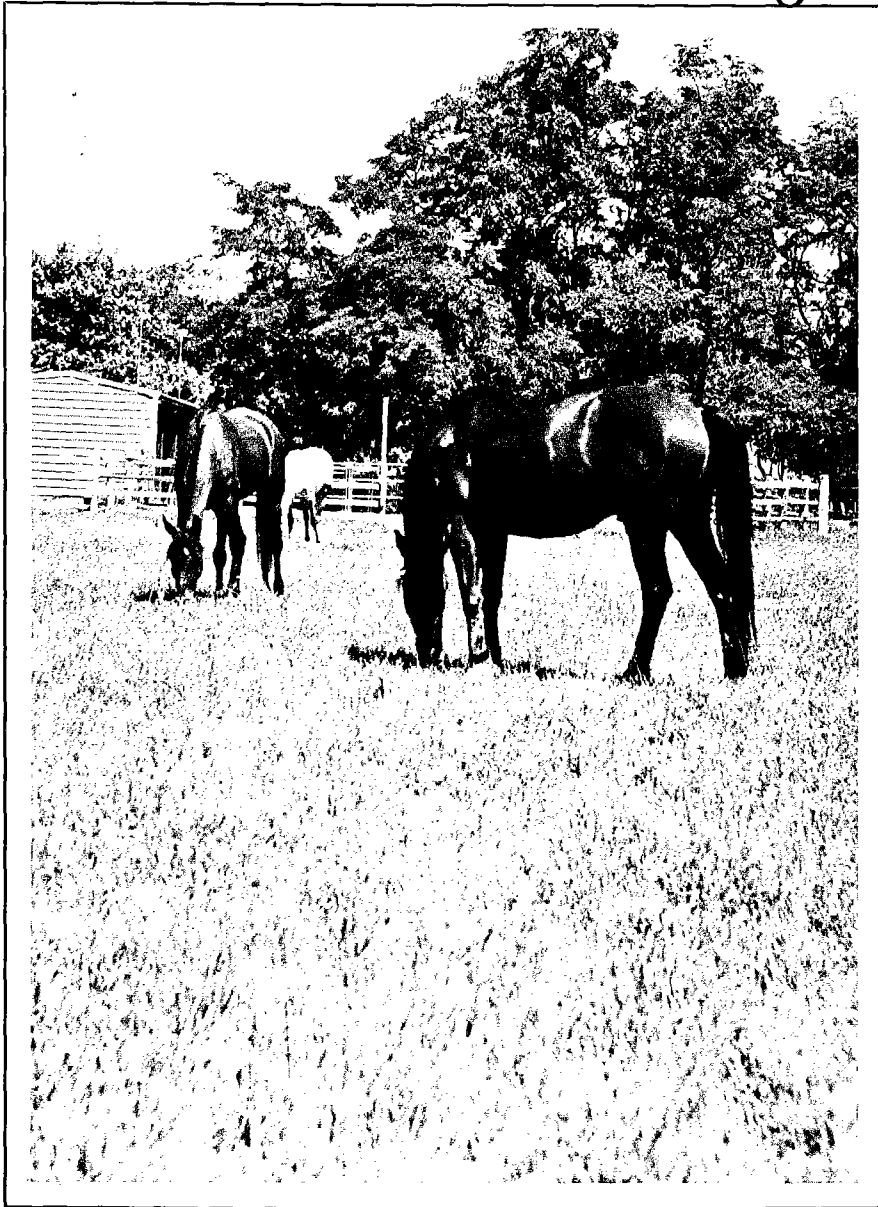


IRRIGATED PASTURES for Horses in Eastern Washington



IRRIGATED PASTURES FOR HORSES IN EASTERN WASHINGTON

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Irrigated pastures can supply all the feed required by horses during the growing season. They are high in total digestible nutrient, the animals harvest the crop, the pastures provide exercise for the horse, and limited labor is required in maintaining pasture production.

Irrigated pastures will produce 7 to 9 tons of quality forage per acre per season. A 1,000-pound horse will need about 25 pounds of dry matter per day, or about 750 pounds per month. During the early growing season 1 acre of good irrigated pasture will produce enough pasture for 2 horses because the horses will utilize only about 60 per cent of the forage produced. During July and August, 1 acre will produce feed for 1 horse.

Horses can founder on lush grass and legume pasture. It may be desirable to feed low-quality roughage, such as overmature hay or straw, when horses are on rapidly growing pastures. Pasturing for short periods, or in during the day and out at night or vice versa, will help to limit overeating.

Establishment

Pasture can be established in either spring or late summer. However, with spring seeding, most of the growing season is used to establish the pasture. The forage crop will not be ready to graze until late summer or early fall.

You can save a season by seeding in August after an early harvested crop. Competition from annual weeds will be less and the pasture will be ready to graze the following spring.

Seedbed Preparation and Seeding

Extra care during the preparation and establishment period is essential if a good stand is not obtained. Yields will be low and weed problems will develop in areas where the stand is thin.

Prepare a fine but firm seedbed. The soil should be firm enough to permit soil moisture to move upward to the seed. A preplant irrigation may be helpful to sprout weed seed, settle the ground, and locate high or low spots which need leveling.

Cultipacker-type seeders with a double set of rollers help in obtaining good stands but may require special rollers on sandy soil. Grain drills equipped with depth regulators for seeding will do a good job. The depth regulators make it possible to place the seed only 1/4 to 1/2 inch deep, increasing the chances for a good stand.

Just before seeding, inoculate the legume seed with nitrogen-fixing bacteria. Use an inoculum that is specific for the particular legume you are seeding. Do not expose the inoculum-treated seed to sunlight or heat for any length of time after mixing. You can use preinoculated seed but do not seed after the inoculum expiration date without reinoculating.

During the first 4 weeks, irrigate often enough to keep adequate moisture in the top 1/4 inch of soil. Short, frequent irrigations are usually best. When the plants develop roots, irrigate long enough to wet the root zone.

Work 30 to 40 pounds of available nitrogen per acre into the seedbed when establishing irrigated pastures.

Seeding Rates

Alfalfa is the best legume for irrigated horse pastures. Since the problem of founder and colic are greater on alfalfa alone, mixtures of grass and alfalfa are usually planted.

Use orchardgrass or tall fescue in grass-alfalfa mixtures. Seed at the rate of 10 pounds of grass and 2 to 5 pounds of alfalfa per acre. When used in mixtures with alfalfa and orchardgrass on

Suggested Plantings for Various Soil Conditions

Soil Condition & Seed Combination	Lb seed/A	Remarks
<i>Long-Lived Plantings</i>		
<i>Well-Drained Soils</i>		
Alfalfa	5	Good production with lower colic hazard
Orchardgrass or tall fescue	10	
<i>Wet Soils</i>		
Birdsfoot trefoil	4	Hard to establish
Meadow foxtail	8	Moderate production, good palatability
or		
Tall fescue	10	Lower palatability
<i>Saline Soils</i>		
Tall fescue	10	Irrigate more to reduce saline problems
or		
Tall wheatgrass	8	Plant to better varieties when salts are leached out
Strawberry clover	4	
<i>Short-Lived (2 Years) Plantings</i>		
Ladino clover	1	
Orchardgrass	10	
or		
Red clover	4	
Ryegrass	6	

good soils, tall fescue is less palatable and results in patchy grazing and wasted forage.

Varieties To Seed

Alfalfa—select a high-yielding, winterhardy variety that is resistant to bacterial wilt and nematodes.

Orchardgrass—Latar.

Tall fescue—Alta or Fawn.

Red clover—Kenstar, Arlington, Pennscott.

Ryegrass—perennial.

Fertilizing

Use a soil test and Fertilizer Guide (FG) 4 to determine needs for phosphorus, potassium,

zinc, and boron. Plow down these fertilizers or work them in during seedbed preparation. They may be topdressed in the fall when adequate amounts have not been applied for the life of the stand.

There is no WSU soil test for sulfur. If sulfur is known to be deficient, apply sulfur fertilizer at a rate that will supply 60 pounds of sulfur per acre, or use ammonium sulfate for both nitrogen and sulfur. Areas irrigated with water from most of the major streams east of the Cascades will not require sulfur because of the high content in the water. Exceptions are the Roza district, areas above Yakima including the Kittitas Valley, and the Wenatchee Valley. Sulfur content of well water may or may not be sufficient to supply pasture needs.

Established legume-grass mixtures containing less than 40 percent legume may produce more feed with 30 pounds of nitrogen applied at least three times during the growing season. April, June, and August are probably the best times to apply the nitrogen. Nitrogen fertilization is not needed on legume-grass mixtures if the stand is more than 40 per cent, well-nodulated legume.

For older stands, or stands composed mostly of grass, apply up to 150 pounds per acre of nitrogen. For grass pastures, apply 150 to 200 pounds per acre of nitrogen per year.

Apply the nitrogen fertilizer in three equal amounts—in early April, about June 1, and about August 15. Broadcast the fertilizers.

Irrigation Management

Do not over-irrigate or under-irrigate pastures. Over-irrigation leaches nitrogen and causes many other losses. Under-irrigation reduces yields from drought and salt accumulations. Irrigate when about 1/2 to 2/3 the available moisture has been removed from the root zone. This can be determined by soil sampling, evaporation scheduling of irrigations, and other methods. Time grazing rotations to avoid wet or puddled soil conditions in the pasture being irrigated.

Grazing Management

Grazing management is the key to high-yielding irrigated pastures. A good management system can increase yields, reduce selective grazing, cut forage waste, and control the quality of the forage.

Any management system should be flexible enough to use all the forage as pasture, hay, or silage. Set up a grazing system so grazing starts when the orchardgrass is 10 to 14 inches high.

Remove horses when 3 to 4 inches of stubble remains. For most efficient grazing, divide pastures into at least four parts or paddocks. Set up a rotation which will concentrate all the animals on one part while the other three or more parts are being allowed to regrow. Pastures need 25 to 35 days between grazings to reach recommended height.

Do not attempt to graze irrigated pastures as soon as they start growing in the spring.

Leave about a 6-inch stubble on the pasture for winter. Legumes grazed too closely will be damaged by heaving and winter injury.

Occasionally you may need to clip the pasture to prevent patchy grazing, control weeds, and remove seed stalks and poor-quality forage. During lush spring growth, some of the paddocks, may be mowed and the forage used as silage or hay.

Plow pastures and grow a clean-up crop when production goes down.

Dragging to scatter droppings will help in more even grazing patterns and also help in parasite control.

Overgrazing is the most common reason for loss of good pasture stands, resulting in poor-quality, low-producing pastures. Many people let their horses graze pastures right into the ground. Even if horses are fed hay on pasture during periods of low production, they will continue to graze

the grass so short that recovery is very slow and eventually nonpalatable weeds invade the pasture, replacing desirable grasses and legumes.

Horses should be conditioned to grass slowly before they are turned on pasture in the spring. This can be accomplished by turning them out on grass for a few hours a day and gradually increasing the time until they can be left out continually. This gives the horse's digestive system a chance to gradually become accustomed to the feed change.

Give horses a full feed of hay before putting them on grass. This will reduce consumption and help reduce problems of colic or founder.

Mature horses will get too fat on high-producing pastures—limit their feed intake by removing them from the pasture for a time during each 24-hour period.

Summary of Practices to Follow

- Try seeding pasture in late summer. You won't lose most of a year establishing the pasture and competition from weeds will be less. A pasture established in late summer can be grazed the following spring.
- Use grazing management to increase yields, cut forage wastes, and control forage quality. Start grazing when forage is 8 to 10 inches high. Prevent damage to pasture plants by rotating horses when 3 to 4 inches of stubble are left.
- Never expect a pasture to carry too many horses. An acre can carry two horses during the early part of the season, but may furnish feed for only one during July, August, and September.
- Use part of the lush spring growth for silage or hay. Or supplement pastures with dry feed when pasture production starts to decline. Plant grass-legume mixtures for greater carrying capacity throughout the season.
- Condition horses to grass slowly in the spring.
- Limit grazing to keep horses from getting too fat.
- Do not overgraze.