



Fact sheet

For a comprehensive list of our publications visit www.rce.rutgers.edu

Pasture Survey Method to Determine the Need for Overseeding or Renovation

Daniel Kluchinski, Mercer County Agricultural Agent

A quick and accurate way to determine if a current pasture should be overseeded, renovated, or maintained is to conduct a pasture count using the string intercept method. This method helps to determine the percentage of good or desirable plants in the pasture versus weeds or bare ground. This method requires some measuring, counting and calculating, but is more accurate than a visual observation. At the same time you can conduct an inventory of the weeds or poisonous plants you may have in the pasture.

What will you Need?

- String, 30 feet in length or longer, knotted or marked with a permanent marker at 6-inch intervals. The final string should have 50 knots or marks OR use a 25-foot tape measure
- Clipboard or note pad
- Pen or pencil

How to Start?

- It is best to conduct this count in early spring. At this time, plants are small and it is easier to identify the plants and see bare ground. But it can be conducted any time during the growing season. If the pasture has significant growth, the first evaluation should be conducted before the pasture has been clipped or mowed and then again soon after. This will allow you to see and identify different grasses, clovers or weeds in the pasture. Then after the field is mowed, recount

to obtain a more accurate figure on the number of plants and amount of bare ground.

- The knotted/marked string or tape measure is placed on the surface of the pasture, and pulled taut so that there is no slack in the string or tape. The area should be selected randomly.



A tape measure can be used to conduct the pasture count. The foot and half-foot interval marks can be used so that with a 25-foot tape, 50 counts are taken.

- Write on a sheet of paper four columns with the following headings:
 - bare soil
 - grass or clovers
 - weeds
 - weed names
- Then walk along the knotted string or tape measure, and observe what falls under each knot or mark. If using the string this would be at each knot or mark at



½ foot intervals, or at each foot or half-foot mark on the measuring tape. Record what you find:

- If there is bare ground, put one X or tick under that heading on your paper, then go to the next knot, mark, or 6-inch interval and record what you find under that mark.
- Continue to take the counts, marking under the correct heading what you find under the knot, mark, or interval on the tape measure.



Use a sheet of paper to record your counts. Total the columns after 100 counts have been taken. These numbers will be the percentage of each type of plant material or bare soil found.

- When finished, do a second count in a different, randomly selected area in the pasture. It is best to pick areas that are representative of the overall pasture so the results are not biased.
- When finished you will have 100 Xs or marks on your paper. Total each number of marks in each column. Because you have 100 total counts, that number under each heading will equal the actual percentage of bare soil, good grass or clover, and weeds in that area of the pasture.
- This information can help you determine if you should overseed or renovate the pasture, control

weeds, or if you have any poisonous weeds to be concerned about.

- If you have less than 50% desirable plant material, consider renovation. This would entail plowing or disking the existing field. Burn down herbicides can be used, or cultivation after plowing to help dry and kill perennial weeds before seedbed preparation and planting.
- If you have 50 to 70% desirable plants, consider overseeding. Mow the pasture close and then no-till drill into the existing pasture, or scrape up the surface with a disk or harrow, then broadcast the seed. If weeds are to be controlled, consult your county agricultural agent for recommendations and timing.
- If you have more than 70% desirable plant material, continue to manage the pasture, following recommended fertility and pH management based on soil testing to encourage growth of the grasses and clovers.
- If you identified any poisonous weeds, these should be controlled using the appropriate herbicide or mechanical methods.

Additional Resources

For information on pasture grasses and legumes, consult RCE Fact Sheet 103 “Horse Pasture Management- Species Selection.”

For information on poisonous weeds, consult RCE Fact Sheet 938 “Poisonous Weeds in Horse Pastures.”

For information on weed control, consult with your local county Extension agent.

For information on grazing restrictions after herbicide application, consult RCE Fact Sheet 446 “Grazing Restrictions for Pasture Herbicides.”

© 2004 by Rutgers Cooperative Research & Extension, NJAES, Rutgers, The State University of New Jersey.

Desktop publishing by Rutgers-Cook College Resource Center

Published: June 2002

**RUTGERS COOPERATIVE RESEARCH & EXTENSION
N.J. AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
NEW BRUNSWICK**

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress on May 8 and June 30, 1914. Rutgers Cooperative Extension works in agriculture, family and community health sciences, and 4-H youth development. Dr. Karyn Malinowski, Director of Extension. Rutgers Cooperative Research & Extension provides information and educational services to all people without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Rutgers Cooperative Research & Extension is an Equal Opportunity Program Provider and Employer.