

# Steers on Pasture Need Grain, Study Shows

Grass pasture alone is not adequate for summer finishing steers, according to Dr. Richard Fowler, Extension livestock specialist at the University of Delaware.

Holstein steers actually lost an average of 36 pounds in 2½ months in a research project by the University in cooperation with Draper King Cole cannery near Milford.

This loss was despite daily pasture irrigation with cannery waste water that supplied high levels of nitrogen to the grass. Most farmers could certainly not afford such irrigation for

pastures. But, in a few locations, irrigation with discharge from sewage treatment plants may be possible, Fowler says.

However, with or without irrigation, for a successful summer feeding program, the study shows you'll need to add extra grain rations to supply energy. The experimental steers got their protein and fiber needs from the pastures; but without grain, the Holsteins lost weight.

When ground corn was added to the cattle ration at a rate of one per cent of the body weight, within a month the steers gained back

all they had lost, plus 16 additional pounds.

In the study, six Holstein steers were kept from July 2 until September 16 on two plots of one-half acre each. The pastures were seeded to a K31 fescue, orchard grass and red top mixture.

For experimental purposes, no fertilizer or lime were applied. This was done deliberately to test the value of irrigating with cannery waste water, Fowler states. "However, before the summer was over, that pasture was in sad shape."

"This brings up another point for feeders. Don't overgraze—

keep the pasture in good condition."

In the study, part of the reason for the gain in weight later in the season was doubling the pasture area to reduce overgrazing, Fowler says.

A pesticide residue study was an interesting sidelight to the research. During a good part of the summer, much of the irrigation water had been used for pepper processing. Peppers are one of the few crops still being sprayed with DDT for corn borer control.

When the grass was tested for DDT residues, the highest level was five parts per million

(p.p.m.). The residues in the steer ranged from 1.2 to 1.34 p.p.m. in the two steers checked. The maximum allowed in beef is seven p.p.m., so the steers were well within acceptable levels, Fowler states.

Another aspect of the study was designed by Dr. William Knibbe, soil scientist with the U. S. Department of Agriculture Soil and Water Conservation Service Research Division. He was interested in learning whether cattle would pack down the heavily-irrigated soil and keep water from going through. Fortunately, the soil was so sandy no compaction was noted.

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