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## **Keeping Senecio, Horsenettle and Other Weeds Out of My Hay Crop**

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Introduced grass pastures are usually managed as a monoculture system but can also contain a mixture of forage legumes. Conversely, native grass pastures (example, tallgrass prairie) contain a diversity of plants. For many of the introduced grass forage species, fertilizer must be applied to keep the introduced grass productive and competitive with the weeds. This is especially true for bermudagrass. Adjusting the stocking rate of livestock on improved pastures according to growth of the grass is also very critical. Having more than 20% weeds is usually a sign of a management problem. The most profitable management of weeds is to tolerate some weeds (up to 20% biomass) and have a good fertility program coupled with grazing management. However, if haying for sale, reduce weeds to less than 5% of the forage. It is important to have an integrated management plan that focuses on growing grass, with weed reduction being a part of the management.

Pasture weeds compete directly with desirable forages for soil moisture, nutrients, light and space. Pasture weeds often reduce desirable forage production by as much as 50%. A general "rule of thumb" is that there is a one pound of forage loss for every pound of weeds produced on introduced pasture grasses. Weeds can also lower the quality of the forage produced. Weeds such as thistles, bullnettle and sandbur can also cause injury to livestock grazing them. Moreover, some weeds are toxic to livestock when eaten and this causes weight loss and even animal death. In such cases, it is best to control these type plants.

### **Reasons for Weeds in Pasture**

#### ***Overgrazing***

Grazing is a major influence on plant communities. Stocking rate is the most important consideration. Animals graze selectively to balance their diets. If they re-bite their favorite plant too many times and too severely, it's ability to compete with a neighboring plant that is not palatable is reduced. Over time, if this condition is not remedied, the less desired plant will dominate. Continuous heavy grazing increases the plants grazing animals do not like. High stocking rates magnify the effect. Planned grazing systems provide for a healthy plant community.

### ***Poor Population of Adapted Forage Species***

If populations of desired plants are scattered or spotty, special management efforts may be needed. Herbicides, mowing, high-density rotational grazing, light ground disturbance, and fertility applied in an integrated approach can thicken or extend the life of stands.

### ***Inadequate Fertility***

Introduced grass forages grown in monoculture require the addition of fertilizer to keep them productive. Bermudagrass for example, requires that nitrogen (N) be applied annually to be effective. A well-fertilized grass can out compete grassbur, ragweed and many other undesirable plants. Soil tests can reveal deficiencies and provide a basis for applications.

### ***Drought***

Weather cannot be changed by the manager. However, the manager can control the ground cover that would influence the soaking up of rainfall. Droughts can weaken plants and trigger short-term cycles of annual plants. For example, a summer drought followed by a wet fall, mild winter, and cool spring would result in higher than normal populations of common broomweed. Also, abusive grazing can prolong the effects of the drought by weakening the root system of the preferred plants. During the drought and post-drought, grazing management will be essential for quick recovery. Plants capable of vegetative spread like smooth brome grass will respond more quickly than bunchgrasses.

### ***Special Weed Problems***

Invasion of introduced weeds (e.g., thistles) and persistent perennial (horsenettle, curled dock etc.) can be a problem even with good management. It usually takes special efforts to control these problem species. This may include spot spraying, altering spray dates, or using herbicide mixtures.

### ***Golden Ragwort (*Senecio* spp.)***

Golden ragwort ([Figure 1](#)) is a noxious, perennial weed of major economic significance that invades disturbed, high rainfall areas where it has been accidentally introduced from its native regions of Europe and Western Asia. Its bright yellow flowers in summer distinguish this weed, making infestations conspicuous. It is usually found on heavy soils of moderate fertility and is commonly found in poorly managed degraded pastures or in areas that had been cleared in the past but never properly developed for pasture. The seeds, flowers, and foliage of the plant are poisonous to cattle and horses when ingested. Young plants are generally more toxic than mature ones. Symptoms of poisoning include stomach upset, skin problems, bleeding, diarrhea, weakness, and even sudden death.

### ***Horsenettle***

Horsenettle ([Figure 2](#)) is a perennial weed, 1 to 4 feet in height and reproduces by underground rhizomes and seeds. Its leaves are broad with toothed edges.

The stems and leaves of this plant are covered with spines. Its flowers are white to bluish, 1 in. across, with 5 petals. Its fruits are dull green to yellow in color, round (approximately 3/8-5/8 in. in diameter), clustered, and smooth. It is typically found in fields, pastures, waste areas, and croplands, where it favors sandy soils. The plant foliage and the green berries are poisonous to livestock. This plant has been known to poison calves, goats, sheep, swine, poultry, but rarely horses and cows. Symptoms include stomach upset, unthriftiness, lack of coordination, weakness, convulsions, and even death. Signs include bloating, trembling back legs, yellow discoloration of unpigmented skin, or rapid heart rate.

### **Golden ragwort and horsenettle control**

Cattle generally avoid feeding on ragwort or horsenettle, however, in fine precision chopped silage or baled hay (ragwort maintains its toxic qualities in both) the animal has little choice. Spray in late autumn or early spring when the plant is at the rosette stage (no stem). MCPA, 2,4-D, and dicamba type products give good control. Spraying established plants during the summer is an option. However, animals must be kept off the pasture until the ragwort is well dead. (Ragwort is most poisonous in the green stage). MCPA, 2,4-D, and dicamba products will also give season long suppression of thistles and many other broadleaf weeds. To avoid dispersal of seed, spray in June before flowering. Individual products may have various grazing or harvesting restrictions depending on the animal, so always read and follow label directions.



Figure 1. Golden ragwort



Figure 2. Horsenettle

**This document was compiled from the following resources:**

**McCain, J.W., R.J. Goetz, and T.N. Jordan. 1999. Indiana Plants Poisonous to Livestock and Pets: WS-9. Purdue Coop. Ext. Serv. Pp. 51-52.**

<http://www.agr.okstate.edu/forage/index.htm>

<http://pestplants.okstate.edu/>

[http://www.clarechampion.ie/00/aug/cc20000811/fa\\_grass.htm](http://www.clarechampion.ie/00/aug/cc20000811/fa_grass.htm)