Alfalfa Seed Production

Field Selection- Alfalfa can be grown on a wide range of soil types, but its best to avoid poorly drained or saline soils. There are many benefits to putting alfalfa into you rotation, it produces nitrogen, increases organic matter and the alfalfa roots go deep into the soil breaking up hard pan and improving drainage throughout the soil profile. Ideally the field should be fairly clean of weeds; it is a good idea to eliminate perennial weed problems before seeding down to alfalfa. Sweet clover is considered a weed in alfalfa; avoid fields that have grown sweet clover in the past as these fields may have a large sweet clover seed bank present. For certified production, ensure that alfalfa has not been grown in the 2 previous years prior to planting and that adequate isolation from other alfalfa plants exist. Typically contracts are for 3 years, but if the field is producing, weed free and generally looks good, contracts can be extended on a year by year basis to prolong the life of the stand.

Seeding- A firm seedbed to plant into is desired. While growers in the past have had success in broadcasting the seed it is best to put it into the ground no deeper than half an inch. Alfalfa for seed has been planted in rows anywhere from 6” to 36” and at rates of 0.5 lb to 2 lbs/ac in the past. 12”-24” at about a 1 lb/ac seems to work best under most conditions. Prior to seeding the alfalfa, seed should be inoculated with a nitrogen fixing bacteria. Alfalfa is not in production for seed until the year after it is planted because of this it is typical to be under seeded with a companion crop so that a year of income is not lost. Wheat and flax are the most generally used companion crops.

Crop Protection- Herbicide options in alfalfa seed can be limiting at times especially when the crop is in the underseed year. There are many grassy weed control herbicide options and while the broadleaf ones may be limited there is enough variations to keep the field clean. Currently registered and frequently used herbicide options include Odyssey, Pursuit, bromoxynil, and Velpar as well as others. Insects can pose a risk to alfalfa seed yield, and will need to be sprayed during the course of the summer. Lygus, Alfalfa plant bugs and Alfalfa weevil are the main pests of concern, as well as late season grasshopper infestations. Alfalfa yields like other crops can be affected by disease to varying extents depending on the year and the use of fungicides is recommended as it tends to increase seed yield.

Pollination- Alfalfa requires leafcutter bees to pollinate the crop in order to set seed. Leafcutter bees generally go out on the onset of bloom usually around July 1.

Harvesting- It takes 4-6 weeks for the plant to produce mature seed, harvest usually begins that time frame after the bees/bloom has finished. The crop should be desiccated using Reglone (diquat) to kill the green tissue and dry out the standing crop. Once desiccated the field will be ready to harvest about 7-10 days later depending on weather. Alfalfa seed is straight cut and either a conventional or rotary combine can be used.

Yield- Manitoba and Saskatchewan yields can range from 100 to 1,000 lbs/acre but are generally in the 250 to 500 lb/ac with a 5 year average being in the 300 to 350 lb range. In Alberta due to climate and irrigation yields are higher, generally in that 350 to 600 lb range with 1,000 lb crops more frequent than MB/SK, 5 year average for Alberta would be in the 500 lb range.