

Criteria for Achieving the Status of a “Publishable Lactation”

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Prior to the introduction of Vision 2000 as the new and flexible milk recording data processing software, in the later part of 1999, the concept of an “official” or “publishable” lactation was quite simple. Cows in herds on supervised milk recording programs received publishable lactations while cows that started or ended their lactation on unsupervised or owner-sampler milk recording did not get official lactation records. Vision 2000 has allowed milk recording agencies and the dairy cattle improvement industry the flexibility of allowing producers to choose the frequency of supervised and unsupervised testing that best suits their personal needs. This has resulted, however, in the establishment of industry-wide standards that define which lactation records, either completed or in progress, would be “publishable” and which would be “for management purposes only”. The responsibility of establishing the publishable lactation standards is that of the Industry Standards Committee, which represents all industry partners and reports to the Canadian Dairy Network Board of Directors. This industry-wide process results in uniform standards across all dairy breeds that are applied at Canadian Dairy Network as part of the Data Exchange System.

Herd Standards

The basic underlying principle of the publishable lactation standards is that a herd owner will determine in advance if they wish the lactation records achieved by cows in their herd to be publishable. The first three herd criteria listed below are calculated on each herd test using herd information for the previous 380 days and applied to the most recent herd in a lactation, using the most recent test date in the herd prior to completing or terminating the lactation. This means that the herd should be enrolled on milk recording and ensures the following criteria at the herd level are respected at all times:

1. The herd must be milk recorded at least 10 times within a 12-month period on a rolling basis. This means that between the current test date and 380 days prior, there must have been at least 9 other herd tests conducted. The only exception are herds enrolled on a milk recording service whereby every herd test is supervised for all milkings on test day (ie: 24-hour test) and then a minimum of 8 herd tests within each rolling 12-month period is required. Any cow with a final test prior to completing or terminating its lactation will not achieve the publishable status for that lactation record if the associated herd on the test date fails this criteria. For new herds enrolled on milk recording, this criterion is not checked until the first year has passed.
2. At the time of any milk recording test date, at least half of the minimum number of herd tests in the current herd conducted within the preceding 380 days must be recorded as “supervised” in accordance with the industry guidelines of a supervised test, as enforced by milk recording agencies. The definition of a

“supervised” test includes the positive identification of all new animals to be tested, the recording of all milking cows in the herd, the collection and security of milk samples for component testing for each cow, the verification of milk meter compliancy and accuracy at least annually and the general supervision of the recording process by a milk recording employee or designate.

3. 80% of all first lactation animals in the herd for at least 90 days during the previous 12 months must be registered in the breed association herd book at any level from 0% to purebred. The percentage of registered first lactation cows is calculated based on the number of registered first lactation cows compared to the total number of all first lactation cows accumulated across all herd test days during the previous 380 days. If the final test in a lactation prior to its termination or completion falls on a test date where the herd fails this 80% criteria the lactation will not be publishable.

The following two requirements are applied at the herd level for all test days during the lactation even when a cow changes herds.

4. In order for the required number of herd tests during each 12-month period to be respected on a continual basis, the interval between any pair of herd tests should not exceed 50 days on a 10-test program, or 60 days in the case of eight supervised, 24-hour tests per year. Under special circumstances, such as an unavoidable situation affecting the herd, the herd test interval can be extended to a maximum of 90 days while maintaining the lactation records as publishable. In any case when the maximum allowable test interval of 90 days is surpassed, all lactation records involving test information from both herd test days will not be publishable.
5. Herd owners who choose a level of milk recording service that includes both supervised and unsupervised testing during the year, must ensure they alternate between supervised and unsupervised tests to prevent consecutive unsupervised testing. If, for any reason, two consecutive unsupervised herd tests are conducted, the current lactation record for every cow tested on both such unsupervised tests will not be publishable.

Lactation Standards

In addition to the above herd criteria, there are specific standards that must be met by each specific cow during her lactation in order for it to be publishable. Failing all or part of the required standards for a terminated or completed lactation will deem the lactation record unpublishable.

1. The interval between any pair of test day records for the cow in the current lactation must be within a maximum range of 90 days, which is also the maximum allowable test interval at the herd level. For herds enrolled on milk recording services requiring at least 8 or 10 herd tests per 12-month period, this

maximum interval normally allows for the possibility of a cow to be “out of condition” for testing or away from the herd on test day for any single herd test, but not two consecutive herd tests. It is highly recommended that herds where lactating cows temporarily leave the herd for any reason be on a level of milk recording service that includes 12 herd tests per year or 10 tests if all are 24-hour and supervised.

2. For completed lactations with at least 240 days in milk, the cow must have at least three accepted supervised tests with component testing results prior to 305 days in milk for the record to be publishable. Normally, within a 305-day lactation in a herd on 10 tests per 12-month period, each cow would be exposed to at least 7 or 8 tests. For a testing program that alternates between supervised and unsupervised, the minimum requirement of three supervised tests should normally be met. Cows in herds on the 8-test option would normally have 6 supervised tests within the first 305 days in milk. For lactations terminated before 240 days in milk, the required number of supervised tests is pro-rated to be one for up to 150 days in milk and two for records terminated between 150 and 240 days in milk.
3. The Lactation Rating, calculated by milk recording as a measure of the relative accuracy of the lactation record, must be at least 95 for protein yield for lactations terminated after 240 days in milk.

Lactations in Progress

As cows progress through the current lactation, the addition of each new test day record results in the re-determination of the publication status for the resulting 305-day projected lactation record. In order for a lactation in progress to be publishable all of the aforementioned herd standards must be met while the standards at the lactation level are modified as follows:

1. There must be at least one test past 60 days in milk in the current lactation.
2. The interval between any two tests in the lactation must not exceed 90 days.
3. At least one supervised test with components must exist within the first 150 days of the lactation and if the number of days in milk is between 150 and 240, then at least two supervised tests with components must exist. Once the lactation reaches 240 days in milk, the publication status is determined in accordance with the “Lactation Standards” above and remains fixed once the lactation is terminated or completed.

The above criteria are aimed at identifying ongoing lactations that will most likely achieve the publishable status once terminated. Records in progress that are initially deemed to be publishable may become unpublishable as the lactation progresses, is terminated or is completed.

Cows Changing Herds

Determination of the publication status for cows that change from one milk recorded herd to another is done through an association between each of the test day records for the current lactation and the herd in which each test was recorded. The verification of the herd and lactation standards outlined above therefore relates specifically to the cow's own test day records and the associated herd tests as she is moved from herd to herd. For example, a cow moving in mid-lactation from a herd with complete unsupervised testing to one that meets all of the herd standards will not receive a publishable lactation since the first herd would have conducted at least two consecutive unsupervised tests. It is important to recall that only the two criteria of alternating supervised and unsupervised testing and the maximum herd test interval of 90 days are processed for all herd test days in which the cow has test day records.

Annual Herd Averages

At the end of each calendar year, the national milk recording processing centre processes all publishable lactations on a herd by herd basis to compute the annual herd production averages for each breed of cow in the herd, as required by industry organizations. In about March of each year, herd averages based solely on publishable lactations terminated or completed during the previous year are computed and forwarded to the Data Exchange System at CDN for further distribution to breed associations and A.I. organizations. Additional information associated with each herd average include the total number of lactations for that herd during the year and a count of the number that were publishable, which were used to calculate the herd averages. Industry organizations provide "Top Herd" lists and "High Herd Performance" awards based exclusively on annual herd averages that include a minimum of five publishable lactations for the particular breed.

Further Details

For further information regarding the application of the publishable lactation standards as they are implemented within the Data Exchange System, contact the Industry Standards Committee or Canadian Dairy Network.