Sled-dog food becoming big business

Sled dog racing is beginning to mean money for Alaska's fishing and farming industries.

Alaskan barley and fish meals are now being used in a newly developed, Alaska-produced dog food. The new food, marketed by Kobuk Fuel and Feed of Fairbanks, utilizes approximately 50 percent Alaskan produced ingredients.

"Eventually we'd like to increase the percentage of Alaskan products in the feed," said Ken Ulz, Kobuk Fuel and Feed president. "When the new McKee's processing plant comes on line, we hope to buy the meat products we use from them. We could possibly have close to 85 or 90 percent Alaskan products in our feed."

Dr. Fredric Husby, of the University of Alaska-Fairbanks School of Agriculture and Land Resources Management, guided the development of the new feed. Development of the feed formula, entirely funded by Kobuk Fuel and Feed, was a public service project by the university.

In formulating the diet, Husby needed to meet several challenges. He tried to use Alaskan products and develope a highly digestible feed for working dogs. He decided to work with two ingredients to provide most of the nutrition. He also had to meet the standards that Alaskan mushers demand.

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"We've got a diet that we think, from the main nutrient standpoint, is comparable to the most commonly used high-stress commercial products available. We supplied our fat and our protein from about as good of sources as you can get," Husby said. "Although fish meal has traditionally been considered to be low in palatability for working dogs, we didn't have that problem in our tests. The dogs ate it without any problem."

The new mix needed to be 30 percent protein and 20 percent fat. Digestibility is important since dogs in races such as the Iditarod and the Yukon Quest, eat up to seven times more food a day than normal to provide the necessary energy.

The average daily maintenance diet for a racing sled dog includes about 1,400 calories. Multiply that by seven and it's the equivalent of eating a little more than three pounds of butter daily.

In human terms that would be comparable to a 175-pound average male office worker increasing his calorie intake from 2,100 to 14,700 calories a day. To get that many calories, he would have to drink 41 chocolate milkshakes or eat 163 fried chicken drumsticks a day. He wouldn't gain weight--assuming that he worked it off like the racing dogs do.

"That's a tremendous amount of food going down the alimentary canal, and it's got to be easily digestible. If it's slowly digested, the dogs aren't going to extract the nutrients out of it. So we had to look at things like high quality animal proteins--meat and bone meal, and fish meals," Husby said.

Designing such a feed theoretically was one thing. Seeing if it would actually work was another. Mushers, as a group, are a demanding market.

"I enjoy talking to dog mushers. They are challenging. As a group, they are well read. I think they are the best informed group about nutrition in the state," Husby said. "they're interested in providing a high stress diet. They have a competitive spirit. They are also interested in the welfare of their animals. They know that what you put in the dogs is going to pay off in the performance that you get out of them."

Most high-stress commercial dog foods use a combination of corn and either chicken or meat by-products. Both barley and fish meals are innovative. Fish meals have previously been incorporated into dog foods, with mixed results. Nutritionally it worked but on occasions, a fish odor made it unacceptable for house dogs.

Very little research has been done on barley until this year. During the summer of 1985, the Kobuk-financed study investigated both hulled and hulless barley. The hulless barley, Thual, is a variety developed in Alaska at the Palmer Experiment Station. Six dogs owned by mushers Joee(JOEE IS CORRECT SPELLING) Redington, Jr., and Bill Cotter were fed experimental barley and fish meal feeds in a controlled situation.

"Redington and Cotter were selected because they represent the two basic types of racing. And both have developed their kennels for their needs. Redington is a sprinter and Cotter goes for distance," Ulz said.

Husby supervised the research. Kerri Rutt, a pre-veterinarian student, worked with Husby as a technician.

Each of three formulas, which were acceptable on paper, were tested. But in the end the dogs made the final determination.

Each dog was fed a maintenance diet of 340 grams, or about 12 ounces of food a day. There was no variation in the amount of food given during the test period.

Feeding trials were in five-day periods. In each testing period all six animals were fed one of the formulas . Each dog was weighed at the beginning and at the end of each test period.

During the test, each dog was monitored for its feeding efficiency on the formula being tested. After five days of monitoring, the dogs were gradually switched to a new test formula. The transition was made by feeding the dogs a mixture of the food they were using with the new test formula. On the first day of the transition, they were given 80 percent of the old and 20 percent of the new. Each following day the ration was increased by 20 percent of the new and the old was decreased by 20 percent. By the fifth day they were eating 100 percent of the new formula.

Dogs ate 100 percent of the new feed for several days to ensure a successful transition. After the transition, another five-day test period started.

During the summer, three formulas were tested. Two of the top-selling commercial high-stress dog foods from other producers were also tested as a comparison. From the testing program a new formula for Kobuk's working dog feed was selected.

Kobuk is now marketing the feed under its Musher's 30-20 brand. Most of the fat in the formula is from human grade pure pork lard. The company is now substituting corn oil for part of the lard. Corn oil comprises one percent of the food.

"Many dog drivers have found that by using corn oil as part of their feed rations, they get a glossier coat on their dogs' feet."

"One thing I think we've benefited by is that we've looked at Alaskan barley as a major contributing energy source in replacement for corn which is the main carbohydrate source in all high-stress dog diets," Husby said. "Thual hulless barley was preferred to the hulled barley in the tests, but both types had good diet performance. The state is encouraging barley production. This also expands the utilization of fish meal. This means that for both barley and fish meal, the fragile in-state market is now not entirely based on livestock.

"This helps guarantee a market for Seward fisheries fish meal. Seward has talked about developing a bottom fish fishery this year. This fishery could produce a product that would be very similar to herring meal."

Dog mushers are the second largest purchasers of commercial feed in the state. Only the dairy industry buys more commercial feed.

Husby feels that much of the data can be applied to other commercial feeds. In particular, he is interested in seeing if Alaskan barley and fish meals could be used for fur farming.

Written by J. Stephen Lay, UAF Public Information Officer.