

Rutgers Cooperative Extension

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ALFALFA IPM FIELD GUIDE

Pre-Planting Decisions

1. Choose insect and disease resistant varieties. (91)*
2. Select fields with well drained, fertile soil. (394)
3. Rotate away from forage legumes for at least 2 years. (394)
4. Lime and fertilize according to soil analysis. (1584)
5. To minimize the risk of Sclerotinia crown rot: (327, 394, 399, 825)
 - avoid planting late in the fall; consider spring planting
 - do not plant close to other legume forage crops.
6. Use seed protectant fungicides at planting, especially when soil conditions are cool and wet. (91)

New Seeding

| Plant Population | Sampling | Frequency | Threshold | Notes |
|--------------------|---|-----------|-----------------------------|---|
| Stand Count | Using a 2 ft. by 2 ft. square wire frame, count the number of crowns in the 4 sq. ft. area. | once | 50 - 100 plants/square foot | Check in mid-summer, if populations seem low. |

Established Field: Up to First Cutting

(From late fall to mid-May, approximately)

First Cutting represents 40% of total harvest.

| Plant Population & Weeds | Sampling | Frequency/Timing | Threshold | Notes |
|--|---|---|--|-------|
| Stand Count | Using a 2 ft. by 2 ft. square wire frame, count the number of crowns in the 4 sq. ft. area. | Make one stand count in late fall or in late February - March | < 4 alfalfa crowns per square ft. = take field out of production. 4 - 5 alfalfa crowns/ square ft. = consider seeding a grass into stand. | |
| Zero Tolerance Weeds (ZTW) Milkweed, Hemp Dogbane, Horsenettle, Canada Thistle, Mugwort, Jerusalem Artichoke, Nutsedge, Brambles, Nightshade, Curly Dock, & Quackgrass (1582) | Sample five 1 square yard areas in the field. Map location of ZTW. | Initial weed scouting: Feb to early March; again two to three weeks prior to first cutting; | Depends on use for hay, but general thresholds are: 4 weeds per square yard in March for first cutting, 4 weeds per square yard in subsequent cuttings up to August. (1582) | |

Established Field, Up to first cutting, continued

| Weeds | Sampling | Frequency/Timing | Threshold | Notes |
|---|---|-----------------------|-----------------------------------|---|
| Rough Blue Stem (<i>Poa palustris</i>) (RBS) (1582) | Sample five 1 square yard areas in the field. Count # of RBS. (1582) | sample on first visit | 1/4 RBS/square yard (1582) | RBS is a highly competitive perennial that acts as a winter annual. After first sampling, do visual inspections in conjunction with other scouting. |

Established Field - Up to First Cutting, continued

| Pest | Damaging Stage | Sampling | | Threshold | Notes |
|--|----------------|---|---------------------------------------|---|--|
| | | Method | Frequency | | |
| Alfalfa Weevil (939) | larva | Randomly count 30 stems; 6 stems in 5 locations. Count larvae on stems & record # per stem. | Once when Forsythia is in full bloom. | 0.7 larvae/stem @ 8 - 12 inches 1.5 larvae/stem @ 12 - 14 inches 2.0 larvae/stem @ 14 - 16 inches 2.5 larvae/stem @ 18 inches (884) | Sampling: Young larva feed in the tight bud tips, moving out onto the open leaf, skeletonizing tissue as they grow larger. (938) |
| Blue Alfalfa Aphid (BAA) (200) | all | 20 sweeps in 5 locations using a standard 15 inch sweep net. | weekly from green up in spring | 3 - 12 inch 50 aphids/sweep OR > 10 inches: if > 1/3 of the field appears stunted from BAA (884) | Not a problem north of Trenton, NJ 10 inch stand most vulnerable. |

| Weeds | Sampling | | Threshold | Notes |
|--|---|-----------------------|-------------------------------|---|
| | Method | Frequency | | |
| Rough Blue Stem (<i>Poa palustris</i>) (RBS) (1582) | Sample five 1 square yard areas in the field. Count # of RBS. (1582) | sample on first visit | 1/4 RBS/square yard (1582) | RBS is a highly competitive perennial that acts as a winter annual. After first sampling, do visual inspections in conjunction with other scouting. |

Second & All Subsequent Cuttings

| Pest | Damaging Stage | Sampling | | Threshold | Notes |
|---|----------------|---|--------------------|---|---|
| | | Method | Frequency | | |
| Potato Leaf-hopper (PLF) (203, 415, 1000) | adult nymph | 20 sweeps in 5 locations using standard 15 inch sweep net. Determine height of alfalfa. | weekly to ten days | Determine height of alfalfa. To determine the threshold, multiply the stand height by 10. | Reduce threshold by 25% during droughty weather. |
| Spotted Alfalfa Aphid (SAA) (1000) | all | same as potato leafhopper | weekly to ten days | 50 aphids/sweep | Problem on new seedings in the southern part of NJ, especially during droughty weather. |

| Weeds | Sampling | Frequency/Timing | | Notes | Threshold |
|---|--|--|---|--------|---|
| Zero Tolerance Weeds (ZTW) Milkweed, Hemp Dogbane, Horsenettle, Canada Thistle, Mugwort, Jerusalem Artichoke, Nutsedge, Brambles, Nightshade, Curly Dock, Rough Blue Grass (RBS) & Quackgrass (1582) | Sample five 1 square yard areas in the field. Map location of ZTW. | Subsequent cuttings: evaluate just prior to or immediately after cutting . | 4 weeds per square yard in subsequent cuttings up to August, except Rough Blue Grass: ¼ RBS/square yard | (1582) | RBS is a highly competitive perennial that acts as a winter annual. After first sampling, do visual inspections in conjunction with other scouting. |

***Bolded numbers in parenthesis indicate sources of additional information found in the Mid-Atlantic IPM database by this special reference number.**

Scouting procedures, thresholds, and crop management recommendations have been compiled from a number of sources and may not be valid for all areas within the Mid-Atlantic Region. These field guides are meant to be used as guidelines. As such, they should be validated on a small acreage before relying on them. No guarantee of their validity, success, or failure to perform in the field is implied or expressed. Consult your local Cooperative Extension Agent for additional information or assistance.