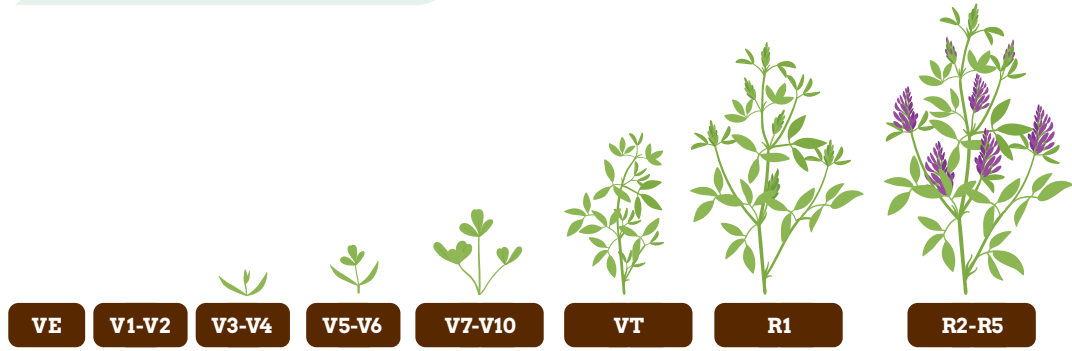




CROP INFORMATION: ALFALFA



ALFALFA	Pre-Plant	Vegetative	Bloom	Winterization
Monty's Recommended Program	MLC: 2 qt/ac Agri-Sweet FG: 2 qt/ac Nauxin* /Microhance: 2 qt/ac Hay-Now: 2 qt/ac	MLC: 2 qt/ac Agri-Sweet FG: 2 qt/ac Hay-Now: 2 qt/ac	Nauxin*: 2 qt/ac Surge XD: 1 qt/ac Agri-Sweet FG: 2 qt/ac	MLC: 2 qt/ac Agri-Sweet FG: 2 qt/ac Hay-Now: 2 qt/ac
Monty's Program Benefits	Improves soil health & stimulates soil microbial populations	May increase uptake of N application, buffer salt and pH	Maximize yield	Residue management for next spring decreases soil compaction and increases soil microbial populations
Fertility Needs	N, P, K, S, B, and Zn			
Maintenance Applications	Other products that can be used in alfalfa production: MLC: 2 qt/ac, Humihance: 2 qt/1 ton dry fertilizer, Surge XD: 2 qt/ac (Can be added to any herbicide/pesticide/fungicide application), Microhance: 2 qt/ac			
When To Soil Sample	In spring after green-up, or follow-up after last cutting			
When To Tissue Sample	6-10" in height, utilizing leaves for tissue sampling			

* Nauxin can be mixed with Dicamba.

† October to December sampling for spring fertilizer applications, and March to April sampling for fall applications are preferred.

‡ Weekly tissue sampling will allow you to monitor plants fertility to achieve the highest yield. Tissue sampling should be done if deficiency symptoms appear.

Useful Information:

- For optimum production, alfalfa requires 6.6-7.0 pH, while clovers and birdsfoot trefoil can withstand slightly more acidic conditions ranging from 6.0-6.5. Cool-season perennial grasses require a minimum of 5.8 for their optimum production, with warm-season and cool-season annuals typically requiring a minimum of 6.0 for their optimum production potential.
- Refer to the table to the right to understand the amount of nutrients removed per an 8 ton yield/ac of alfalfa produced.



Soil should be firm enough at planting for a footprint to sink no deeper than 3/8 inch.

Parts of an alfalfa plant

- Apical meristem
- Leaflets
- Petiol
- Axillary buds
- Unifoliate leaf
- Hypocotyl
- Radicle



Some alfalfa varieties allow subsequent harvest to be adjusted to maximize harvestable yield per cutting throughout your growing season. Other alfalfa varieties should be harvested based on the quality of hay needed or approximately 10% bloom.

Nutrients (lbs) removed per ton of alfalfa produced

Maintaining the ideal level of nutrients is key to maximizing yield. It is important to tissue test and supplement nutrients throughout the season to ensure your plants are getting the necessary amounts of nutrients.

Nutrient	lb/acre
N	415
P ₂ O ₅	94
K ₂ O	401
Ca	151
Mg	36
S	26
B	0.43
Cu	0.11
Fe	1.67
Mn	0.45
Zn	0.30
Na	...

Ag Proud, 2022

* Program benefits are based upon results of field trials conducted by Monty's and third parties. Program benefits are not guaranteed and will vary based upon many factors including weather, soil type, and farming practices.



CROP INFORMATION: ALFALFA

Deficiency Symptoms



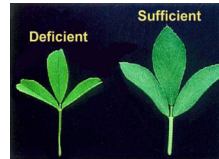
Nitrogen deficient wheat plants appear pale-green to yellow with necrosis/chlorosis, and appear in older leaves.



Boron symptoms develop in younger leaves and spread to older growth. Symptoms appear as small chlorotic spots that began to enlarge and coalesce to form white stripes.



Iron deficiency is characterized by interveinal chlorosis of the leaves with the leaf veins remaining green.



Zinc deficiency symptoms appear as pale green plants with localized light-yellow chlorosis, that can turn into brown/gray necrotic lesions. Plants can be stunted.



Sulfur deficiency is characterized pale yellow color, uniform yellowing without necrosis.



Calcium deficiency appears first on the youngest leaf and spreads to older leaves. Tips of leaves turn pale and began to roll inwards. Leaves may twist back, tear off, or die. The base of the leaves will remain green.



Phosphorus may cause dark green coloration of the leaves and a purple color to the leaves. Older leaves may be dark yellow to orange or brown.



Manganese deficiency will occur in patches throughout the field. Plants are stunted and symptoms appear as yellowing in the younger leaves, yellow striping of leaves and whitish to colorless spots.



Potassium deficiency appears as pale green plants that appear wilted or limp. Symptoms appear in the oldest leaves and have bright yellow chlorosis and brown necrosis along the margins.



Magnesium appears on the middle leaves as green, yellow with yellow interveinal chlorosis that can turn to brown necrosis.

Soil & Tissue Sampling

SOIL SAMPLING RECOMMENDATIONS:

Take one soil sample for every 20 acres. This sample should consist of a composite of 15 subsamples taken randomly at a depth of 6-7 inches from across the sample area. The sample needs to be mixed well to be representative of the soil conditions.

Soils that can be tested less often: If the soil has a high CEC, it will hold cation nutrients better and the pH will remain constant over longer periods of time. It is still suggested to test throughout the growing season and at the end of the harvest for planning.

Soil that should be frequently tested: Soil with a low CEC (less than 7), some cations such as potassium (K+), magnesium (Mg++), and ammonium (NH4+) have the ability leach through the root zone, so testing more often to find nutrient deficiencies is beneficial. When fertility levels are low, soil sampling should happen more frequently to insure best utilization of added nutrients and fertility.

The key is consistency and getting the information back in time to use it. This is why we encourage sampling at harvest to plan properly for the next growing season. While factors such as weather and crop rotation can affect soil test results, these differences are generally small enough that reliable information can still be obtained regardless of when sampling is done.

For general practices: October-December sampling for Spring fertilizer planning and applications, and March-April sampling for Fall/post harvest planning and applications. These two time periods generally have the lowest amounts of testing variability associated with them. **Give yourself adequate time to review the test results and plan the program before making fertilizer applications.**

TISSUE SAMPLING RECOMMENDATIONS:

Timing: Alfalfa tissue sampling is best completed when plant height reaches 6-10", with continued sampling at each cut. Growers are encouraged to tissue sample throughout the growing season (early and often) to achieve the highest yields possible.

Storing and shipping: Store the sample properly and remove soil or other debris that would interfere with tissue analysis and results. Problem areas or areas of interest should be sampled separately. All samples should be stored in a paper bag and in a cool place and properly labeled. All samples should be sent to the lab immediately to prevent any decay or damage to your sample that could cause your tissue results to be inaccurate.

MONTY'S HIGH YIELD PROGRAM: *Monty's high yield program can vary from a standard program by products, application rates, and application timing. If you are interested in a high yield program contact your Monty's representative or call 800.978.6342.*