

Weed Management in Established Forages

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I. Good crop management = 75-90 % of forage weed control program

- A. Few herbicides used in established forages: cost often exceeds benefit
- B. Follow the basics of sound forage production to "prevent" weeds
 - 1. "EGG WAS FIRST": Weedy alfalfa due to thinning stand; not the reverse
 - 2. Crop rotation key component of forage/weed management

II. Impact of Weeds on Forages: Returns on the Investment

A. Yield:

- 1. do not expect total tonnage to increase
- 2. do expect a higher percentage of legumes in the harvested forage

B. Quality: here is where the payoff (returns) must be

- 1. depends on the species present (see Table 4-1 on page 116 of Pest Management bulletin)
- 2. varies with the stage of weed growth: older weeds have less feed value
- 3. depends on weed density
- 4. some weeds have low palatability, weed digestibility declines more rapidly than legumes:
 - a. yellow rocket: reduced protein content by 1-2% and is relatively low in digestibility
 - b. quackgrass: reduced protein content by 3-6% with lower digestibility
 - c. dandelion: protein reduced only in first cutting; no impact on digestibility
 - d. white cockle: rarely a weed of economic importance in forages

C. Water content/drying time

- 1. weeds wetter than alfalfa at cutting time are dandelion, curly dock and white cockle
- 2. weeds like dandelion can slow the forage drying rate

3. can add an extra day to make dry hay
4. weed moisture content not as concern when making silage

D. Nitrogen credits. Without quackgrass (or other grasses) more nitroge credits could be given to the following corn crop

E. Forage stand longevity: weeds alone are not likely to reduce stand longevity

F. Weeds and the two stress theory: forage legumes will stand one abuse; two or more invite yield and stand loss
Ex: weeds + leaf hoppers or weeds + low K levels = stand loss and low yields

BOTTOM LINE:

- It is difficult to put \$ value on the impact of weeds in forages
- Quality will continue to be the criterion by which we judge success in forage production

III. Possible Herbicide Alternatives in Established Forages

A. For quackgrass and annual grasses: Poast Plus or Select (fatty acid synthesis inhibitor)

1. Treat quackgrass 6 to 8" tall; will reinfest later in season
2. Also excellent to control annual grasses (yellow foxtail; barnyardgrass) in midsummer
3. Cost is reasonable and treatment is often justified

B. Broad spectrum, spring dormant treatments: all are photosynthesis inhibitor

1. Sencor: Only in stands at least 2-yr old
Spring "pre-greenup" treatment unless applied with dry fertilizer as carrier
Good to excellent for several of our common perennial broadleaves; suppresses quack
2. Velpar: Can treat with up to 2" new growth and maybe year after seeding
Good to excellent for several of our common perennial broadleaves; suppresses quack

C. Herbicide use strategy in established forages

1. Threshold to justify herbicide use in forages is 4 to 5 alfalfa

- plants/sq. foot or > 55 alfalfa stems/sq. foot
2. Monitor forage stands and weed situation in spring and fall
 3. When stands thin and weeds appear, crop rotation best choice in most cases
 4. Do on-farm evaluations, including forage quality comparisons
 5. Should never need broadleaf weeds more than once in the rotation

IV. Idealized Weed Management Program in Forages

Year	Practice
1	Establish the crop
2-4	Monitor crop and weed populations
3 or 4	Treat if necessary/justified
4 or 5	Harvest forage for one season after treatment OR rotate to corn without treating in years 3 or 4

V. Overall Summary of Forages and Weeds

- vigorous alfalfa is your best defense against weeds
- solo seeding requires careful weed monitoring
- perennial weeds in established forages can be controlled chemically: assess the cost/returns carefully
- improved forage quality is the end product of good crop/weed management practices in forages