HORSE PASTURE RENOVATION

PASTURE ASSESSMENT

When planning to renovate a horse pasture, the first thing you should do is walk the pasture and determine what plant species currently exist and make an assessment of the overall condition of the pasture. If the pasture consists primarily of grass and\or legume species, but is being considered for renovation due to low productivity, changes in pasture management may be more effective, and more economical, than a complete renovation. Such things as fertilizer, weed control and grazing management may produce big gains. If, on the other hand, few desirable species are present, and the pasture is infested with weeds, then renovation may be the best solution. If the site was previously in some other crop, then renovation will also be required to establish the desired pasture species.

WEED IDENTIFICATION & CONTROL

Prior to any tillage operations, it is important to determine what weed species are growing on the site, as some species (e.g., quackgrass, Canada thistle) may be more effectively controlled by applying a herbicide before any cultivation is done. Cultivation procedures such as discing or rotavating such plants as Canada thistle or quackgrass may just spread these weeds throughout the field, as they can regrow from a small fragment of root material. For specific information on weed control contact your farm supply outlet or your local office of the Ministry of Agriculture and Food.

SOIL SAMPLING & ANALYSIS

The best time to take a soil sample for analysis of nutrient requirements is prior to a new seeding. This will allow you to incorporate any needed fertilizers into the seedbed, or to band them near the seed at time of seeding. This allows for more efficient use of fertilizers, especially phosphorous and lime which need to be in the root zone as they do not move down readily when applied on the surface. High phosphorous levels are important for encouraging good root growth and to improve seedling vigor.

Micro nutrients such as boron may also be applied and incorporated prior to seeding.

Nitrogen and potassium may be applied after the crop has become established. High levels of nitrogen and potassium prior to seeding are not desirable as it may promote vigorous weed growth and can cause root burning and injury of seedlings.

TILLAGE OPERATIONS

Tillage operations, such as plowing, discing and harrowing are required to turn existing vegetation under the soil surface and to prepare a good seedbed. If the pasture you are renovating has a significant amount of sod and plant material, plowing is the preferred primary tillage operation, as it is more effective than discing or rotovating in burying the old plant material. After the field is plowed, two or three passes with a disc may be required, followed by harrowing to level and pack the soil. The objective is a firm clod-free seedbed. Any fertilizer to be applied should be broadcast prior to the last discing operation.

If the field is to be rotovated instead of plowed, it is important to pack the field either with a roller or by dragging a float. Rotovating produces a very fluffy, loose seedbed which dries out quickly. It is also very difficult to get good seed placement in a loose seedbed, resulting in poor and uneven germination. A firm seedbed is one in which your footprints are less than ` inch (12.5 mm) deep.

SEEDING

Once the seedbed has been prepared, and fertilizer has been applied, you are ready to seed. The preferred

method of seeding pasture varieties is with a packer-seeder, such as Brillion seeder. Seed drills with a grass-seed attachment, set to a shallow depth (approximately ` inch/12.5 mm) are also suitable. If you do not have access to either of these types of seeders, seed can be broadcast with either a hand powered or machine powered broadcaster. Best results from broadcasting are obtained by seeding one half of the seed in one pass, and then broadcasting the remaining seed at right angles to the first pass. After broadcast seeding it is important to lightly cover the seed (i.e. by dragging a chain), followed by rolling to pack the surface, to ensure good seed to soil contact.

NO-TILL SEEDING

If the above process of tillage and seeding appears to require more labour and machinery than you have available there may be another option. This is no-till seeding, which requires a specialized seed drill that can penetrate existing vegetation and place the seed and pack all in one operation. In order to achieve satisfactory results, any existing vegetation needs to be killed with a herbicide two to four weeks prior to seeding.

This option of pasture renovation may be available to you if there are custom operators in your area.

POST-SEEDING MANAGEMENT

After you have gone to the work and expense of renovating your pasture, you will want to manage it carefully after seeding to ensure you obtain a strong, vigorous stand. You will probably require some post-seeding weed control.

Little or no grazing should take place on a new seeding for a least two months after seeding. If you are in a dryland area, with no irrigation, the seeding should not be grazed at all the first year to allow the plants time to become well established. The first grazing should be done only when the ground is dry and firm, to prevent deep hoof prints, and grazing should be moderate, leaving at least a 3 inch (75 mm) stubble.

Overgrazing in the year of seeding is one of the main causes of seeding failure. Patience in the first year will improve your chances of establishing a vigorous, long-lasting pasture.

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