

Orchard Grass with Vitazyme application

Researchers: Gunnar and Gary Garms

Farm: Bale Counter, Inc.

Location: Smith, Nevada

Variety: Seco

Soil type: sandy loam

Experimental design: A 30-acre center-pivot field, with an established orchard grass stand, was fertilized at high rates and divided into two 15-acre areas, with half receiving Vitazyme after the first cutting. The objective of the trial was to determine if this product could benefit grass quality when added to a high fertility program.

Fertilization: All 30 acres received the following:

Cutting	Dates	Nitrogen	Phosphorus	Potassium	Sulfate-S	Calcium	Zinc
----- lb/acre -----							
First cutting	3/7-5/30	157	122	83	30	122	0.30
Second cutting	6/5-7/14	105	82	78	30	122	0.30
Third cutting	7/19-8/15	89	75	68	30	122	0.35
Total		351	279	229	90	366	0.95

Vitazyme application: 13 oz/acre sprayed on the west half of the pivot on June 17, for the second and third cuttings.

Actagro product applications: Several Actagro products were applied at recommended rates for each of the three cuttings

Weather for 2015: The season was very dry. Only 0.97 inch of precipitation was received for the 180 days of October 2014 through April 2015.

Yield results: No yield separation was made for the second and third cuttings of the two halves of the pivot. Total yields were as follows:

Cutting	Date	Growth time	Irrigation water	Yield
		days	inches	tons/acre
1	5/3	77	11.7	3.1
2	7/14	45	8.4	2.3
3	8/28	45	11.5	2.1
Total				7.5

Hay quality results: Samples of third-cutting hay were collected about September 10 and sent to Dairyland Labs in De Pere, Wisconsin. All values are for a dry basis.

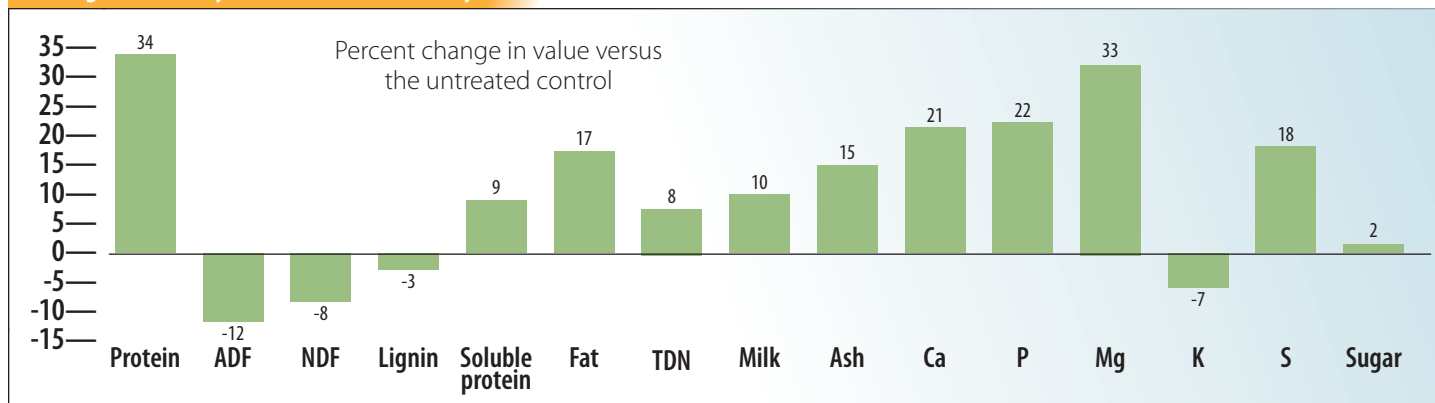
Treatment	Protein	ADF ¹	aNDF ²	Lignin	Soluble protein	Fat	TDN ³	Milk ⁴
		%	%	%NDF	% crude protein	%	%	lb/ton of DM
Control	11.27	39.37	63.59	9.22	37.71	2.42	50.25	2,391
Vitazyme	15.11	34.74	58.69	8.91	41.16	2.82	54.45	2,628
Change	+34%	-12%	-8%	-3%	+9%	+17%	+8%	+10%

¹ADF = acid detergent fiber; ²aNDF = ash free neutral detergent fiber; ³TDN = total digestible nutrients; ⁴a measure of milk that can be produced from a ton of this forage; ⁵WSC = water soluble carbohydrates.

Orchard Grass *with Vitazyme application cont.*

Treatment	Ash	Calcium	Phosphorus	Magnesium	Potassium	Sulfur	Sugar (WSC) ⁵
	%	%	%	%	%	%	%
Control	11.45	0.70	0.23	0.21	2.64	0.22	5.90
Vitazyme	13.15	0.85	0.28	0.28	2.45	0.26	6.01
Change	+15%	+21	+22%	+33%	-7%	+18%	+2%

Changes in Quality Parameters with Vitazyme



Conclusions: The addition of a single application of Vitazyme to this orchard grass mid-season, to the second and third cuttings, caused an undetermined yield change but a great improvement in forage quality. Protein improved a massive 34%, with fiber and lignin decreased. Fats, forage digestibility,

sugar, and mineral contents of the forage increased to produce a calculated 10% improvement in milk production. This program is shown to be an excellent addition to a forage grower's program, especially when added to careful mineral fertilization and Actagro organic products.

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2012 Crop Results

Vitazyme on Grass Hay
A Testimonial

Researcher: John Clark, Advanced AquaTronics International Corp., Pompano Beach, Florida

Farmer: Jim Lush

Location: Brush Creek, Tennessee

Experimental design: Vitazyme was provided to the grower for a hay trial. The farmer applied the product to 40 acres of grass hay land and harvested the crop without weighing the yield, or comparing with an untreated control. He gave the following report.

“John, thank you for making me aware of your Organazyme [Vitazyme] product. I was very skeptical at first, but after speaking to Paul Syltie, Ph.D., I decided to give Organazyme a try. I have a farm in middle Tennessee, and we normally cut 60 acres of hay, which is enough to keep our cows and horses in hay for the winter. Last year we were only able to cut 40 acres. This meant I would have to buy hay to get through the winter. To my surprise, we got the same amount of hay cutting 40 acres as we did the year before cutting the full 60 acres. The only difference was, I used your Organazyme [Vitazyme]!”

John, I am constantly looking for ways to increase my production while cutting my costs. This year I will cut the full 60 acres, which means [by] using Organazyme [Vitazyme] I should harvest one-third more hay than I need. That’s a huge increase.

Thank you again!”

Jim Lush, Brush Creek, Tennessee