Scientists link lamb taste to sheep diet

WASHINGTON, D.C. - What and where sheep eat could make a difference in reducing soil lost to erosion in the years ahead, say scientists at the U.S. Department of Agriculture.

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Problem: Americans prefer lamb from young sheep finished for market on grain, usually corn, a crop often tilled in soil that is easily carried away by the winds and rain. Australians and New Zealanders, on the other hand, widely accept lamb fed only forage.

Solution: Sheep are excellent foragers. They get an average of 90 percent of their nutrients from grass and legumes. Let the sheep graze on range or pasture forage instead of feeding them grain. That way, lamb producers can grow grass or grass-legume mixtures on some land now tilled for grains. Much of this land is hilly and susceptible to being washed and blown away after its ground cover is lost in the cultivation of crops like corn.

Halting or slowing the loss of vulnerable soil is one reason USDA scientists are doing research on

forage crops such as alfalfa for sheep, said Terry B. Kinney, Jr., administrator for 'USDA's Agricultural Research Service.

Another goal of the research is to boost U.S. sheep production, which fell from 25 million animals to half that many between 1965 and 1979, said Kinney.

Since then, the number of sheep rose slightly - about 1 to 2 percent a year - giving the lamb industry some encouragement, according to USDA's Statistical Reporting Service.

"Sheep offer a market outlet --as do cattle - for forages that are vitally needed to increase water absorption, reduce soil erosion and help maintain productivity," said Kinney. "And farmers often raise sheep in areas that are hilly and subject to soil erosion.'

The challenge, said Kinney, is that American consumers generally have not accepted lamb to the degree they have accepted beef and pork and they prefer animals fed grain, most often corn, over those fed forage for the market.

To meet that challenge, Gordon C. Marten, research leader and USDA's agronomist with Agricultural Research Service, and Robert M. Jordan, animal nutrutionist at the University of Minnesota, have teamed up at St. Paul to study lamb production as it is affected by forage. They are trying to develop lower-cost cropping systems that will reduce soil erosion.

"If we can develop forageoriented cropping systems that appeal more to present and potential sheep producers," Marten said, "we may be able to reduce the cost of producing sheep, increase production and consumption of lamb and create markets for forages that will increase water absorption and protect soils from erosion."

Success, he said, hinges on consumers accepting lamb fed on forage rather than grain. Marten and Jordan are comparing daily rates of gain by lambs on alfalfabrome pasture and pure alfalfa pastures, with and without pelleted grain. They are using cross-bred

sheep, noted for multiple births, mixed with Hampshire and Columbia breeds, noted for meat production.

In the experiments, average daily gains were almost identical when lambs grazed alfalfa or a mixture of alfalfa-brome that is predominately alfalfa. Daily gains on alfalfa-brome declined when the grass provided more than half the total forage available. The difference disappeared when lambs also were allowed to eat grain.

"We found cost-benefits by

lambs which are an eighth Finn feeding grain to lambs on both alfalfa-brome and alfalfa pastures," said Marten. "But when you don't feed grain, the best economic response occurs when you have a high quality forage like alfalfa.'

> Because grass contains more fibrous cell walls than does alfalfa. said Marten, grass moves more slowly through the digestive tract. This means less grass forage can be consumed, fewer nutrients are made available for growth over a period of time and lambs reach market weights at older ages than those fed alfalfa

Grain-fed animals consume more nutrients than those fed only pasture forages and these animals reach market weight the earliest.

"Meat from these younger animals is more tender and more marbled with fat than is meat from forage-fattened animals," said Marten. "In Australia and New Zealand," he said, "lamb prodcuers simply market forage-fed lambs at a young age when the meat is tender. The lamb has nationwide acceptance. We hope this degree of acceptance can be achieved in the United States."

Check pastured heifers daily

UNIVERSITY PARK - Summer pasture is often considered "free" room and board for replacement heifers. That "free" room and board may turn out to be pretty expensive if heifers don't grow and mature the way they should

Summer pasture for hiefers does not take much labor on your part, but it does take some management skill and attention to detail, say Penn State Extension Veterinarian Lawrence Hutchinson.

Here are some do's and don't's for keeping pastured heifers growing and healthy:

-Water supply should be plentiful, accessible and of good quality; avoid stagnant or algaeladen water;

~Supply supplemental trace mineral salt, as well as calcium and phosphorus;

~Avoid overgrazing; supplemental feed and /or additional eliminate cattle grub problems:

pasture may be necessary in mid to late summer:

-Pastured heifers should be wormed at least twice during the pasture season. These wormings pay best dividends if given early in the pasture season. However, if vou haven't wormed them by now, start right away;

~Leptospirosis frequently affects pastured heifers. Use lepto vaccine, especially on breedingage heifers;

- IBR, BVD and other infections may be a threat to your heifers. Check with your veterinarian for vaccination recommendation;

~Flies irritate pastured heifers and can reduce weight gains; they also spread diseases, including pinkeye. Insecticidal ear tags and oral larvicides are two elements in a fly control program. Ask your county agent for details. Good fly control will also reduce or

-Heat detection of pastured heifers is a problem on many farms. Holstein heifers should be showing heats by the time they tape 600-650 pounds; they should be bred when they are about 750 pounds. If you intend to breed your pastured heifers Al, you will need daily or twice daily observation, heat detection aids (chalk mark or detector patch), and restraint facilities.

Hutchinson reminds farmers that the best single thing you can do for your heifers this summer is to observe them daily. Those heifers on pasture are your future herd; keep an eye on them!







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