



# FATS AND PROTEINS RESEARCH FOUNDATION, INC.

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TELEPHONE AREA CODE 312 827-0139

## "THE DIRECTOR'S DIGEST"

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Technical Director

December 16, 1964

No. 6

One of the projects supported by FPRF involves feeding trials with beef cattle using fat and fat plus GHT (a fat sugar complex produced by Ledoga) in the ration. Professor Wise, North Carolina State University, is in charge of these studies. A few weeks ago, he reported the following preliminary results.

	Basal Ration	Basal Ration + 5% An. Fat	Basal Ration + 5% An. Fat + 0.5% GHT	Basal Ration + 5% An. Fat + 2% GHT
Av. Daily Gain, lbs.	1.94	2.23	2.46	2.46
Av. Daily Feed, lbs.	19.89	19.08	19.34	18.50
Feed/lb. Gain, lbs.	10.25	8.56	7.86	7.52

Although these results look very promising, Professor Wise cautions against being too optimistic about them. The steers, 5 in each lot, had been on test only 65 days when these results were reported. A much longer feeding period with more animals will be required to establish conclusively the response to GHT. It is gratifying to note that animal fat added to the ration gave more rapid and more efficient gains. This of course confirms many other experiments and practical feeding results. Even though the response to feeding GHT in addition to animal fat is confirmed by additional experiments, very careful cost analyses would be needed to prove that the use of GHT is economical for practical feedlot operations.

During the past summer Professor Moody of Arizona State University, with financial support from FPRF, did some feeding tests with added animal fat in the ration of dairy cattle subjected to the normal high temperatures of Arizona. This was done because some preliminary experiments and theoretical considerations would suggest that sodium acetate and/or animal fat in the ration might help to maintain the fat content in the milk produced during periods of high temperature.

Recently Professor Moody submitted the following preliminary results from this study.

Average Fat Content of Milk from Dairy Cattle  
(Low roughage intake; high environmental temperatures)

Ration	Period 1	Period 2	Period 3	Combined
Basal	1.99	2.30	2.57	2.28
Basal + 2% sod. acetate	2.28	2.32	2.87	2.49
Basal + 6% Fat	2.34	2.75	3.00	2.70
Basal + 2% sod. ac. + 6% Fat	2.35	2.52	3.05	2.64
Combined	2.24	2.48	2.87	

Although these data suggest that fat and/or sodium acetate did help to maintain milk fat levels, Professor Moody states that a somewhat different method of analyzing the data does not show the same superiority for fat. In any case the differences are not great and final conclusions must await further study. We are now trying to arrange additional tests with dairy cattle maintained under very closely controlled environmental conditions.

Notes on Research of Other Organizations

The November, 1964 issue of the Journal of the American Oil Chemists' Society includes six technical papers that were presented at the spring meeting of the American Oil Chemists' Society as part of a symposium on biodegradable detergents. These papers relate to methodology and studies with LAS(soft)detergents. Although little or no information on fat-based detergents is included anyone who is following closely the technical developments in the detergent field should read these articles.

Recent articles by B. S. Sathe, et al., of the University of New England, New South Wales, Australia, on the nutritional evaluation of meat meals for poultry report that the removal of bone from meat and bone meal improved its value in broiler rations. Growth depression on high bone diets was mainly the result of excessive calcium content and was not due to high proportions of collagen provided by bone protein.

SEASON'S GREETINGS

Houston S. Chamberlain has stated "Nothing probably is more dangerous for the human race than science without poetry, civilization without culture." Lest we be accused of thinking and talking science and technology to the exclusion of all other aspects of our life, the staff of FPRF takes this opportunity to wish you and your loved ones a very happy Holiday Season and a wonderful and prosperous New Year.