



# Effect of Foliar Fertilizer Program on Alfalfa Yield

Butler, PA 2021

## Experiment Info:

Planted:	5/15/2019
Harvest:	6/12/2021
Yield Goal:	
Target Fert.:	
Variety:	
Population:	
Row Width:	7"
Prev. Crop:	
Plot Size:	2 acres
Replications:	1

## Soil Test Values (ppm):

pH:	6.7
CEC:	9.2
%OM:	3.8
Bray P1:	95
Bicarb P:	
K:	240
S:	5
%K:	6.7
%Mg:	18
%Ca:	74.8
%H:	0.5
Zn:	1.2
Mn:	4
B:	0.3

## Objective:

Evaluate the effect of foliar applied fertilizer on yield and forage quality of alfalfa.

Control treatment was 100 lb/acre dry potash 0-0-60 broadcast after first harvest.

AgroLiquid treatment was CalSip (formerly S-Calate) 1 gal/a + Sure -K 1 gal/a + Micro 500 0.25 gal/a + Boron 0.18 gal/a applied after first harvest . A second application of the same treatment was made after second harvest.

Plots were harvested and dry matter yield was determined. Forage samples from each plot were analyzed for forage quality parameters and that information was used to estimate milk production per ton of forage and milk production per acre. Milk production was estimated using the "Milk 2006" model developed by the University of Wisconsin.

Parameter	AgroLiquid	Control treatment	AgroLiquid	Control treatment	AgroLiquid	Control treatment	
	2nd Harvest		3rd Harvest		Average or Total		
Crude Protein	18.85	19.00	20.10	20.20	19.48	19.60	Average for 2 harvests
ADF	35.85	34.40	31.80	30.40	31.80	30.40	Average for 2 harvests
aNDF	44.75	42.15	40.30	37.90	40.30	37.90	Average for 2 harvests
RFQ	125	141	141	161	132.75	150.75	Average for 2 harvests
NDFD 48hr	22.10	21.50	19.00	19.35	20.55	20.43	Average for 2 harvests
Milk/ton	2196	2402	2435	2594	2315.25	2498.00	Average for 2 harvests
Tons/acre dry	1.18	1.03	0.91	0.90	2.09	1.93	Total for 2 harvests
Milk/acre	2597	2475	2213	2331	4842	4819	Total for 2 harvests

AgroLiquid Treatment: CalSip 1 gal/a + Sure-K 1 gal/a + Micro 500 0.25 gal/a + Boron 0.18 gal/a after 1st and 2nd harvest  
 Control Treatment: 100 lb/a Dry Potash after 1st harvest

## Conclusions:

- Forage yield in the AgroLiquid treated plot was higher than the yield in the control plot. These results are consistent with trials conducted on alfalfa, although the differences between the AgroLiquid treatment and the control treatment in this trial was not as pronounced as in other trails on alfalfa. High soil test levels of phosphorus and potassium may have reduced the differences between the treatments in this trial.
- Forage quality was similar for both the control and AgroLiquid treatments. The similar quality and higher forage yield provided a higher estimated milk production per acre than the control treatment.