Page 10B THE BATTALION

Color hides good nutrition and good flavor Sunflower seed may become major protein sour

Cattle are now eating protein that could assuage the hunger of chil-dren starving in Pakistan, or if that's too far away to affect one's sensitivities, think about Mexico - or Texas

They're eating the high protein products of sunflowers seeds which, because of husking problems and tendency to turn green or black when cooked, aren't considered useful for human consumption. Two Texas A&M University sci-

entists, Drs. Peter J. Wan and Karl F. Mattil, are the principal investigators on a project to remedy the homely sunflower's shortcomings.

The duo works through the Food Protein Research Center for A&M's Texas Engineering Experiment Station. The program is funded by the USDA's Agricultural Research Serv-

"The sunflower seed is about 25 per cent protein, and the meal pro-

Frozen Confections

Other Delights

protein with a good flavor." "However," added Mattil, "in

processing the meal for foods, we often use alkaline reagents like baking soda. When you use it on sunflowers you had better be Irish because it's going to be green.

People like clean colors in their he continued. "They want their bread and potatoes white, a desire that becomes even stronger among the poor who would be the main beneficiaries of a low-cost protein. In many foods this coloration just would not be satisfactory.'

The culprit in this coloration is chlorogenic acid which is found in a lot of plant material and has no re-ported adverse biological properties. It is present in large quantities in sunflower seeds.

"The meal is currently used only for cattle feed and sold at the lowest

'An increase in value that great could put the sunflower seed into commercial competition and will make it a much more valuable crop to Texas farmers," said Dr. Wan. "Right now though, the sunflower seed cannot stand on the value of its

oil alone. 'The vegetable oil market has

duced can be 50-60 per cent pro-tein," Dr. Wan pointed out. "Good protein with a good flavor." "However," added Mattil, "in of palm oil, which is reaching its peak, and the increased production of soybeans in Brazil. This has severely demoralized the vegetable oil market in the U.S.

"The result is we must demonstrate a higher value for protein from the sunflower seed and get it into the food chain," Wan said.

"This will increase real value and food value.

'Eventually, the world will find a place for all this oil but in the meantime a lot of people will suffer and it is usually the small one-crop farm-er," Mattil said. "They're now ask-ing_if they can afford to grow sunflower seeds profitably. The an-swer is yes, if we can increase the protein, and no if not.'

"We're already ten years behind "Peter will find out how the during commercial production development," he said. "You chlorogenic acid is bound to the and meal from sunflower

need to start research a decade before the demand is felt. We have people who are hungry in Texas pilot plant operation will require in years. It will require in right now. Protein foods are expensive, and we can't wait until later to develop this resource.

"Look at the price of meat, cheese and milk," said Wan. "Poor and retired people are losing out on protein, so someone has to develop principal researcher of a si ow-cost protein.

meal," Mattil attested. "W have guidelines for a co hunch and luck. Sometime is most important. It won but it will be a challenge.

Dr. Peter Wan is a ect to remove the fiber of during commercial produ

Livestock production efficient agriculture

Despite the claim by elitists that S. agriculture wastes grain Animal Science 68th annual meet-producing protein with livestock U.S. agriculture wastes grain through excessive meat production, the nation's agricultural production, research and marketing can be proud of its accomplishments, a prominent cattle feeder said here last week.

Kenneth R. Monfort, board chairman of Monfort of Colorado, Inc., said there is no reason for shame that U.S. farmers and ranchers have produced so much food and fiber at reasonable cost to consumers, and with such a small percentage of the overall population in-

Monfort told about 1,800 mem-

ing (Aug. 16-18) at Texas A&M University that there are those who want Americans to feel ashamed for eating so well.

The reason the citizens eat well, he said, is because farmers and ranchers produce meat protein, as well as food grains, and they do it through efficiency, hard work and the research tools gleaned from colleges and universities.

'Animal agriculture has been particularly condemned by many of the elitists throughout our nation," Monfort said. "They decry what

producing protein with livestock and poultry. They state flatly that we should not use our grain supplies to produce meat.

The speaker said these same elitists usually ignore the fact that much of the nation's agricultural acreage has one best use — the production of livestock.

"They ignore the fact that our greatest crop of all, corn - yellow corn — is primarily a feed grain and will in the foreseeable future continue to be used in production of meat whether we use it at home or whether it is exported," he said.

Monfort then listed many of the research accomplishments by such agencies as the Texas Agricultural Experiment Station. The advances are now standard practice in most

But he told researchers in the ASAS meeting that "your job has just begun. We need so much

He said a cow still has only one calf a year. It still takes about eight pounds of feed for a pound of liveweight gain in the feedlot, and 20 pounds of feed for a pound of edible beef. Too often, undesirable

meat is graded U.S. Choir desirable meat is not graded Monfort put the ASAS me on the spot by listing what he

'wild" research goals when celebrates it tri-centenn He said he would like to per cent calf crop, 1,2 steers at 12 months of age only the last 260 pounds the feedlot; a convers pounds of feed to a pour

almost no fat on the ca universally desired tende flavor that add up to me

Margo's la Mode

Livestock fed recycled manure; cattlemen say utilizing protein is good business

Two cattlemen in the southeastern United States are making efficient use of animal wastes by recycling them in a practical feeding program

Russell May of Timberville, Va., and Sam D. Hay, Jr., of Covington, Ga., talked about their operations at the annual meeting of the American

sheep, discussed the use of poultry litter in rations for his beef herd, brought on mainly by the need for a more efficient type of feed. He initi-ated litter feeding in the 1960's under the pressure of drought con-ditions, and has since expanded his operation. Early rations consisted of one pound of corn meal and three pounds of litter, supplemented with hay during the winter months. Now May mixes corn silage along with the litter, with his cow herd receiv-

BASKETS: SHRIMP & CHICKEN

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ing a ration of 25 per cent litter and 75 per cent silage

The key to using litter is its palatability to cattle, said May. He piles up the litter from his poultry operation for four to six weeks to allow it to go through a heating period before using it in a feeding

Hay, whose main business is a backgrounding and cattle finishing operation, recycles manure by using a ration consisting of 45 per cent corn, 15 per cent corn silage and 40 per cent manure.

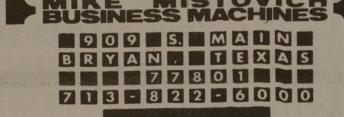
"By utilizing the protein in ani-mal waste products along with silage and grass, we feel we can compete and stay in business," said Hay.

The cattleman said that he buys corn for his feeding ration but grows the corn silage. These two ingre-dients are mixed with the manure and put into a silo for 10 to 14 days before feeding it to cattle. "Using the above ration, we have

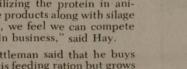
realized an average daily gain of 2.65 pounds per animal in our finishing operation," noted Hay. He also feeds manure to cattle being backgrounded on pasture and relies heavily on ryegrass and yucchi clover for grazing from October through May.

Another speaker, Dr. Arnold Peterson of Elburn, Ill., discussed a \$1.5 million plant at Summerfield near Hereford in the Texas Panhandle where manure from cattle feed-

THE SUPER SCOOP Society of Animal Science at Texas A&M University Aug. 15-18. Behind Loupot's * Northgate May, who runs an Angus herd along with swine, poultry and E MISTOVICH



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lots is being processed for use in finishing rations as well as for fertilizer for the home garden market. The product has an analysis fo 2 per cent nitrogen, 1 per cent phos-phorus and 2 per cent potash. Peterson said that at a feedlot

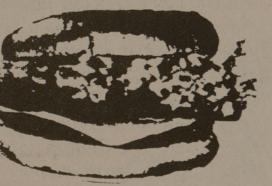
near Hereford, a ration containing 30 per cent manure and 70 per cent corn silage is being utilized. He contends that 30 to 40 per cent manure in a ration is probably the upper limit. The processed manure has a crude protein of 12.5 per cent.

Manure is valuable as both a feed and fertilizer," said Peterson. "It is generally valued at about \$5 million annually across the nation."

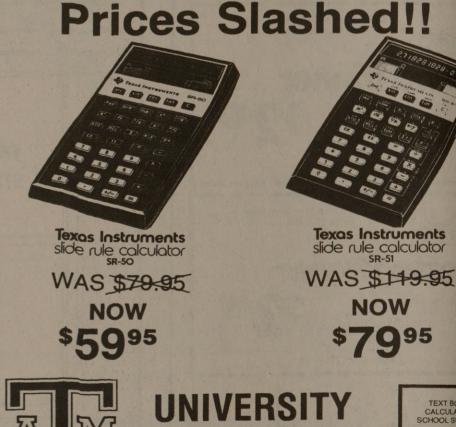
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