

HERD TOTAL REPORT

Explanation of Terms

HERD TOTAL – (Front)

This report summarizes production and milk quality for a herd or permanent string for the most recent 12-month period. It provides yearly and monthly totals for the herd as well as rolling herd average production for the current year. The current yearly averages can be compared with yearly averages from three, six and twelve months ago. Managers may quickly review trends and take decisive action. It also provides the number of fresh cows and fresh heifers for each of the last 13 months, and calculates the average production for both groups for each month.

A. AVG DAILY HERD PRODUCTION

This section contains the Test Interval Daily Average milk, fat, and protein or SNF pounds for each of the past 12 test periods. Test Interval Daily Average is the estimated daily average during the entire interval of approximately 30 days. It usually consists of the average for two test dates.

TEST DATE: The date that milk weights and samples were collected. An "S" preceding the date indicates a surprise test.

ALL COWS: The daily production values for all cows are calculated by dividing the test period total pounds by the total cow-days in the test period.

MILK COWS: The daily production values for milking cows are calculated by dividing the Test Period total pounds by the cow-days in milk in the test period.

B. HERD SCC MANAGEMENT INFORMATION

L2 SCORE: The L2 Score is a log value based on individual somatic cell counts and is the best indicator of the effect of mastitis on milk production. The amount of milk loss per cow per day in pounds is shown for each L2 Score category. A distribution of number of cows by score values is shown for the current test and several additional tests during the past year.

Linear scores of 0, 1 and 2 are considered negligible with respect to mastitis. Scores of 3 are suspicious. Scores of 4 or greater are considered positive for mastitis. Scores of 7, 8 or 9 indicate that cows are shedding extremely high numbers of somatic cells and are not only on the verge of clinical cases, but are seriously affecting milk quality if allowed into the tank. A goal should be to have 80% of the animals with linear scores below 4.

DOLLARS LOST PER DAY: This summarizes the total value of milk lost due to lower production of cows infected with subclinical mastitis for the current test and several additional tests during the past year.

C. TEMP STRING TOTALS and MILK QUALITY

Information is printed in this section only if the herd is divided into temporary strings. These data show the comparative performance of each string on the last test day. The table contains the average values related to milk production and milk quality for each temporary string. Cows can be assigned to temporary strings each time the herd is tested.

ST NO: Identifies the string number of the temporary string.

COWS: The number of cows assigned to each temporary string.

COWS TESTED: The number of cows tested in each temporary string.

AVG DIM: The average days in milk for cows in the temporary string is a measure of the stage of lactation.

AVG MILKING COWS: These columns contain the average values for milking cows. Values listed are pounds of milk, fat and protein or SNF.

%L2: The distributions of the percent of cows tested in each string by Linear Score. The management goal is to minimize percentages with the Linear Score of 4 or greater.

SCC AVG: The average Somatic Cell Count weighted by individual cow pounds of milk for the string. This is an estimate of the string SCC if the entire string milk production was pooled in a bulk tank.

L2 AVG: This is the simple average of the Linear Score value for the temporary string. Linear Score values best represent milk loss due to mastitis.

D. HERD TOTALS

This section contains the production totals and summaries for each test period during the past year.

TEST DATE: This column shows the dates of the last 12 tests beginning with the most recent test date.

TEST INT DAYS: This column shows the number of

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days in each interval between tests. It is the number of days since last test day and includes the current test day. Test intervals should be approximately 30 days in length.

COWS IN HERD: This is the total number of cows in the herd on test day, milking and dry.

AVG DIM: This is the average days in milk for all cows currently in milk. For herds with year-around calving the goal should be under 170. If the herd has a seasonal calving pattern, the value can vary widely throughout the year.

COW MOS: All production credits are calculated on a cow-month basis. A cow in the herd one day is one cow-day. A cow in the herd one month is one cow-month. A cow in the herd one year is one cow-year. This column contains the number of cow-days in the test interval divided by the number of days in the calendar month of each test. All calculations, averages, production credits and changes are based on the number of cow-days converted to cow-months and to cow-years.

COWS TESTED: This is the total number of cows in milk on each test day.

COWS LEFT HERD: This is the total number of cows that left the herd by transfer, sale or death since the previous test day.

TEST PERIOD POUNDS: In this section are found the total pounds of milk, fat and protein or SNF produced by the total herd during each test period indicated.

% FAT and % P / S: The average percent fat and protein or SNF for the milking cows is shown for each test period. These percentages are determined by dividing the total pounds of fat and protein or SNF for each test interval by the total pounds of milk for that interval. Since the test interval method is used, these figures will generally not perfectly correspond with the percentages for the day of test.

% DIM: This is the percent of days the cows in the herd were in milk during the test period. This is calculated by dividing the total days in milk in each test interval by the total number of cow days in that test period.

% 3X: This is the percent of cows in milk that were milked three times per day during the test period.

DAYS: This section shows the total number of cow-days in milk and total cow-days for each test period during the year.

E. MILK QUALITY

This table compares the test-day distribution of the herd by somatic cell count linear score and averages for somatic cell count for the last 12 tests. Month-to-month changes and trends in the numbers in these comparisons indicate whether the overall herd health is improving or deteriorating.

%L2: For each test period, the herd is divided into seven SCC categories based on Linear Score. The percentages are shown for the cows in milk each test day.

SCC AVG: The SCC average is weighted by pounds of milk; this value should be very similar to the bulk tank test.

L2 AVG: The linear score value is a simple average of all cows tested on test-day. Herd average linear SCC may be compared to previous months, especially the preceding month and the same month one year earlier. An increase in SCC score may indicate that subclinical mastitis is becoming increasingly more common and severe.

F. YEARLY TOTALS

This table contains the sum of herd period totals for the past 12 months for milk, fat, and protein or SNF production. Values are shown the current month and for the previous 3, 6 and 12 months.

DAYS ON TEST: This is the number of days the herd was on test during the year for the periods indicated. The number of days may or may not be exactly 365.

COWS LEFT HERD: This is the total number of cows that left the herd during the period indicated.

TOTAL POUNDS: This is the total herd pounds of milk, fat, and protein or SNF produced in the number of days on test for the months indicated.

TOTAL DAYS: This is the total number of cow-days in milk and total number of cow-days in the herd for the months indicated.

G. YEARLY AVERAGES

The yearly averages are adjusted to 365-day averages for milk, fat, and protein or SNF for all cows and milking cows for the years indicated. Herd trends can be evaluated for any of the items in the table.

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COW YEARS: This is the total number of cow-years in the herd for the period indicated. It is also an estimate of the average number of cows in the herd during the period.

% LEFT HERD: This is the percent of total cows that left the herd during the year. Adjusting the total number of cows that left the herd to a 365-day period and dividing by the number of cow-years for the period calculate the percent left herd.

ALL COWS: This is the average annual production for all cows in the herd, also known as the Rolling Herd Average. The averages are calculated for pounds of milk, fat, and protein or SNF, and FCM. Fat corrected milk is pounds of milk adjusted to a 3.5% fat basis.

MILKING COWS: This is calculated by multiplying the average daily production of milking cows by 365. The averages are calculated for pounds of milk, fat, and protein or SNF, and FCM. Fat corrected milk is pounds of milk adjusted to a 3.5% fat basis.

% FAT and % P/S: The yearly herd average percent fat and protein or SNF in milk produced.

% DRY and % DIM: The average daily percent of the total herd that was dry and milking during the past year.

H. FRESH COW and HEIFER PRODUCTION SUMMARY

These tables show the test date, number of fresh cows or heifers, and average milk yield for their first test for each of the last 13 months. The higher the milk yield at peak flow, the higher the yield for the remainder of the lactation. Therefore, when fresh cow or heifer milk yield is down for two or more months consecutively, the rolling herd average will also begin to reflect a downward trend.

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The backside of the Herd Total Report summarizes age groups of cows as well as the entire herd. Several tables have cows grouped according to the current lactation number. Cows in their third or later lactations are grouped together and are considered mature. Tables are also provided to show projections of the number of cows to calve and dry during the next nine months.

A. EXTRAPOLATED 305 DAY AVERAGE

COWS IN HERD: This is the total number of cows in each of the lactation groups, as well as the total number of cows in the herd on test day. Production and breeding information summarized by age-groups assists the dairy manager in identifying problem areas and in comparing the relative efficiencies between age groups.

ACTUAL: These figures represent the current lactation average actual milk, fat, and protein or SNF produced when projected to 305 days for each lactation group. This summary includes production from only those cows that have been in milk 46 days or longer.

MATURE EQUIV: Mature Equivalent adjusts the current partial lactation record for the cow to what would be produced if she were a mature cow. Calculated on a twice a day milking 305-day basis, averages are adjusted for age and season of calving. If progress is being made, mature equivalent values for first lactation animals should be higher or equal to cows in second lactation or greater.

B. TEST DAY AVERAGES

COWS IN MILK: These columns contain the number and percent of total animals in each lactation group.

AVG DIM: The average number of days in milk (DIM) for cows currently milking in each lactation group. As the number of DIM increases over 170, it may indicate too few fresh cows are entering the milking herd. In a balanced production program for seasonal market demands, increases or decreases in DIM may be valid.

MILK, % FAT, LBS FAT, % P/S, LBS P/S and FCM: The production averages are for cows milking on test day. They include milk pounds, percent fat, fat pounds, percent protein or SNF, protein or SNF pounds, and fat corrected milk. The FCM is milk pounds adjusted to a 3.5% fat equivalent.

C. PEAK PRODUCTION

DIM: Average days in milk where cows in that lactation group are at peak production.

LBS MILK: Average pounds of milk on the day of highest sample day production during lactation.

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D. MILK QUALITY

PERCENT SCC: These columns are the current distribution of percent cows in each lactation group by CMT score of N&T, 1, and 2&3

PERCENT L2 SCORES: These columns are the current distribution of percent cows in each lactation group by SCC linear score.

AVG SCC: The average Somatic Cell Count weighted by individual cow pounds of milk for the lactation group. This is an estimate of the lactation group SCC if the entire group milk production was pooled in a bulk tank.

AVG L2: The simple average of the SCC Linear Score value for the lactation group. Linear Score values best represent milk loss due to mastitis.

E. HERD INVENTORY

ENTERING: The distribution of cows that entered the herd during the current test period by lactation group.

LEAVING: The distribution of all cows that left the herd during the current test period by lactation group. The subset of animals that left the herd for dairy purposes is expressed in a similar manner.

F. REPRODUCTION

AVG AGE AT CALVING: The average age at calving of the animals in the three lactation groups in years and months, plus the average age of the total herd. For example: 2-05 indicates 2 years and 5 months. Heifers are usually expected to calve between 2-00 to 2-06. Second lactation animals usually calve between 3-00 and 3-08. This information includes an average for all cows in the herd.

AVG CALV INT MOS: The average calving interval month is the average time between the current and previous calving date for animals in their second and later lactations. A long calving interval generally reflects poor reproductive herd health and/or a low level of herd management. It is an "after the fact" statistic indicating that a problem existed 1-2 years ago.

AVG OPEN DAYS: The average open days is calculated beginning with the calving date and ending with the last reported breeding date for cows reported pregnant, or more than 90 days since the last reported breeding date. It is a prediction of the future calving

interval. A value of 115 days open predicts a calving interval of 13.0 months. An average days open value greater than 145 may indicate a potential breeding problem.

HRS: The Herd Reproductive Status is an index that examines more than values for pregnant cows. The HRS index includes the breeding status of all cows open over 100 days and the number of days they are open. The formula used is: $HRS = 100 - (\text{Total days open for problem cows} / \text{Total number of cows in the herd}) \times 1.75$. Compare the index to last month, a decrease indicates more cows are becomes problem cows or the problem cows are open longer.

COWS OPEN: This section divides the three lactation groups into three categories based on the number of days open at last breeding. The information is expressed as the number of cows in each category and the percent of the cows in the lactation group. The manager's goal is to increase the number of cows open less than 100 days on last service, while decreasing the number open more than 130 days when last bred.

DAYS AT FIRST BREED: The average number of days in milk at first breeding for each of the lactation groups plus an average for the entire herd. These figures are a good measure of: proficiency of heat detection, reproductive health following calving, and the length of the voluntary waiting period. If it turns upward begin to search for the reason.

SERVICES / CONCEPTION: The average number of services per cow for cows in each lactation group and in each technician group. This figure represents only those cows that have been reported pregnant by the dairyman, or have exceeded 90 days since their last reported breeding date when using the computer 90-day declaration.

% 1ST SERV: The percent of cows that were declared pregnant or have exceeded 90 days since last bred that were only bred one time.

% MORE THAN 3RD SERV: The percent of cows that were declared pregnant or have exceeded 90 days since last bred that were bred more than three times.

G. DRY COW SUMMARY

DRY COWS: The number and percent of the cows in each lactation group that is dry on the current test day.

AVG DRY DAYS: The average number of dry days for the cows in each lactation group for the previous dry

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period. Previous dry days are naturally not available for first lactation heifers.

DAYS DRY: The distributions in each lactation group of the previous days dry by three categories of length. The manager's goal is to maximize the number of cows in the 40-70 day category. Good managers should exceed 80 percent in this category.

H. PTA SUMMARIES

The Animal Improvement Programs Laboratory of USDA summarizes production information provided by the DHI system. Cows and sires are evaluated for their predicted transmitting abilities (PTA's) based on performance and information from relatives. The methods used are continually updated and new variables are added when research indicates it is appropriate. Currently, AIPL determines the PTA values for: milk yield, fat yield, protein yield, productive life, somatic cell score and three type composites. The PTA value for each variable is compared to the base population; i.e., a breed average animal born in 2000 would have a 0 value in each category.

NO COWS: The number of cows with genetic information available to summarize.

\$\$\$: The Lifetime Net Merit dollar value combining the economic value of the PTAs of the average animal compared to the industry base.

MILK: The PTA mature equivalent milk pounds of the average animal compared to the industry base.

FAT % and PROT %: The PTA fat percent and protein percent compared to the industry base.

RPT: Reliability is based on how much information was available for calculating the Lifetime Net Merit. The value can reach 99 for some proven AI sires. The value for cows is somewhat lower.

PCTILE: The percentile ranking of the animal compared to the current industry standard. Genetic progress is occurring if the rank for younger animals is higher than older animals

NUMBER OF COWS LEAVING HERD THIS MONTH: This table shows the how many cows left the herd for dairy purposes, low production, breeding, illness or sickness, mastiffs, or died during the current test period. The reason a cow leaves the herd should always be recorded at the time the cow is culled.

NUMBER OF COWS LEAVING HERD THIS YEAR: This is an accumulation of period totals during the past

12 months. This important record reflects herd health, breeding and management practices.

NUMBER OF COWS PROJECTED TO CALVE-DRY FOR NEXT NINE MONTHS: The number of cows expected to calve or dry is reported for each of the next nine months. This projection is based upon the last reported breeding dates for all bred cows. A cow need not be declared pregnant to be included in this table. This information is important in calculating the need for additional replacements in the months ahead.