



# Crop Science Report

RESEARCH/EXTENSION

## PASTURES FOR HORSES

by Les Vough <sup>1/</sup>

High quality pasture represents one of the best and least expensive sources of feed for your horse. In addition, a well-kept pasture provides the best place for your horse to exercise and rest, to be admired, and to enjoy fresh air and sunlight.

If you are considering establishing pastures for horses, you must ask yourself these questions: "What do I expect from my pasture? Do I simply want a place for my horse to exercise, or do I also want to provide a major source of energy, protein, minerals, and vitamins?" The principles of establishment are essentially the same for either purpose. The differences are mainly in the kinds of plants sown and the amount of land required per animal for the two purposes.

### For Exercise Only

When acreage is very limited, less than one acre per horse, exercise may be the main use of your pasture. Pasture for this purpose, in addition to exercise itself, has many other benefits including providing access to fresh air and sunlight and freedom from respiratory problems frequently associated with stabled animals. However, this type of pasture cannot be expected to supply more than a minimum amount of feed.

Well fertilized tall fescue should be the main grass for this type of area. It withstands close and continuous grazing better than most other grasses, and when well-established and properly fertilized, it produces a reasonably dense and attractive sod. Tall fescue produces one of the toughest, heavy traffic sods of any of our adapted grasses.

### For Exercise and Feed

Grass is the horse's natural feed. Productive, well-managed pasture can provide most of the forage requirements for horses during the growing season, including protein, vitamins and minerals - and usually at the least cost to you.

On the other hand, poorly managed, worn-out pastures not only supply little or no feed, but are frequently the source of many internal parasites found in horses.

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### Pasture Improvement

If you already have good stands of desirable grass and legume species, lime and fertilizer, together with good management may be sufficient to assure good horse pasture. However, if you do not have adequate stands of desirable grasses and legumes you will probably have to completely renovate or re-establish your permanent pastures.

#### Lime and Fertilizer Alone

Most permanent pastures are not producing up to their potential. In fact, unimproved pastures may yield only 2000 pounds or less of dry matter per acre per year. This may produce enough forage on 2 acres or more to feed one horse during the normal summer grazing months. However, many of the pasture grasses have a pattern of over production in the early spring months with little production in the hot dry summer.

Unlimed (Western Oregon), unfertilized, unclipped, weedy pastures fail to provide a balanced ration when grass is dry and weathered.

But, yields on many worn-out pastures can be doubled - simply by adding lime (in general, lime is only required in Western Oregon) and fertilizer. Liming and topdressing pastures with nitrogen, phosphate, and potash costs much less, and is less work than a complete job of renovation. Furthermore, it is often possible to have these materials custom applied at a relatively small additional cost to you.

How much plant food should you use? That depends on local conditions. "Lime and fertilize by test - not guess" is one good rule to follow. A soil test will determine the pH (acidity) and nutrient level of your soil. The Oregon State University Soil Testing Laboratory will test soil samples for you. Soil testing kits and information on how to take samples are available through your local county agent. Testing your soil won't guarantee top quality pastures, but an analysis of a soil sample properly taken will tell you how much lime and fertilizer you should apply. It will give you the best information available to bring your pasture to a high, balanced fertility condition.

But remember, the response is often slow when you apply lime and fertilizer on the surface of old sods. It may take 1 to 3 years, depending largely on the lime needs and species present in the original sod before your pasture sod is thick and productive again.

#### Pasture Improvement by Renovation

Old, worn-out pastures can also be improved by complete renovation, i.e., destroying the existing species and establishing productive mixtures. This procedure usually results in the highest yield increase per acre, but also may be relatively expensive to perform.

If you plan to renovate an old pasture you should consider the following points:

1. Correct any poorly drained areas either by use of drain tile or by construction of any necessary conservation practices. Pastures on wet soils are difficult to establish and maintain for your sharp-hoofed, fast moving horses.
2. Test the soil for lime and fertilizer requirements. This is the only sure way of knowing how much lime and fertilizer are needed.
3. Apply required lime prior to any tillage operation. Disking or plowing will help to mix the lime evenly throughout the soil. Remember, lime moves slowly through the soil and it takes several months for lime to sweeten sour soil and to assure efficient use of fertilizer elements. Thus, if possible, lime should be applied and worked in several months before the actual seeding.
4. Destroy the old sod by plowing or by disking. The ideal approach would be to plow or disk heavily in the late summer.
5. Complete the job in either early fall or early spring by adding the required fertilizer and seeding to Fawn tall fescue or a good mixture of improved species.
6. Protect the seeded area until the seeded species are well established. It is often assumed that several years are required before a newly seeded pasture is suitable for grazing by horses. However, where good mixtures are band seeded and weeds are controlled chemically, good turf can be developed in a single year.

### Management of Pastures

Whether you improve your pastures by the use of lime and fertilizer alone or by reseeding, sound management is essential to keep the desired species persistent and productive.

#### Rotational Grazing

Avoid over or under grazing. Since horses are notorious spot grazers, they will seriously damage desired species in some areas unless they are moved into new pastures frequently.

Thus, some form of rotational grazing is desirable. The correct acreage per horse changes with the season as well as with other factors. However, a good thumb of rule is to provide at least one acre of good quality pasture per horse. Then set up 5 or 6 paddocks, letting the horses graze first in one area for about one week and then change to another. This system helps to keep the legumes and grasses growing better and increases the carrying capacity per acre. Furthermore, by rotating the grazing pattern you can break the life cycle of some parasites.

#### Clipping Pastures

Clipping your pastures regularly during the growing season is also an important management practice. Clipping at a height of 1 1/2 to 2 inches after

horses are moved to a new paddock helps to control weeds, prevent grasses from heading and in general keeps the vegetation in a more palatable condition.

### Dragging Pastures

Dragging pastures with a chain or link harrow at least once per year in the fall is likewise important. Dragging helps to spread droppings which helps to reduce the parasite populations by exposing them to air and sunlight. In addition, dragging helps to smooth over areas dug up by horses' hoofs on wet soil.

### Maintenance Fertilization

Improved horse pastures must be fertilized annually if they are to remain productive and the legumes and grasses persistent. The fertilizer to use depends on the species present. A complete soil test is your best guide.

### Annual Crops

Annuals, both summer annuals and winter annuals, can supply valuable pasture and other forage for your horse.

Of the summer annuals, Piper sudangrass shows the greatest promise. When properly managed it will provide pasturage during the hot dry summer, when permanent pastures often become short and other feed is limited. However, herbage wastage is usually high when horses are allowed to graze sudangrass.

Winter grains such as rye and wheat can be used to extend the pasture season much later in the fall and provide some early spring grazing. However, horses should not be allowed to graze these crops when fields are wet.

Spring oats may also be sown either in the spring or in the fall for supplemental pasturage.

Additional information on liming and fertilization, seed mixtures, seeding rates, weed control, etc., can be obtained from your local county agent.