

animal husbandry notes

Collected at the second world conference on animal production held at the University of Maryland in College Park

DAIRYING

Fertilized grass may harm cows

Heavy fertilization of pasture may result in lusher greenery but poorer health for the cows eating it.

Dr. A. J. Mudd of England's Institute for Research on Animal Diseases says a lowered level of calcium absorption was noted in dairy cows fed in the spring on grass treated with heavy dressings of potash or nitrogen plus potash. Untreated grass or grass treated with nitrogen alone does not produce this effect, he says. The potash treatment may inhibit calcium uptake by the grass.

In the fall, Dr. Mudd says, the villain is nitrogen. Heavy nitrogen or nitrogen plus potash applications earlier in the year result in grass containing 10 percent more moisture than grass treated with potash alone or untreated.

Because of this dilution the total mineral intake of cows eating the lusher grass is lowered.

MUTATIONS

Chicken breeders seek new model

The current design of chickens has gone about as far as it can go in egg production, according to Dr. Walter C. Morgan of South Dakota State University's Agricultural Experiment Station in Brookings.

Dr. Morgan says chicken breeding now is at a dead-center position in which techniques for mating and selection of strains have been unable appreciably to increase annual egg production for the past 10 years.

What is needed, Dr. Morgan says, is a new variety of chicken genes for breeders to experiment with. He has produced mutations by irradiating sperm with cobalt 60, and he reasons that if radiation can affect genes for qualitative changes, it can also change genes for quantitative factors such as egg production. An artificially produced branch in the chicken family tree might be manipulated to produce smaller, hardier chickens laying bigger eggs.

BREEDING

Livestock matched to local feeds

Much of the work done in animal breeding is directed at developing varieties producing fast, high yields, then developing a suitable diet to feed the new varieties. Sometimes this diet does not coincide with what is locally abundant, putting a strain on the farmer's purse and making the new breed less attractive. Even rearers of established breeds often depend on imported feeds.

Siegfriedo Kraft, an agronomist with the National Institute of Agricultural Technology in Pergamino, Argentina, suggests that the answer lies in the new concept of nutritional genetics—breeding animals not so much with individual productivity in mind but considering optimum productivity from available feeds.

Thus, while most chickens do poorly on sorghum-based diets, Kraft's lab has developed a broiler strain

which gained 20 percent more weight than normal on a 66 percent sorghum mash. Sorghum is plentiful in north central Argentina. Other breeds are being developed that will thrive on olive pulp, a plentiful by-product of oil production in the western region, and on seaweed. The latter breed is destined for use in southern Patagonia.

FORAGE

Mutton odor depends on diet

The market for mutton always has been hampered by the meat's strong and, to many people, disagreeable odor and flavor. Some people avoid lamb for the same reason. Scientists in New Zealand report that attention to the sheep's diet may have a bearing on the matter.

Robert A. Barton of Massey University says sheep fed exclusively on a diet of white clover produced meat of more intense flavor and odor than did sheep fed on perennial ryegrass.

While sheep on the range consume a mixture of plants, and thus fall somewhere between the two experimental groups, mutton breeders might find it worthwhile to develop techniques for reducing the levels of white clover and similar plants in their pastures.

BREEDING

Improved livestock may fail in desert

It has long been the habit among animal husbandrymen to attempt to improve the poor cattle of some underdeveloped nation by cross-breeding with fat, imported strains. In arid regions this may be a mistake.

Dr. W. A. Verbeek, director of animal husbandry and dairying of the Union of South Africa's Department of Agricultural Technical Services, says more productive results are achieved by selective breeding within the poor, but indigenous, strain. Introduced breeds crossed with native cattle may produce one generation of offspring showing good production, but subsequent offspring show successive degeneration and may end up poorer than the pure native animals. This is because the introduced strains are not genetically prepared for the harsh environment.

NUTRITION

Cattle don't recover winter losses

A New Zealand scientist warns ranchers not to let winter feeding of cattle slide with the expectation of making up lost weight on lush spring pastures.

A. D. H. Joblin of the Ruakura Animal Research station described a winter feeding experiment in which one herd of beef cattle was wintered on poor pasture for 13 weeks. Another herd spent the 13 weeks on abundant pasture.

The cattle grazed on the sparse pasture were then put out on plentiful grass for the next 22 weeks. Despite this they regained only about a third of the weight lost due to poor winter feeding.

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