

Dairy cow of the future will be Super Cow

BY SHEILA MILLER
HERSHEY — Dairymen were introduced to the future dairy cow during the 29th Annual Meeting of the Pennsylvania Farmers' Association on Tuesday.

Veterinarian James Evans, of the University of Pennsylvania's New Bolton Center, looked into his crystal ball and told the dairymen's fortunes.

He stated that the cow of the future will be bred with the emphasis on efficiency... not necessarily the biggest and the best.

Evans pointed out that the future dairy farmer will be

better able to manage the smaller-sized herds. The cost of maintaining the herd for peak production will be less for the smaller framed animals than for the now-popular large framed cow.

There was some nervous laughter from the group when Evans stated that the cow of the future will be black and white, with possibly some red and white cows. He cited statistics to back up his theory.

"Nine out of ten times, the Holstein breed is chosen by dairymen. It's popularity has risen from 20 per cent in 1920 to 60 per cent in 1975."

He added that with the acceptance of Red Holsteins in the purebred registry, there would be some added color in the 21st century herds.

Evans pointed out that the cow, rather than sheep or goats, would be the ruminant of the future because of its dual production.

"The dairy cow can supply both meat and milk. In today's low-fat society, the dairy animals lean meat is more desirable than beef. And, so far, we don't eat goats or milk sheep."

The doctor also described the futuristic cow as producing more milk. He said that today farmers are selectively breeding in that direction, and mentioned the Indiana cow who's average was 54,000 lbs.

"On a national average, milk production has increased 220 pounds per cow per year through farmers stressing and pushing their herds for the desired, selected traits."

Not only will the fortunate future farmer have a high producing cow, he will also have a high fat and protein producer. Since milk is mostly water, this is needed

to maintain the nutrient value of the product.

Evans stressed that fat is the most concentrated form of energy available to people. The 21st century cow will be able to produce the desired fat because per cent fat is a highly heritable trait.

In today's market, Evans noted, the international buyers of dairy cattle put their main emphasis on the milkfat production of their prospective purchases.

Milk in the future will be drug-free, according to the veterinarian. Breeding will select for those cows that are disease resistant. These cattle will not be troubled by mastitis or cystic ovarian follicles.

And, the cows will be able to produce the large volume of milk with high butterfat with a diet of "non-competitive feeds", such as corn cobs, recycled manures, paper, and pine needles.

"In the future, grain prices will not allow the farmer to feed corn to cows. He will have to rely on the cows ability to ruminate."

Evans informed the dairymen that there is a direct correlation between PDM and feed efficiency in

daughters. He cited a recent study published in the Holstein Friesian World which dealt with the effects of a low grain ration on a milk cows production efficiency.

The efficiency average in the study was 25 per cent, with a range from 17-35 per cent. According to the study, North American cattle could maintain their efficiency on either a high or low grain diet.

Evans touched on the breeding processes of the future. By the next century, he said artificial insemination will have progressed to the point where semen of a selected sex will be possible.

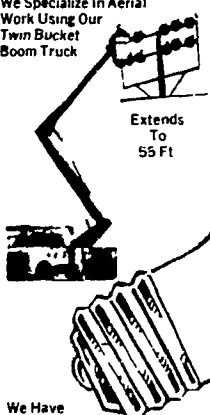
The head of the Pennsylvania Embryo Transfer Service said that embryo transplants and transfers

will allow the best cows to produce many offspring in one year.

Evans also told the farmers about the possibilities of gamete fusion, or causing two ova to unite without the usual sperm; parthenogenesis, where an egg divides without the sperm, producing individuals with the exact same genetic material; in vitro fertilization, which allows a cow, who's reproductive organs may prevent gestation, to have her eggs collected and fertilized outside of her body; and cloning, the ultimate method of reproduction where tissue taken from a cow can be biologically grown into another identical individual.

With these ideas that sounded like the script of a bovine Star Wars, Evans' crystal ball clouded over giving the dairy farmers a lot to ruminate on.

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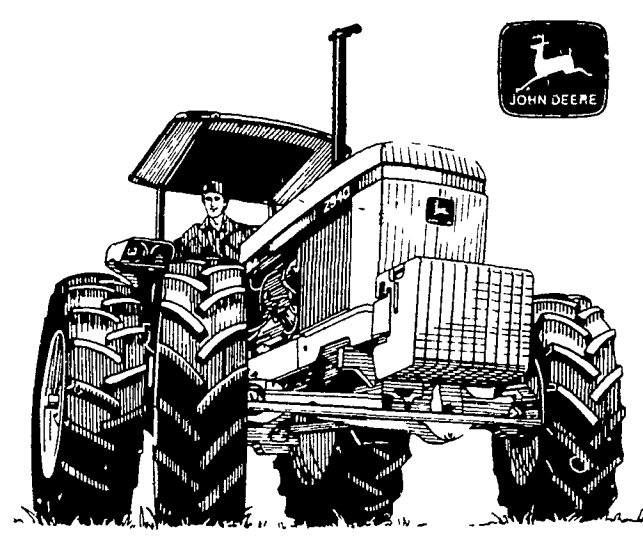
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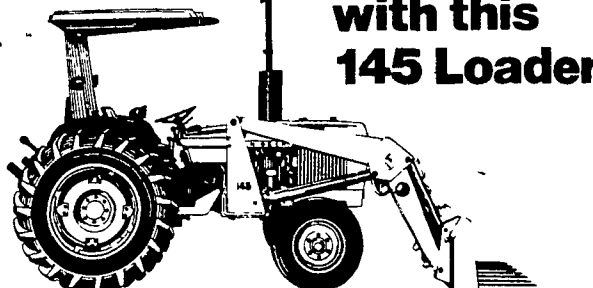
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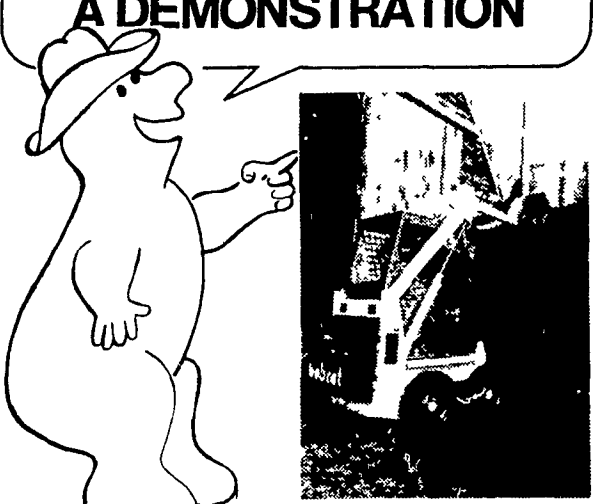


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