

EFFECT OF YEAST CULTURE ON GROWTH OF YOUNG WILD HORSES

Summary

Yeast Culture was evaluated for growth promotion and feed efficiency in feeds for wild growing horses. Diets were formulated to be isonitrogenous and had similar mineral levels. A total of 34 growing wild horses were randomly assigned to two feeding groups. The trial was for 120 days and the horses were self-fed. Average daily gain and gain in withers height were greater ($P < .01$) for Yeast Culture than controls.

Yeast Culture increased rate of gain by 60% and cost per lb. of gain was \$0.32 cheaper for Yeast Culture than controls. Feed efficiency was about 39% better for Yeast Culture than controls.

Materials and methods

A total of 34 wild mares and their foals were trucked from Wyoming to Louisiana. The foals were weaned, wormed and gradually started on a feed which was to be the basal ration for the feed trial. The two groups were kept in pens of about 2.5 acres each. Torrential rains caused heavy flooding and hay was the only feed fed for about one week. The foals were again introduced to the basal diet. After consumption leveled off at about 8.25 lbs. per head daily, the foals were held off feed overnight and weighed, and randomly assigned to one of two feed groups. Hay feeding was discontinued, and the foals were fed *ad libitum* for 120 days. All horses were wormed two additional times during the trial. Table 1 shows the composition of the diets. Both diets were analyzed completely by a commercial laboratory.

The two groups of foals had an initial average weight of 448.5 lbs. and an initial withers height of 50.15 inches. Initial and final weights were obtained after a 12-hour fast. Initial and final withers height measures were also obtained. Since this was a commercial operation providing the test animals, cost and efficiency of gain

Table 1. Composition of diets.^A

Ingredients	Control %	Yeast Culture %
	-----%, as fed-----	
Soybean meal (IFN 5-20-637)	10.00	10.00
Ground yellow corn (IFN 4-02-935)	52.50	50.00
Whole oats (IFN 4-03-309)	20.00	20.00
Rice bran (IFN 4-03-928)	15.00	15.00
Yeast Culture (IFN 7-05-520) ^C	—	2.50
Calcium carbonate (IFN 6-01-070)	1.00	1.00
Vitamin-mineral premix ^B	1.50	1.50

^A Diets contained 16% protein, .65% Ca and .58% P on a dry matter basis.

^B Vitamin-mineral premix supplied 165 ppm Fe, 35 ppm Zn, 8 ppm Cu and 42 ppm Mn on a dry matter basis, along with 2200 IU of Vitamin A/kg of feed on a dry basis.

^C Diamond V Mills, Inc., Cedar Rapids, Iowa.

was calculated. The data were analyzed by the analysis of variance method. Difference among means were evaluated by Duncan's multiple range test.

Results and discussion

The growth rate of these wild growing horses was much less than that of comparable weight horses listed by NRC (1978). Table 2 shows the performance and measurements of the horses. The Yeast Culture increased rate of gain of the horses by 60% compared to controls. The cost per lb. of gain was \$0.32 cheaper for Yeast Culture-fed horses than controls. Least squares analysis showed a very low correlation ($r = .0775$) between weight gain and withers height gain. This data suggest that animals that are raised on forage do not grow rapidly on all concentrate diet and that a product like Yeast Culture which aids digestion might be of economic benefit.

Table 2. Feedlot performance and measurements of wild growing horses as influenced by Yeast Culture.

Item	Control	Yeast Culture
No. of foals	17	17
Initial weight, lbs.	449.13	447.88
Final weight, lbs.	521.00	561.99
Total gain, lbs.	71.87 ^A	114.11 ^B
Daily gain, lbs.	.59 ^A	.95 ^B
Lbs. feed/day	9.57	9.31
Lbs. feed/lb gain	16.11	9.84
Cost/lb diet, \$.059	.064
Cost/lb gain, \$.95	.63
Initial withers height, inches	50.59	49.70
Final withers height, inches	52.84	53.20
Gain, withers height, inches	2.25 ^A	3.50 ^B

^{A,B} Means with unlike superscripts differ (P < .01)

Research source

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