

## QUALITY MILK PRODUCTION

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### I. Employee Training and Education

All employees are given regular training and refresher sessions in equipment use and care. This includes proper operation and correct sanitation and cleaning procedure. Correct cow preparation and proper milking techniques are also taught.

### II. Equipment Care and Use

It is essential that all milking equipment and milk storage facilities be properly maintained and used to insure that a quality product is produced. Proper maintenance and use of the milking equipment is needed to keep the udder healthy. You should be sure that adequate vacuum and milk lines are used for the number of milking units to be operated. Enough vacuum reserve should be available to insure a stable vacuum supply. Avoid fluctuations in vacuum. Vacuum pumps are checked for proper operation and are serviced daily.

The milking equipment (machine) is checked for proper pulsation on a regular basis and all rubber parts are checked daily for wear and damage. Inflatons are changed every 10 days and are disposed of.

The bulk storage facilities are checked frequently during and between milkings to be sure that the milk is being cooled rapidly and maintained at 34-36 degrees F.

All milking and storage facilities are cleaned with CIP units and manufacturer recommendations are followed. Our bacterial plate counts usually vary between 2,000 and 10,000.

### III. Cow Preparation and Sanitation

We use sprinkler type cow washers in the holding pens to remove most of the dirt from the cows stomach, udder, feet and legs. The cows are then moved forward to the parlors where they have adequate time for most of the water to drip off before entering the milking parlor. Once in the parlor the cows are checked on a strip plate for mastitis, washed with warm water, sanitized and dried. After milking each cow is sprayed with an iodine solution (Bovadine). Also teatcups are flushed not dipped after each cow.

### IV. Mastitis Control and Treatment

A. Cows showing signs of mastitis are pulled from the milking herd and are isolated and treated. We routinely take sensitivity tests to aid in the selection of medications or antibiotics. After the cow is cleared up-

showing no signs of mastitis - she is returned to the regular milking herd.

B. We keep all 1st calf heifers in separate herds, and they are milked first. This keeps down their exposure to mastitis and to older cows which have had mastitis.

C. It has been proven that cows in late stages of lactation have higher leucocyte counts than other cows. We dry off cows that go below a certain level of production. On the large breeds - Holsteins and Brown Swiss, this level of production is 20 lbs. per day and on the small breeds the production level is 17 lbs. per day.

D. We follow a dry cow treatment plan which is essentially as follows:

(1) Every quarter on every cow is treated when she is dried off even though she may not have had mastitis. During the drying off period (2 weeks) cows are checked daily for mastitis and are milked out and treated if needed. At the end of this 2 weeks all cows are treated for mastitis by intramammary injections and are vaccinated for mastitis. The main advantage of vaccination on our farm has been a definite reduction in the number of gangrene cases when compared to the time prior to the start of vaccination. When dry cows are moved to the freshening pens - 4 weeks before calving - they are watched for signs of udder problems and treatment starts if a cow shows any signs of mastitis even though she may not have calved.