

Dairy Farm Efficiency Can Be Improved

LEOLA (Lancaster Co.)—At one of five customer meetings held Jan. 29, 30, and 31 by F.M. Brown's Sons, Inc. the topic of farm efficiency was discussed and explored by a group of five speakers. Dr. Carl Brown, sales manager, introduced the program and topics by challenging those who attended to go home with at least one new idea on how to improve their farms overall efficiency.

Dr. Charles Stallings, Dairy Extension Nutritionist and Director of Dairy Extension at Virginia Tech, Blacksburg, Va. lead off the program with a talk entitled "Dairy Farm Efficiency Starts In The Rumen." He discussed how nutrient requirements and feed intake have increased over the past few years because production has increased. He pointed to increasing dry matter intake as the best way to improve potential herd production and profit. Dr. Stallings stated that cows have no nutritional sense, we need to balance their rations for them, and then went on to discuss the nutrient requirements of various groups of cows including dry cows, pre-fresh cows and early fresh cows.

Feed efficiency must be looked at on a "Farm Enterprise" level. Dr. Stallings reviewed some partial budgets from Va Tech where the cost of using a Corn Silage/Hay based program was compared to a Corn Silage/Hay/Haylage program. In the example he cited the cost of feeding the former was \$46,000 for 100 cows for a year vs. \$52,000 for the later diet. While each farm will be different he challenged those in attendance to develop their own analysis. He then went on to caution dairyman about the cost of bringing in a lot of off-farm products. He briefly reviewed how nitrogen and phosphorus hauled onto the farm must

be disposed of. He cited Florida work which showed that to adequately dispose of 22 lbs. of phosphorus consumed by 100 dairy cows in a day, 9 pounds is shipped out in the milk truck, and the remaining 13 lbs. must be used to produce meat and spread on the soil. To do this, a farmer must have 89 acres of land available to spread manure for every 100 cows. Phosphorus may be one of the major limiting aspects of nutrient management in the future.

Milk Urea Nitrogen (MUN) was also covered. Based on Dr. Stallings research the picture MUN levels in milk paint is still cloudy. He cited research he and his graduate student recently completed where diets with a wide variations of 29 and 41% ration undegradable protein were fed and had little effect on MUN's. He cited other Pasture Research where cows fed intensive pasture had average MUN values of 25 to 30 Mg/DL and still had excellent reproductive status. While MUN's reflect the available rumen nitrogen available to cow, we have much to learn about their use. High levels may show that rumen available carbohydrates are low, or that ration energy is low and the cow is breaking down protein as an energy source. Very low levels will indicate that rumen nitrogen is not available to support adequate rumen microbial growth.

John Osborne, Mid-Atlantic Sales Manager for Diamond V Yeast, reviewed how yeast culture is manufactured. He reviewed research that show yeast culture increases the efficiency of rumen fermentation by increasing the number of fiber digesting bacteria in the rumen and by increasing the digestibility of feeds. He cited work which showed that in pre-fresh rations yeast culture increased the level of propionic



Program participants are from left, Dr. Mark Engstrom, director of technical services, Hoffman-LaRoche; Brian Good, farm seed sales, F.M. Brown's Sons, Inc.; Dr. Charles Stallings, director of dairy extension, Virginia Tech; Dr. Walter Kennett, director of nutrition, F.M. Brown's Sons, Inc.; and John Osborne, Mid-Atlantic sales manager, Diamond V Yeast.

acid produced and improved feed intake in post-fresh cows.

Dr. Mark Engstrom, Technical Director for Hoffman-LaRoche, talked about feed efficiency in beef and heifer diets centered on how Bovatec improves feed efficiency and health in calves and heifers. At as early as four weeks, calves are starting to produce volatile fatty acids in their rumen via fermentation.

The newest member of the Brown's Staff, Brian Good, talked then about planning your cropping program to take advantage of the unique characteristics of your soils. Brian challenged those who attend not to make the mistakes he has in the past of over-estimating the yield potential of soils.

Dr. Walter Kennett, Director of Nutrition at F.M. Brown's Sons,

Inc. concluded the program by discussing the topic "Brown's Nutritional Programs, Making The Pieces Fit." He challenged every producer to consider himself/herself to be a professional dairyman, just like the person who has 600 or 1000 cows. He showed the feeding programs of five of Brown's top herds which range from 25,000 to 29,000 lbs. of milk. None had exactly the same program. All had designed their program to match their farms highest efficiency, and then Brown's developed an individualized feeding program for them.

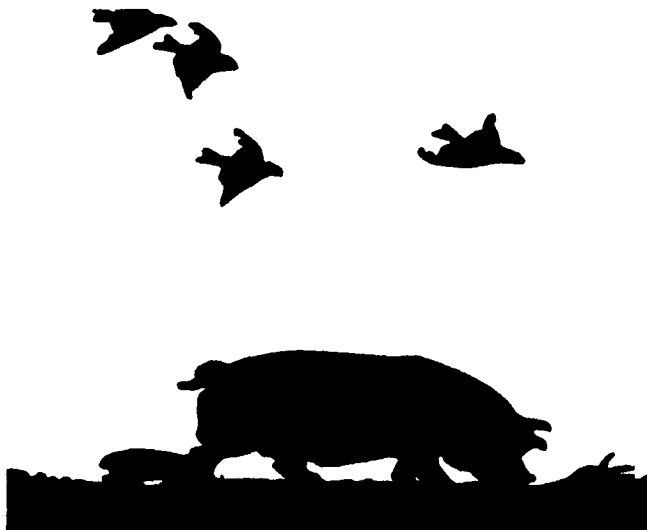
Dr. Walt then showed how increasing dry matter intake from forages by dropping forage NDF from 48% to 44% on an average could improve returns 12 cents per cow per day. He discussed the impact of various rumen available and rumen bypass protein sources

and how they needed to be matched up with the fiber and non-structural carbohydrate levels of the diet. He showed how Brown's nutritional printouts provide opportunity prices of various feeds offered in their feeding programs, and the impact of feeding more corn silage or more haylage in example programs. The cheapest bypass protein sources are still, and always will be the microbes produced in the rumen. He discussed how to maximize rumen protein production, and then how to select protein sources which will do the cow the most good past the rumen.

In conclusion, Dr. Kennett cited recent research where digestibility of various protein sources were compared after they escaped the rumen. The most digestible source of rumen escape protein were fish-meals and expeller processed soybean meals such as MoraMeal.

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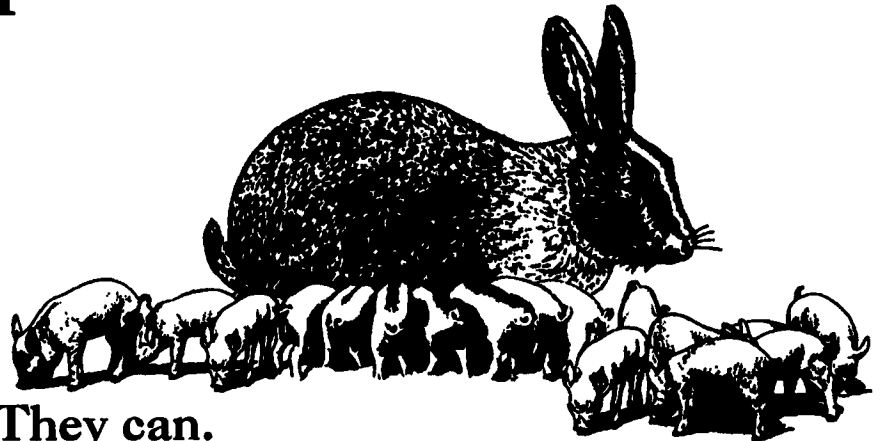
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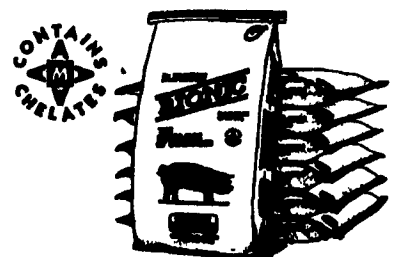
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