

# Sun power turns Daisy on

Dairy science researchers have found that Holstein dairy cows exposed to 16 hours of light per day not only give more milk and gain weight faster than cows on "short" days, but also reach puberty sooner.

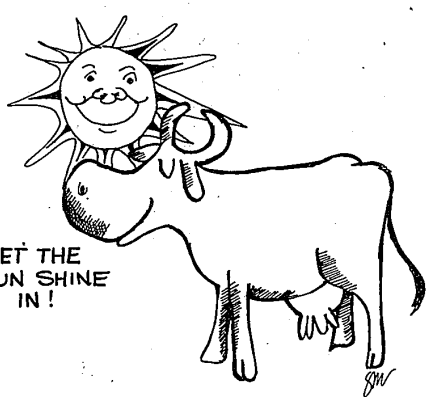
"However, once the cycle gets going, the light doesn't seem to have any effect on ovulation — it's still random," says H. Allen Tucker, professor of dairy sciences at Michigan State University. "But Holstein heifers exposed to the long days do come into puberty at an earlier age than heifers subjected to the natural short duration (less than 12 hours of daily light) photoperiods in the winter."

The past year's study repeated many of the results of earlier research work. Holstein heifers provided with 16 hours of light per day again showed roughly a 10 percent increase in weight gain, and lactating cows produced up to 10 percent more milk under long-day conditions.

Experiments during this year at the MSU research station have focused on the effect of changing the type of light source and on light intensity.

Tucker found that fairly low intensity lights work just as well as high intensity lights in stimulating weight gain. He also found that mercury vapor lamps gave about the same results as the fluorescent lights used in previous experiments. Data on a

LET THE SUN SHINE IN!



study of incandescent bulbs as the light source are just being assembled.

Tucker's discovery of the relationship of day length to milk production grew out of basic research on the hormone prolactin, what causes it to be released into the cow's blood and how prolactin levels are related to milk production.

Sampling cows throughout lactation showed that cows produce more prolactin — and more milk — during the long days of summer than during the short days of winter.

Controlled experiments with Holstein dairy

herds revealed that providing supplemental light in winter increases milk production and that the optimum day length is 16 hours. Finding that heifers exposed to long days gain weight faster and come into puberty sooner was something of a bonus.

If these results can be duplicated in the field, farmers would have an economical way to get cows into production. If beef steers respond positively to the 16-hour days, gaining more weight on the same daily feed ration and spending fewer weeks fattening, they would reach slaughter weight on less total feed and so cost less to raise.

## Carpet as champ needs TLC

For sheer ability to absorb punishment, household carpeting ranks as the heavyweight champ of home furnishings.

"Nothing in the home is subject to more battering than the average carpet gets from foot traffic, accumulated grit, grime, absorption of household odors, and accidents such as spills or burns" according to Lewis W. Champney, a Montgomery Ward merchandiser.

Carpeting and the appliances needed to maintain it are major home investments that require proper care to maximize their wear lives, said Champney, who is buyer of floor care products at Wards.

HE LISTED the following maintenance tips:

- Your regular home cleaning program should include a light daily once-over with a carpet sweeper or vacuum cleaner, and a more thorough cleaning once a week.

- Use chemical cleaners occasionally to help remove greasy soil and deposits that dull carpet colors — but only these preparations made especially for carpeting and rugs. Stay away from soap, ammonia, bleach or any of the strong household cleaners intended for hard surfaces.

- Despite attentive home care, carpets may need periodic professional cleaning to remove accumulations of embedded grease and dirt. In selecting a cleaner, deal only

with skilled professionals.

- Before you vacuum pick up by hand any small, hard or sharp objects such as pins or clips which can damage the fan blades, belt or hose, or puncture the dust bag.

- Be sure your dust bag is empty before vacuuming. A clean bag provides greater cleaning efficiency and protects the motor, which is cooled by air flow.

## OU hikes fees

Oakland University's 1979-80 operating budget includes a tuition rate increase averaging about 8 percent for all classes of students.

The new budget of \$28,970,768 and the tuition rate hikes were approved by the OU Board of Trustees on Aug. 8. The new costs will be effective for the fall semester.

OU officials said the tuition increases are below those already approved at most of Michigan's public colleges and universities. Oakland's undergraduate tuition continues to rank seventh highest among the state's public four-year institutions.

Under the new tuition schedule a resident undergraduate pays \$27.25 a credit hour, up \$2.25; resident graduates pay \$38.50 a credit hour, up \$3.50; Tuition for non-resident undergraduates went up \$3.50 a credit hour to \$67

and a non-resident graduate student will pay \$75 a credit hour, an increase of \$11.50. Undergrads, taking courses off campus, graduate fees increased \$2.50 to \$43.00 a credit hour.

The university's 1979-80 general fund operating budget will be derived from \$19,344,875 in state appropriations, \$7,790,000 in tuition (including an anticipated \$590,000 to be realized from the tuition increase), \$370,000 from registration and admissions fees, \$475,000 from indirect cost recovery from administering grants, \$465,000 in miscellaneous revenue, and \$525,893 carried on from the 1978-79 budget.

The 1979-80 general fund operating budget has been increased by \$3,102,158 over 1978-79. A major portion of the increase, some \$1,711,971 will be needed to pay the higher costs of maintaining existing programs.

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