

Reduce Summer Heat to Increase Profits

BY DR. GEORGE F.W. HAENLEIN

Extension Dairy Specialist
University of Delaware

NEWARK, Del. — Summer heat is here again, and it's time to take steps to protect milking cows from its effects.

Without your help they will suffer in a number of ways which can also have economic consequences. Cows can't tell you when and if they suffer. They simply give less milk with a drastically lower milkfat percentage, don't come into estrus, don't show estrus and don't conceive.

What can you do to prevent the harmful effects of heat stress on your milk herd?

Short of installing air con-

ditioners — which would be ideal but probably aren't an economical solution these days for most dairy farmers in this region — you can do quite a few things, starting with exercising common sense.

Physiologists have shown that the comfort zone for Holsteins is between 35 degrees and 70 degrees F. So on days when the temperature is above 70 degrees, you can expect problems with your cows — especially the high milking ones.

In the presence of high humidity, the effects of summer heat can be even more severe, because the cows make thermoregulatory adjustments in their physiology, nutrition and behavior to overcome hypothermia. These adjustments are somewhat easier to

make in a breeze.

The windchill factor, so feared in winter, is a great benefactor in summer. By installing strong fans you can artificially create extra wind to cool their backs, especially if you spray them with water first.

One common behavior adjustment of cows to heat stress is daytime lethargy, which reflects their reduced metabolic activity. This also means less feed intake and less sexual interest, which are alleviated in part by shifting activity to cooler night hours.

Cows require frequent drinks of clean, cool water to combat daytime heat stress. Have water bowls nearby, providing at least one for every 20 cows to take care of the timid ones. Unfortunately, green algae grow fast in the bowls

on summer days, which makes the water taste different, causing it to be less attractive unless they're suffering badly from thirst. So you need to clean out the bowls several times each week to keep water palatable.

The same goes for water tanks. Some farmers keep goldfish in their tanks to reduce algae growth and feed contamination! It really works, and the cows don't seem to mind.

To support high milk production, cows must eat large amounts of heat-producing feed.

Fibrous and protein feeds produce even more heat, but these are essential in the diet to avoid low milkfat tests and body weight loss.

When cows eat more concentrates and less forages to

reduce heat stress from digestion, they suffer an acute potassium shortage. Potassium goes into the milk daily and must be replenished mainly from silages and hays or whole cottonseed. Grain corn and other common grains and by-products in the concentrate ration (except for soybean meal) cannot supply this potassium in sufficient amounts.

Like humans, cows also sweat. But where we lose sodium, they lose potassium, which further aggravates the shortage.

Current potassium recommendations for dairy cattle are 0.8 percent of the total daily feed intake. Research in Texas and Florida shows great benefits in improved feed intake when this level is doubled for milking cows during hot weather.

HOW TO MILK A KUBOTA.

A Kubota tractor can do a whole herd of chores on a dairy farm.



Out in the hayfield, it can plow, till, mow and bale. Apply fertilizer or pesticide. Help repair an old fence.

Back in the barnyard, it can haul feed from the silo to the trough at mealtime. Then clean out the corrals.

In fact, it can do almost everything except milk the cows. Because it's loaded with hardworking features.

Some come standard. A

liquid-cooled diesel engine. A bevel gear system on every 4WD tractor. Plus a neatly designed operator platform.

Or choose a model with more advanced features. For example, a 5-cylinder direct injection diesel engine. It's fuel-efficient. It runs more smoothly than a 4-cylinder engine. And more quietly. That can help reduce both operator fatigue and noise-related stress on the cows.

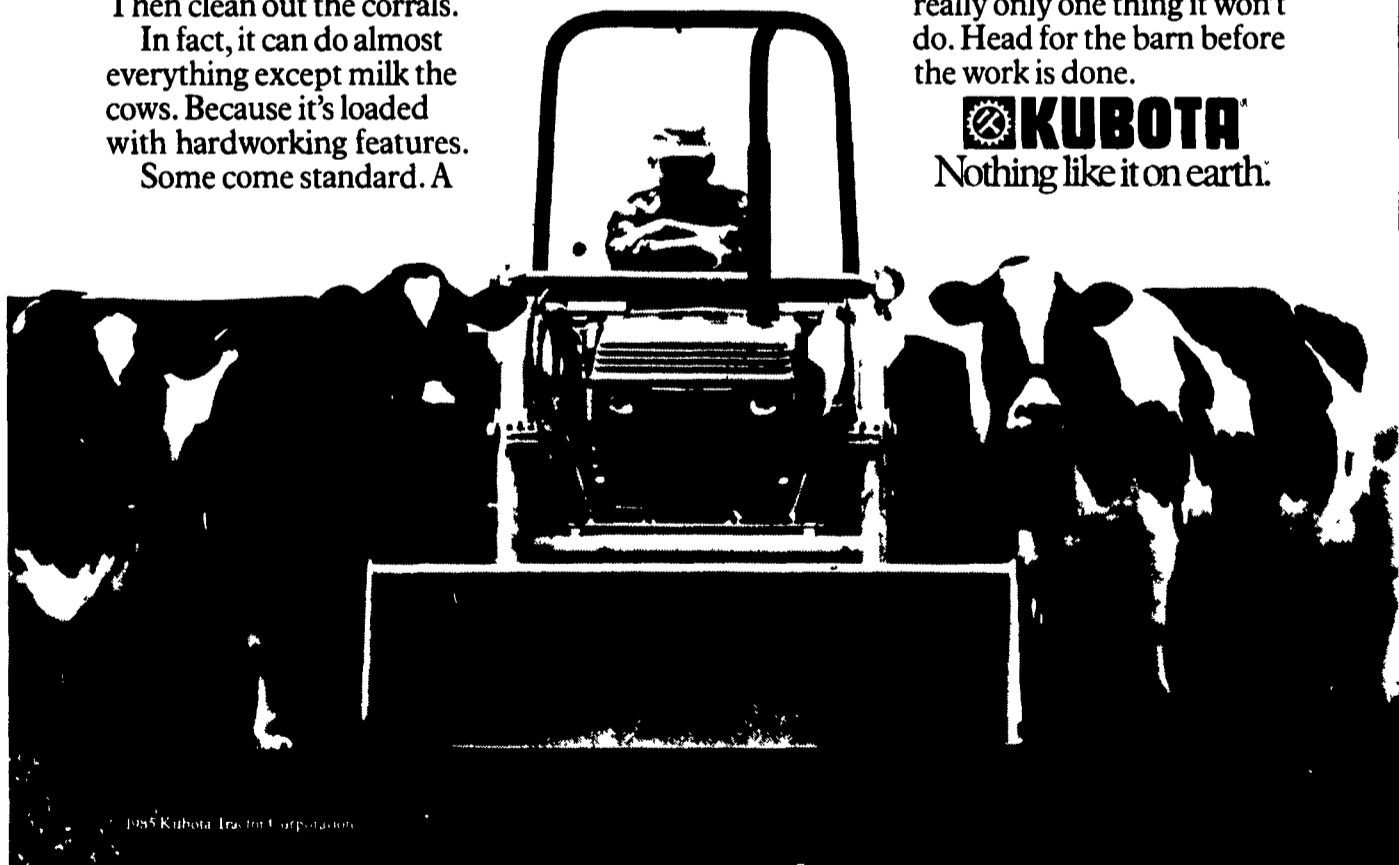
Of course, any Kubota

tractor works hardest with implements also designed and built by Kubota. The quick-attach front loader on the L4150DT you see here is a perfect example.

A Kubota dealer can show you all of our tractors. You have more than 15 different choices from 23.5 hp to 85 PTO hp. One should be just about custom-made for your needs.

So start imagining all the chores a Kubota could do around your place. There's really only one thing it won't do. Head for the barn before the work is done.

KUBOTA
Nothing like it on earth.



©1985 Kubota Tractor Corporation

Your Kubota Dealer Invites You
To Come In And See The Full Line
Of Kubota Tractors & Implements

CALL YOUR LOCAL KUBOTA DEALER

PENNSYLVANIA

Alburtis
CANNS-BILCO
215-966-3733

Avondale
THOMAS POWER
EQUIP.
215-268-2181

Biglerville
O.C. RICE, INC.
717-677-8135

Bloomsburg
TRACTOR PARTS CO.
717-784-0250

Carlisle
PETERMAN FARM
EQUIP., INC.
717-249-5338

Chambersburg
STOUFFER BROS., INC.
717-263-8424

Dallas
PENN STATE SEED CO.
717-675-8585

Dayton
DAYTON EQUIPMENT
COMPANY
412-783-6990

Dover
STRALEY FARM
SUPPLY, INC.
717-292-2631-4443

Honesdale
MARSHALL
MACHINERY, INC.
717-729-7117

Jersey Shore
THOMAS L. DUNLAP
717-398-1391

Lebanon
KELLER BROS.
TRACTOR CO.
717-949-6501

Lititz
KELLER BROS.
TRACTOR CO.
717-626-2121

New Park -
Stewartstown
M & R EQUIP., INC.
717-993-2511

Newtown Square
NIEMEYER SERVICE
CENTER
215-356-2672

North Huntingdon
LASPINA EQUIPMENT
412-864-5147

Reynoldsville
McGARVEY EQUIP. CO.
814-653-9637

Spring Mills
RISHEL'S SALES &
SERVICE
814-422-8826 -
238-7788

Wellsboro
BENEDICT'S FORD
TRACTOR
717-724-2839

Westchester
M.S. YEARSLEY
& SONS
215-696-2990

MARYLAND

Chestertown
W.N. COOPER &
SON INC.
301-778-3464

Hagerstown
ARNETT'S GARAGE
301-733-0515

Rising Sun
AG IND. EQUIP.
CO. INC.
301-658-5568

Upper Marlboro
GATEWAY FORD
TRACTOR, INC.
301-627-6400

NEW JERSEY

Andover
ANDOVER TRACTOR
& EQUIP. INC.
201-786-5525

Elmer
ROOKS FARM
SUPPLY INC.
609-358-3100

Fairfield
CALDWELL TRACTOR
& EQUIP. INC.
201-227-6772

Flemington
PONIATOWSKI BROS.
EQUIP. CO.
201-782-3514

Hainesport
MATERIAL HANDLING
SYSTEMS
609-267-6100

Hammonton
RODIO TRACTOR
SALES, INC.
609-561-0141