

# INTERSEEDING NATIVE PASTURE

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**INTERSEEDING — SEEDING INTO AN ESTABLISHED VEGETATIVE COVER OR GRASS SOD.**

Interseeding native grasslands is a very old practice. It was originally used to reestablish grasses lost from the vegetative cover due to improper grazing management. Today, interest is in the establishment of alfalfa into native grass sod. The purpose of interseeding is to increase forage production, grassland grazing capacity and animal gain per acre.

## FORAGE PRODUCTION

A study at the Dickinson Experiment Station (Fig. 1) shows that Travois, a pasture-type alfalfa with the creeping-rooted growth habit, increased forage yield 30 to 35 percent compared to native grassland not interseeded. The study also shows the yield contribution of hay-type alfalfas and several grasses when interseeded. In general, interseeding grasses did little to improve forage yield of native grassland in good condition because of poor seedling establishment.

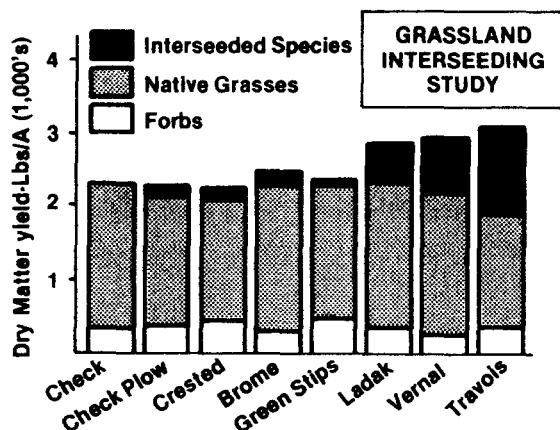


Fig. 1 — Ave. dry matter yield of native grassland interseeding treatments, Dickinson, ND (1971-76).

## GRAZING STUDIES

Livestock grazing studies in North and South Dakota have been conducted or are currently in progress on interseeded native grassland. A cow-calf study in progress at the Dickinson Experiment Station shows that calf gain/acre (Table 1) on alfalfa-interseeded native pasture has been increased 70 percent compared to pastures without alfalfa when summer grazed. The Norbeck, S.D., study shows a similar percentage increase in gain/acre when grazing yearling steers seasonlong. Both studies increased pasture carrying capacity about 50 percent by interseeding with a pasture-type alfalfa.

Treatment	lbs gain/acre	
	calves	yr. steers
	Dickinson, N.D. 1978-81	Norbeck, S.D. 1977-79
No alfalfa	32	53
Alfalfa	55	85

Table 1 — Gain per acre of calves and yearling steers grazed on alfalfa interseeded native pasture.

## WHERE TO INTERSEED

Interseeding alfalfa into native grasslands should only be done on range sites with a potential for increased forage production. Interseeding these range sites is more desirable than complete seedbed preparation because the risk of soil erosion by wind and water may be too high due to land slope and soil conditions. Alfalfa, like range grasses, has certain requirements for growth. It will not be productive on thin soils or soils with a limited waterholding capacity, saline-alkali areas or on periodically flooded or wet soils.

## EQUIPMENT NEEDED

A furrow-type interseeding machine should be used (Fig. 2). These machines are not readily avail-

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able, but plans showing construction details can be obtained. The machine is equipped with twisted chisel plow shovels for removing sod strips and seed boxes for seeding in one operation. A sod strip must be removed to reduce sod competition, providing a more favorable environment for alfalfa establishment. Herbicides have not been effective in reducing sod competition on native grassland.

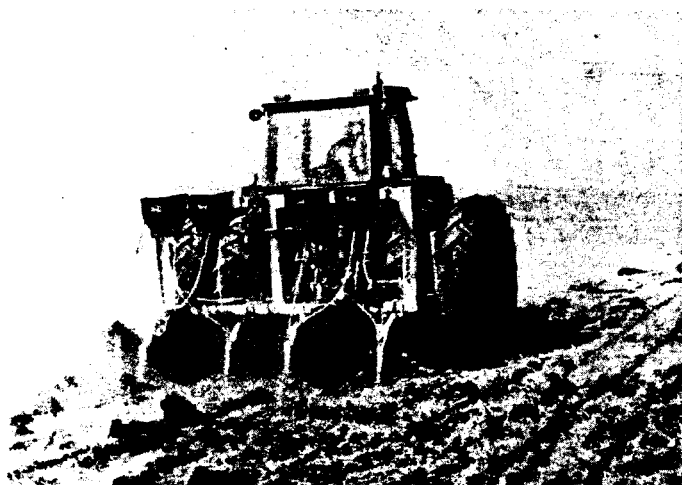


Fig. 2 — A furrow-type interseeding machine.

#### FURROW SPACING AND DEPTH

Row spacing should be 24 to 48 inches. The wider row spacing should be used in drier areas or on less favorable moisture sites. Furrows should be 3 to 4 inches deep and about 5 to 9 inches wide. The 4-inch twisted chisel plow shovel opens a furrow about 5 inches wide and the 6-inch shovel about 9 inches wide. Use the wider furrow openings in lower rainfall areas. **ALWAYS INSTALL FURROW INTERSEEDINGS ON THE CONTOUR TO LESSEN WATER EROSION POTENTIAL AND TO CONSERVE RUNOFF WATER IN FURROWS FOR ALFALFA ESTABLISHMENT.**

#### ALFALFA VARIETY

Use a pasture-type alfalfa when interseeding pastures. Pasture alfalfas have broad low-set crown with the ability to spread due to their creeping-rooted growth habit and may persist longer than hay types when grazed. Examples of pasture-type varieties available are Drylander, Kane, Prowler, Rangelander, Rambler, Roamer, Spredor II and Travois. Others may be available locally.

#### TIME TO SEED

Interseed in the spring, preferably in May or early June, into a moist seedbed. Early seedlings will usually benefit from early season rainfall and become established before leaf-eating insects become abundant.

#### SEED TREATMENTS

Alfalfa seed should be inoculated on the farm with the proper strain of nodule-forming bacteria or pre-inoculated seed should be purchased. Fungicides are generally not required on alfalfa, but South Dakota studies indicate loss of seedlings from disease. If a fungicide is used, apply at seeding time and plant immediately or within two hours as it can be toxic to inoculum bacteria.

#### SEEDING RATES

Use 1 to 2 pounds pure live seed/acre. If conditions are satisfactory this rate of seeding should establish an average of about one plant per square foot. This is considered a near ideal alfalfa plant population on native grassland.

#### WEED CONTROL

If weeds are a problem, they should be controlled before interseeding. Use the recommended herbicide treatment for the particular weeds present.

#### FERTILIZATION

North Dakota studies show that the use of nitrogen fertilizer at time of interseeding causes reduced seedling establishment. Phosphorus, if limiting, may be beneficial for successful seedling establishment.

#### GRAZING

Native pastures may be grazed before and following interseeding. Remove livestock from the interseeded pastures as soon as grazing begins on the young alfalfa seedlings. Moderate fall grazing is permissible once the alfalfa has become established. Two production years are generally required for interseeded alfalfa to become fully competitive with the grass sod, even under ideal growing conditions.

Interseeding is one of many grazing management practices. To be effective it must become a part of the total grazing management plan, otherwise it will likely fail.