

# Milk Production in Winter Time

**Alejandro R. Castillo, UCCE  
Merced & Stanislaus counties**

**M**ilk production in winter time is not a big problem in California. However, in some specific situations it is necessary to remember some management recommendation to increase animal performance efficiency and to protect animals. Some aspects to take in account are: cold stress, mud and dirt.

Dairy cows have a thermal neutral zone between 41 to 68°F, temperatures below and above this range may in some circumstances alter animal performance. Under normal winter conditions in the Central Valley of California, adult's animals may compensate low temperatures increasing feed intake. Feed offers need to be checked and adjusted when temperatures drops below the lower critical zone. But, the effect of cold is more significant when dairy cows are wet and under muddy conditions.

Researchers from Cornell University calculated a 2.5% reduction on dry matter intake in dairy cattle for every inch of mud in the corrals. Other studies on the effects of mud on feedlot animals, which might be applied to dairy animals, observed that with around 5 inches of mud feed intake was reduced 6% and 14% feed efficiency. Dairy cows housed in muddy conditions leads also to increase environmental mastitis, somatic cells count, acidosis, lameness, and stress. The stress is because animals reluctant to lie and rest on muddy places. In winter time, clean mangers and food without mould and

rancidity will also help to minimize stress and increase animal performance.

An article from Dr John Kirk (ex-UC Extension Veterinarian), indicates that in free stall barns the slippery mud surfaces also led to increased risk of injury. Cows were seen to have trouble keeping their footing as they come down of the bedding mounds. They may also injure themselves when coming off the concrete into the muddy corrals. Slips and falls may be more common on the concrete pads due to accumulation of mud carried onto the pads by the cows. Besides the difficulties mud poses for the cattle, it can also be a hazard for the pen workers. Excessively muddy corrals make it more difficult for the pen workers to detect sick cattle. Sick cows in muddy pen tend to just sit and present fewer signs of disease. The pen workers must decide if it is more beneficial for the cattle to be treated when sick and use the extra energy to move to the hospital pens or to stay in the pen without treatment and the stress of moving through the mud. Milkers fight with the mud in the corrals and spend extra time to prepare the cows for milking.

Finally, it is important to remember that new environmental regulations do not allow water accumulation in open corrals. All the corrals and pens must be designed and/ or re-constructed to collect and divert all process wastewater to the retention pond. In the animal housing area (barn, shed, and milking parlor) the construction have to be

prepare to divert all the water that has contacted animal waste to the retention pond. Also, manure and feed storage areas have to collect and divert runoff and leachate to the retention pond. This will reduce possible environmental impacts and improve animal performance. ■



**SCHUIL & ASSOCIATES**

Serving your dairy and dairy land needs  
Find us at [www.schuill.com](http://www.schuill.com)

**HWY 198 RANCH - EXETER, CA**  
±105.27 acres plums located adjacent  
to Hwy 198 between Visalia & Exeter  
\$2,080,000

**DAIRY - VISALIA, CA**  
±80 acres, ±600 head facility  
Located off of Rd 68, 1 mi. S of Ave 280  
\$2,600,000

**HANFORD, CA DAIRY**  
±320 acres, ±1,200 milk cow dairy  
Double 15 Herringbone  
Open lots, large shades  
\$9,500,000

**HERFORD, TX DAIRY**  
±320 acres, ±1,000 stanchions  
\$1,850,000

**CORCORAN, CA RANCH DAIRY SITE**  
±1,636 acres with **AIR CREDITS!**  
Permitted for ±3,500 milk cows  
Plus ±4,492 head support stock  
\$6,000 per acre

**HANFORD, CA DAIRY SITE**  
±1,600 acres, Under Construction  
for 5,200 milk cows, Freestall with full  
heifer support. Three Irrigation wells  
\$6,500 per acre + construction

See you at the **Ag Expo!!**  
Dairy Center #6642  
Tree Fruit Pavilion #1314

Marc Schuil, Arnel Koster, Jon Van Ryn  
Tom Koetsier, Phil Heynen  
(559) 734-1700 • (800) 400-5090  
[www.schuill.com](http://www.schuill.com)