrain where mowing is not feasible.

**Summary**

Weeds can reduce the vigor, yield and quality of pastures. The first step in weed management is proper identification. No one single management practice (cultural, mechanical, chemical, and biological) will result in weed free pastures. The grazier must adopt an integrated approach utilizing each of the above mentioned management practices.