

Dr. Don Miller
Director of Product Development
Alforex Seeds

Late Summer Seeding of Alfalfa

Spring seeding of alfalfa is often preferred in many regions of the U.S. However, a late summer seeding can be successful if proper management techniques are applied. The following information is a summary of some frequently asked questions (FAQ) and some current university recommendations and guidelines for successful late summer seedings of alfalfa.

Frequently Asked Questions

When should you consider a late summer seeding of Alfalfa?

1. **If your spring planting of alfalfa failed.** Often due to various reasons, including bad weather, drought, diseases etc... a new spring planting of alfalfa may fail. In this case replanting with a late summer seeding may be your best option, especially if existing herbicide residues limit your crop choices. Normally we DO NOT follow alfalfa with alfalfa due to the potential of autotoxicity problems in establishing the second alfalfa crop. However, in this case autotoxicity is not a factor when the original field of alfalfa is less than one year old. Replanting a failed spring planted alfalfa field with a late summer planting is considered to be free of potential autotoxicity problems, and a logical crop choice.
2. **A late summer planting may also be an option if your crop rotation allows you the opportunity and time to establish another crop.** This is often possible in rotations with early grain or vegetable crops.

What are the advantages of a late summer seeding in alfalfa?

1. **Higher yields the first production year verses a spring planted field.** Late summer plantings are well established the first production year because of the previous fall establishment period. Yields are often closer to that of established alfalfa production fields than those of spring planted fields. Spring seeded fields, must go through the establishment phase and therefore are less productive the first year than plantings that were established the previous fall from a late summer seeding.

2. **You may avoid planting delays and disease problems associated with wet spring weather.** Often wet soil conditions make it difficult to plant in the spring especially on heavy clay soils. Planting conditions on these soil types is often more favorable in late summer plantings. Soil conditions are generally not as wet at this time of year, which will lesson damping off problems with Pythium, Phytophthora Root Rot, and Aphanomyces during the establishment period.
3. **You can reduce your spring workload.** Planting and establishing your alfalfa the previous fall allow you more time for other field work in the spring.
4. **Less weeds and insect problems during establishment period.** With a few exceptions, the need for herbicides is reduced or eliminated with a late summer planting since many of the annual broadleaf weeds will be killed by frost in the fall. Insect build-ups may also be reduced by the approaching cold weather.

What are the disadvantages or risk associated with late summer plantings?

1. **Adequate moisture for proper establishment before winter may limit success.** This is the main factor that generally determines the success of a late summer planting.
2. **Early frosts may damage stand before the plants have time to establish.** A minimum of 6-8 weeks of growth is needed before a killing frost.

Guidelines/Recommendations for Late Summer Seeding of Alfalfa

Pre-plant preparation

1. Check previous crop herbicide residue time intervals for possible problems of carry-over injury.
2. Take a soil test and apply fertilizer as needed.
NOTE: Acid soils with pH levels less than 6.2 will limit alfalfa production. Timely applications of lime may be required to adjust the pH to acceptable levels. Generally, lime is applied the season before the alfalfa planting, to allow sufficient time for the pH to adjust.

3. Control perennial weeds, Quackgrass, Canadian thistle, Yellow nutsedge, and dandelions before planting.
4. Pre-plant herbicides for annual weeds is generally not needed in a late summer planting since they will be eliminated by the fall frost.
5. Ground preparation for a late summer alfalfa seeding should be done in a manner to maximize or conserve soil moisture. Adequate soil moisture for proper establishment is often critical for planting this time of year. Firming the ground immediately after ground prep with a cultipacker or similar device is beneficial in saving soil moisture. No-till planting is also another means of conserving soil moisture.
6. The seed bed should be firm enough that a footprint should not be deeper than the soles of your shoes or 3/8 of an inch deep. Planting in a firm seed bed optimizes seed to soil contact for proper germination and establishment. A firm seed bed is critical for optimal stand establishment.

Planting Date

Late summer plantings require a minimum growth and establishment period of 6-8 weeks before a killing frost (4 hrs. @ 26° F). Optimal planting dates vary due to each regions historic killing frost date, but following are some suggested planting dates for Kansas

Northwest Kansas—August 10-15

Southeast Kansas—Sept 15-30

Seeding Rate and Depth

The standard seeding rate for alfalfa is 15-20 lbs./acre. This rate may vary depending on local conditions. However, the end objective is to have 15-25 plants/sq. foot, 5-6 weeks after planting. Higher than normal planting rates may be required to obtain this initial plant density if soil conditions and/or method of seeding are less than optimal. Lower rates and planting densities may be advisable for dryland or arid climates (8-12 lbs./acre). The recommended seeding depth for alfalfa is ¼ to ½ inch. However, this may vary depending on soil type and availability of soil moisture.

Adequate soil moisture is needed to allow sufficient growth for establishment before a killing frost and is critical for a late summer planting if supplemental irrigation is not available.

The following chart lists common planting depth recommendations that take into account varying soil types and moisture levels.

Planting depth for Alfalfa seeding

Soil Type	Soil Moisture Content	
	Optimal	Marginal
Sandy (Lighter Soils)	½ inch	¾ to 1 inch
Silt Loam	¼ to ½ inch	½ to ¾ inch
Clay (Heavier Soils)	¼ inch	½ inch
NOTE: Never plant alfalfa seed deeper than 1 inch.		

Companion Crop

Planting a companion crop with a late summer alfalfa seeding is not generally recommended due to limited soil moisture. Available soil moisture is often limited in late summer plantings. Competition for moisture with a companion crop may be detrimental to alfalfa stand establishment.

Weed Control

Herbicide requirements for a late summer seeding may be minimal, since annual weeds will be killed by frost. Perennial weeds should be controlled before planting the alfalfa when possible. Control of volunteer small grains may also be required.

No-till plantings may require herbicide applications to insure optimal alfalfa establishment.

First Harvest Recommendations

The fall growth of a late summer alfalfa seeding should not be harvested. Plants are small and subject to injury at this time. Harvesting the top-growth can be detrimental to winter survival. The first harvest should occur the following spring. Hay production the first year should be similar to that of established alfalfa.