ISP technologies

environmentally clean crop production for healthier food

Alfalfa

(Rates Based on "Per Acre", with adequate soil nutrient/fertility)

Dry or Bulk Fertilizer: Being a perennial crop it is universally recommended that primary soil amendments such as calcium be applied prior to new seeding. Alfalfa is a heavy feeder, and although a legume, there is data to support the timely applications of nitrogen. Our strong preference is ammonium sulfate, and based upon average weather conditions, and/or irrigation availability, up to 200 pounds per acre has shown benefits. Potassium can be an issue with alfalfa, and annual applications can pay dividends. All of the following recommendations are made with the assumption that bulk fertility needs are being, or have been, met.

NOTE: This program is presented with high yields being the goal, and as a guideline only, based upon experiences of a number of growers. With the wide variances possible from both soil types and environmental conditions present during any particular season, your actual recommendation can vary from what is presented. It is always advisable to discuss actual management practices with your local representative.

New Seeding:
Prior to seeding, 16 fluid ounces MetaboliK HV-1, and
1/2 to 1 gallon PhytoGro Xtra. These products can be applied with a burn-down application of herbicide prior to planting. Optimum benefits would be achieved by slightly incorporating them into the top two to six inches of topsoil.

16 - 24 fluid ounces MetaboliK SB, broadcast just prior to planting.

Established Stand - Prior to Spring "Green-up":
(100 pounds of ammonium sulfate, and potassium based upon individual soil nutrient requirements.

Once alfalfa has an inch or so of new growth, optional foliar is: 10 pounds of 10-45-10, or 10-20-20, and 8 fluid ounces of MetaboliK HV-1, and 32 - 64 fluid ounces of PhytoGro Xtra.

1st and 2nd Cutting:
8 - 12 pounds 28-16-7 Alfalfa Special, and 4 fluid ounces of MetaboliK HV-1. (This foliar should be applied prior to cutting just as the early initial buds are seen, or after dry hay has been removed.)

Mid-summer Cuttings:
Weather is the determining factor for summer applications. Unless the alfalfa is irrigated, it may or may not be recommended to foliar apply nutrients for potential July/August cuttings. If weather has been positive and there is adequate soil moisture, or irrigation potential, then positive results should be achievable. In this instance follow the same recommendation as prior cuttings.

Additionally, It is often recommended to apply another 100 pounds of ammonium sulfate, and supplemental potash during late summer. This will set the stage for vigourous fall cuttings and aid in maintaining adequate K levels in the soil.

If the weather has turned hot and dry, and irrigation is not possible, then it is recommended to not apply foliar nutrients as overall growth will almost certainly be limited, simply due to weather conditions.

Samples from research projects drying, Colorado.

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Fall Cuttings:
The weather often improves as fall approaches, and there is the opportunity to have another good cutting of hay. Either following the last summer cutting, or in late August to early September, once again the recomendation would be;
8 - 12 pounds 28-16-7 Alfalfa Special,
4 - 8 fluid ounces of MetaboliK HV-1.

Prior to Dormancy Foliar:
As dormancy approaches, and the last feasible cutting of hay has been removed,

10 pounds 11-28-18, and 8 fluid ounces of MetaboliK HV-1, and 32 - 64 fluid ounces PhytoGro Xtra.

(It is always advisable to plan for at least 3 - 4 inches of growth to regrow prior to dormancy.) Hi-yield irrigated alfalfa will often show benefits from a fall application of potash.

Alfalfa vigor, stand thickness and longevity is dependent upon crown/root vigor. The purpose of a fall application is to replenish the plant root. Although there will be no further curring this particular season, the results will come in the spring with an increase in production and quality.

Research strongly indicates that yield increase seen from foliar applications is not from an increase in stem height, but rather the number of stems being initiated from the crown following cutting. The hay is simply "thicker" with an increase in stem numbers, while at the same time maintaining excellent node spacing and leaf size.

Feeding Quality: Quality hay is certainly important. Below are two sample of improved feed quality.

Feed Quality Comparison, 4th Cutting Hay, Ohio, 2014.

	No Foliar:	Foliar:
Crude Protein	21.6	23.1
Relative Feed Value	139	150
Relative Feed Quality	136	161
Est. Milk Per Ton	1,681	1,875

Foliar was 6 ounces MetaboliK HV-1, and 10 pounds of 28-16-7 Alfafla Blend soluble plant food.

Feed Quality Comparison, 4th Cutting, Ohio, 2015.

	No Foliar:	Foliar:
Crude Protein	23.32	26.44
NDF	45.05	41.07
NEC	.55	.62
TDN	54.26	60.36
RFV	121.44	142.24

Another common observation is that alfalfa stems are somewhat thicker, more solid rather than hollow. This can have a significant impact upon tonnage and quality.

Alfalfa

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