RULES
for the

OFFICIAL OPTION OF THE QUEBEC DAIRY HERD ANALYSIS PROGRAM

(Q.D.H.A.P.)

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RULES AND PROCEDURES FOR THE OFFICIAL OPTION OF THE QUEBEC DAIRY HERD ANALYSIS SERVICE

The following set of regulations has been drawn up jointly by the Quebec Department of Agriculture and the management of the Quebec Dairy Herd Analysis Program at Macdonald College. It embodies the bare minimum of standards needed to meet the requirements of the Joint Dairy Breeds Committee in order that the production records of animals enrolled in the Official Quebec Dairy Herd Analysis Program will be nationally recognized for the purposes of cow testing and sire evaluation.

The system of milk production testing under the Official Quebec Dairy Herd Analysis Program provides for the keeping of official production records for each lactation period of cows of all dairy breeds, under the joint supervision of the Department of Agriculture of Quebec, Macdonald College, and the Canada Department of Agriculture.

1- Equipment and working methods

All equipment used in the above-mentioned program, including the computerized milk analysis system and the operating methods and procedures used, must meet the requirements of the Canadian R.O.P. Dairy Advisory Board (see appendix).

2- Duties of the owner

The owner of a dairy herd enrolled in the official Quebec Dairy Herd Analysis Program must cooperate at all times with the appointed supervisor.

He must:

a) Have his dairy herd tested on the dates set by the supervisor. If, for some compelling reason, he cannot receive the supervisor's visit, he must sign the relevant statement.

b) Maintain a milking procedure that will enable the inspector to supervise the milking of all cows on test. This may mean milking the cows one row at a time in the case of head-to-head stabling.

c) Make available to the supervisor all registration certificates and all forms of the National Identification Program for Grade Cattle (N.I.P.) so that he can check the identity of the tested animals, helping him if necessary;

d) Give the supervisor relevant information about dates of calving, drying, breeding, abortion, enrolment for or withdrawal from testing and any other pertinent information likely to facilitate the compiling of data;

e) Be present and ready, if necessary, to help the supervisor when he checks the accuracy of milk-measuring of weighing devices. If they are defective, the owner must see that they are repaired before the next test;

f) Follow the same milking schedule on test days as on other days. The testing service may be withdrawn from the herd if it is proved that milking time has been consistently delayed on test days in order to obtain production for more than 24 hours;

g) Provide the supervisor with the last two bulk tank statements. The supervisor will report the amounts for specific dates on the monthly report;

h) Co-sign inspection forms certifying that freshening dates, drying dates and disposal dates are correct. The owner may be required to produce the bill of sale in support of the date of sale claimed;

i) Comply with the rules. Owners are held responsible for their own and their employees' infractions. In such cases, the Disciplinary Committee of the QDHAP may impose penalties for any violation of the rules.

3- Animals submitted to testing

All dairy cows, whether registered or unregistered (grades) of the breed(s) entered for testing, which are owned by the applicant or present on his premises and have already calved at least once, must be put on test, whether they are milking or not.

The following exceptions to this rule are permitted:

a) cows twelve years old or older with a previously recorded lactation;

b) cows used as nurse cows throughout the lactation period, with a previously recorded lactation on the official test;

c) cows with a previously recorded lactation on the official test which have lost two or more quarters of the udder.

All enrolments for testing must be reported to the supervisor within the 60 days following enrolment of the herd for official testing or the entry of an animal into the herd.

Once enrolled for official testing, dairy cows may be withdrawn therefrom only after they have permanently left the herd owing to transfer, sale or death.

The owner of a dairy herd who has more than one farm on which dairy cows are kept may, if he wishes, divide his herd into as many production units as he has farms. Each such production unit shall then constitute a different herd and be tested separately. However, he will not be allowed to shift dairy cows from one farm to another to improve the average of a herd.

If a herd includes animals of two or more separate breeds, only the composite average of the whole herd is calculated; separate averages may, however, be reported for each breed represented by fifteen or more animals enrolled for testing.

4- Identification of the animals

Every dairy cow in a herd enrolled in the official Quebec Dairy Herd Analysis Program must be positively identified by means of the official N.I.P. form for grade cattle or a registration certificate for purebreds.

A) **Positive identification:** requires that registration numbers of purebred cows or N.I.P. numbers of unregistered (grade) cows be carefully checked by the supervisor, at the time the naimals are added to the herd or at the first test of each new lactation, to make sure they correspond to coat colours or tattoo markings.

B) Subsequent to the first identification following calving, the supervisor may use additional means of rapid identification, such as ear tags, tattoo marks and neck chains but they must be properly indexed with the registration papers or N.I.P. cards.

C) No certificate of production will be issued for a cow which cannot be positively identified. A cow which has not been identified by means of a registration certificate or by the N.I.P. card certified by the registration office of the breed may be tested for not more than four consecutive visits following her entry into a herd enrolled for the test.

5- Supervision of milkings

The supervisor must be able to observe directly the milking of every cow on test and also the automatic milk meter or weighing device. If necessary, he may require that the cows be milked one at the time. The supervisor himself shall determine the number of cows to be tested during a day, and the owner of the herd is bound to cooperate in order to facilitate the testing.

6- Weighing and sampling of milk

A) The weighing, sampling and recording of results of each milking of every cow on test carried out in a 24-hour period must be done by a qualified superfisor, duly authorized by the firectors of the QDHAP (Quebec Dairy Herd Analysis Program). The supervisor must verify the accuracy of the various milk-measuring devices whose use is currently authorized (see appendix 1) This check must be made before the evening milking.

B) In the specified 24-hour period, the supervisor must take a sample from each milking of every cow on test. The composite sample from each cow will be analyzed in the QDHAP laboratory by means of the "Foss Milko-Tester". All milk samples and all recorded test data must be kept carefully locked up by the authorized supervisor when they are not under his immediate observation.

7- Recording of weighings and appropriate remarks:

The supervisor shall record on the proper forms all weighings of milk taken from the cows on test during his visit. Weighings must be recorded to the nearest half pound. He will also report any unusual circumstances which have affected the cows' production.

8- Number of cows and herds tested per day

The number of herds and cows tested each day shall depend on the capacity of the supervisor and the facilities placed at his disposal. However, the supervisor and also the farmer must take the necessary time to respect all the rules and requirements of the official testing.

9- Lost samples or missing weighings

A) If a sample of milk is lost or if the results of the weighing are missing, the average of the preceding test and the following test will be used to calculate the production.

B) If, in the case of the first test of a new lactation, the sample is lost or missing, the butterfat percentage of the following test will be used. If the weighing of the milk of a cow was not done for a valid reason (milk spilled, cow suckled by accident, etc.) at the first test of her new lactation, a production equal to 90% of the weight of the following test will be credited to her.

10- Diseases or injuries – adjustments for abnormal conditions

In the case of serious disease or of injury or if the cows is in heat on the day of the test (except for the first test of a new lactation, in which case see article 9-B) the production will be considered abnormal if these conditions are entered on the barn sheet for the day of the test and if the decline in milk production (expressed as a percentage) from the yield at the preceding test exceeds the value determined according to the following formula:

27.4 + (0.4 x number of days elapsed between the two tests)

In such cases, the actual weight shall be reported and productions judged abnormal under this article shall be adjusted according to article 9A or 9B.

11- Beginning and end of lactation:

A) **Start of lactation:** The calving date shall be considered as the first day of the new lactation and the cow's production is credited to her starting on that date.

– **First test:** The milk from a newly freshened cow may be weighed and sampled starting with the evening milking on the 5th day following the calving.

B) **End of lactation:**

The last day of the lactation period shall be the one on which according to the owner's declaration, the cow was milked twice for the last time, except in case of sickness.

On the said last day, the cow will be credited with half her reported production for the day of the preceding test. Her production for the final period from last test day to day declared dry will be based on the average of the last test weight and one half of the last test weight. The fat percentage of the last test day will be used in calculating the fat credits.

C) Method of calculating production in special circumstances

i. Production of cow or herd not known for one or more tests after the first weighing:

- Milk spilt, sample missing or lost: if the gap does not exceed 75 days, the milk or fat production will be estimated from the mean of the preceding and following tests.
- If a cow enrolled for testing has missed being tested for longer than 75 days, the 14th day after the last test shall be considered to be her final day of lactation, unless she is taken off the test before the said 14th day.

ii. Cow leaves herd or herd going off test:

- Cow leaves herd: The day on which a cow leaves the herd is considered as the last day she belonged to it and will be used in calculating her lactation. For that day she will be credited with half the last test weight.
- Herd taken off test: If the supervisor does not report any visit subsequent to the date of the last test, the 14th day after that date shall be the herd's final day of lactation, unless the herd is taken off test before the said 14th day.

iii. New enrolments for testing:

a) Newcomers to the herd and nurse cows:

If a lactating cow is brought into a herd which is on test, without having her production credits transferred with her, she will be credited with a production based on her first test for the number of days lactation from the date she calved to the date of the said first test. However, if the interval between these two dates exceeds 75 days or if the date she calved is not known, she will receive credits for a fixed interval only (for 30 days preceding the first test) and, in such cases, the production will not be used for official calculations. This rule also applies to nurse cows which are starting a period of official production testing.

A cow, milking or dry, which enters a new herd with her credits, will have her production in it continued starting on the day after the one on which she left her previous herd. The supervisor must report the date of entry into the herd as the last day on which the cow received production credits in the previous herd.

b) Newly enrolled herds:

Cows in a herd which is newly enrolled for the official test will be given production credits for the number of days they have been milking if they calved comparatively recently. But those whose calving date is not known or which calved more than 75 days previously will be credited with not more than 30 days production.

12- Abortion, premature calving or calving without a dry period:

a) Abortion while dry: The production of a cow which aborts during the dry period will be reported as for a cow which has newly calved.

b) Premature calving: If the date of breeding is known and if a cow in lactation calves less than 30 days before the expected time, the calving shall be considered normal. However, it shall be considered abnormal if a lactating cow calves 30 or more days before the expected date.

c) Abortion during lactation: If the cow aborts while she is milking and if the foetus has been carried less than 152 days, the same lactation shall continue without interruption.

If the breeding date is unknown, the production period shall continue without interruption if the abortion occurs when the cow has been milking for less than 200 days.

In all other abortion cases, the lactation in progress shall end on the day before the abortion and a new lactation shall start on the day of the abortion.

d) New lactation without calving, and calving without a dry period: If a lactation starts without a calving, the cow's production shall be recorded starting with the first day of the new lactation. If, in such a case, the cow subsequently calves without dry period, the lactation already in progress shall end on the day before the calving date, and a new lactation shall start on the day of calving.

13- Regular testing visits:

QDHAP supervisors shall make at least 10 regular testing visits during a 12 month period. At least two of these visits shall be make by a person other than the regular local supervisor. This person must be duly authorized by the direction of the QDHAP.

It is recommended that the supervisor make twelve test visits a year to the herd so that he will be in a better position to give the owner the information he needs to manage his herd well.

14- Additional testing visits:

If at the time of a regular testing visit other than the first two at the start of a lactation, a cow has been credited with a butterfat yield for a 24 hour period which is higher than the standards of the ROP advisory board as shown in the following table, an extra visit shall be made before the cow has completed her 305 day lactation and additional tests shall be made on the cow and the whole herd.

TABLE

	Pounds of butterfat
Junior 2-year-old	2.7
Senior 2-year-old	2.7
Junior 3-year-old	3.0
Senior 3-year-old	3.1
Junior 4-year-old	3.2
Senior 4-year-old	3.3
Junior 5-year-old	3.4
Senior 5-year-old	3.5
Adult	3.6

N.B. Applicable only to Holstein cows: If, under conditions that would otherwise be considered normal, it happens that the result of the first butterfat test exceeds that of the second by more than 2.5%, the average of both tests shall be used to replace the first one.

15- Interval between visits, and schedule of the supervisor:

A) In general, the interval between two successive visits shall not be shorter than 15 days nor longer than 45 days. An exception to this rule may be tolerated in the case of emergency calls or vacation schedules. Even in such cases the interval must never be longer than 75 days. If the interval between two visits is between 46 and 75 days, the supervisor must give reasons for such length to the directors of the QDHAP.

If in the case of an individual lactation, the interval exceeds 45 days or 75 days, see item 11 C (i).

B- The owner must never be informed beforehand of the supervisor's route or schedule nor of the date of his next visit. The supervisor will, however, notify the owner not more than six hours before the evening milking on the test day of his intention to test the herd.

16- Cows milked more than twice a day:

The practice of milking a cow more than twice a day makes any comparison with comtemporaries impossible. Moreover, the schedule of the QDHAP supervisors does not allow for 3 X recording. Official supervision of 3 X production recording will therefore not be available.

17- Computation of production records:

Milk and fat credits shall be calculated for periods; a period being the interval between two testing visits. The first test will apply to the period from the date of calving to the first test date, inclusive.

Production credits are calculated by multiplying the number of days in a period by the average production during that period. For example:

A cow yields 40 lb of 4.0% milk on June 10, and yields 36 lb of 4.2% milk on July 14.

Period between test visits	34 days
Average production	38 lb
Milk credits for the period:	34 x 38 equals 1292 lb
Fat credits for the period:	

$$\frac{\frac{40 \times 4.0}{100} + \frac{36 \times 4.2}{100}}{2} \times 34 \text{ equals } 53 \text{ lb}$$

Period credits are accumulated.

Production for the period between the last test visit and the final day of a lactation reported by the herd owner will be calculated from the result of the last test.

The final day of lactation used for computation shall be that reported by the herd owner as the day the cow was last milked twice daily. Her production on that final day will be assumed to be one half that of the last test. Her production for the final period from the last test day to the day declared dry will be based on the average of the last test weight and one half of the last test weight. The fat percentage of the last test day will be used in calculating fat credits.

18- Issuing of official production certificates:

An official production certificate will be issued for each cow whose production has been tested over a normal lactation period.

A) Certificates issued for cows which have completed a lactation of 183 days or longer before drying will show B.C.A.'s. These are calculated for the maximum production period of 305 days. The cumulative production of the lactation, results of previous lactations, and lifetime production will also be shown on the certificate.

B) Certificates will be issued for cows which are sent to slaughter or die before completing 240 days of lactation but these will not show B.C.A.'s.

N.B. No official certificate may be obtained for a lactation which started under unofficial testing and was subsequently transferred to the official testing system unless such lactation meets the requirements of item 11 C.

19- Annual averages:

Annual herd averages by county and by region will be calculated at the end of each year from the official records of all cows which completed a lactation during the year.

The records of un registered ("grade") cows having the N.I.P.Ss "A" suffix or higher will also be used in calculating the herd average.

20- Breed Class Averages (B.C.A.'s) and milk and fat indexes:

A) The production of cows completing lactation records is expressed in terms of B.C.A.'s. The Breed Class standards are based on averages of R.O.P. records certified in the 12 years up to and including 1971. The standards include adjustment factors for each month of calving and are shown in the appendix.

B) Rolling herd averages (R.H.A.'s): The rolling herd average is calculated monthly and is based on the average B.C.A. indexes of production records completed in the preceding 12 months. The production of each animal that completes a lactation is expressed in terms of its deviation (in B.C.A. points) from the R.H.A. of the herd in question. The R.H.A. is based on the records of registered cows and of grade cows having the N.I.P.'s "A" suffix or higher.

21- Other services:

Besides issuing official production certificates (article 18), the Official Testing System of the Quebec Dairy Herd Analysis Program will supply all useful information normally provided by the regular Q.D.H.A.P.

In addition, farmers will receive monthly reports containing a complete analysis of the production, feeding and management of their herds. Specifically, they will show, for each cow, milk production on the day of the test, per cent butterfat content, protein content, the gross value of the milk produced and its net value less feeding costs, number of days since freshening and in calf, the amount of meal to be given each day and the individual production index in relation to the herd average.

At the herd level, the monthly report will show the average milk production, average butterfat test, average forage consumption, quantity of meal fed to the cows, average gross value of the milk, average net value less feed cost, the number of hours of labour per 100 pounds of milk, and the number of pounds of milk produced per man.

22- Relationship between supervisors and breeders:

The supervisor's task in the case of official QDHAP is to make sure that weighings are done precisely, that samples are representative and well identified and that the data collected are accurately entered on the barn sheet.

The supervisor is responsible for collecting the testing fees and must issue receipts for them. He shall not receive any gratuity from the owner of a cow or from any other interested person.

In no case is the supervisor allowed to test his own herd or that of a relative, or a herd in which he has any financial or other interest.

The supervisor is not free to decide which regulations are or are not dispensable; he must observe all regulations and prescribed methods down to the smallest details. Herd owners or their employees share with the supervisor the responsibility for the application of these regulations in their entirely.

23- Fraudulent practices:

A) Fraudulent practice means any action by any person who, by any act or voluntary omission, knowingly and with intent to mislead, impairs or attempts to impair the reliability of any information about an animal or herd.

B) Use of stimulants: No stimulant or drug may to be given to a cow during her testing period. However, this rule does not forbid proper medical attendance on a sick cow.

The use of any product producing thyroidal effects is likewise prohibited. The use of Oxytocin prior to or during any milking on test day is prohibited. Any practice that is intended to create an abnormal yield of milk or fat is a violation of these rules.

24- Penalties:

Any violation of the foregoing regulations shall be referred to the disciplinary committee of the QDHAP. (The said disciplinary committee is composed of one representative of the Quebec Department of Agriculture, and one of the Canada Department of Agriculture, one representative of Macdonald College and two representatives of the Quebec Joint Dairy Breeds committee).

A) Herd owners who infringe any regulation of the official QDHAP will have their privilege of access to information suspended, and may be barred from participating in the official testing system for a definite or indefinite period depending on the disciplinary committee's decision.

B) Any supervisor who infringes these regulations or neglects to report an infringement thereof by a herd owner or any of his employees will be liable to disciplinary measures or will be dismissed.

25- Exclusion:

Herd owners whose combined milk and butterfat index falls to or below 80% of the provincial B.C.A. average during three consecutive years may have their application for enrolment in official testing refused by the directors.

26- Amendments to regulations:

The directors of the QDHAP reserve the right to amend these regulations if need be, or on the recommendation of the Canadian ROP advisory board for dairy cattle and to accept, reject or stop at anytime the testing of herds enrolled in the Official Program, on the recommendation of the disciplinary Committee.

The Livestock Productions Division

- Dr Camille Julien, Assistant Deputy Minister, Production Branch
- Mr Conrad Bernier, Director of the Livestock Productions Division
- Mr Clément Plante, Head of Herd Testing.

APPENDIX

ITEM 1:

A) Milk measuring devices approved for official recording

- Accurate measuring devices
- Milk-O-Meter, made by Technical Industries, Fort Lauderdale, Florida
- Milk-O-Scope, made by Foss Electric Co., Hilleroed, Denmark
- Chore-Boy Rigid Mounted Roll-O-Measure, model 61124
- De Laval Rigid Mounted Weigh Jar, models 8300719 and 8301064-01
- Surge Rigid Mounted Weigh Jar, model 25177
- Universal Rigid Mounted Weigh Jar, model 7491
- Bou-Matic Rigid Mounted Weigh Jar, model 8517802
- Stay-Rite Rigid Mounted Weigh Jar, model DE 31-100
- Surge Tru-Test Meter, models 26035 and 26036
- Waikato Milk and Rate Meter (De Laval)

These devices must satisfy test requirements for installation and operation before they can be approved for test purposes.

B) Methods used by the QDHAP laboratories to determine butterfat percentage:

FOSS-MILKO-TESTER

ITEM 2:

Definition of official recording

A milk recording program that includes:

1- Supervision of the milking by an approved supervisor;

2- rotation of supervisors to the extent of at least two visits per calendar year performed by a supervisor other than the regular supervisor;

3- retesting of herds in line with article 14 of the regulations for herd testing ("Règlement sur le Contrôle laitier");

4- approval by the R.O.P. Dairy Advisory Board for breed improvement programs:

Recognized by the Department as official recording programs:

In Canada:

1- The Quebec Dairy Herd Analysis Program, official option (Q.D.H.A.P.-O.), administered by the Quebec Department of Agriculture;

2- Canadian Record of Performance (R.O.P.);

3- Dairy Herd Improvement, Supervised, (D.H.I.), Ontario Department of Agriculture and Food;

In the U.S.A.: Dairy Herd Improvement Registry (D.H.I.R.)

ITEM 3:

Breed Class standards for milk and fat:

These are based on all Canadian R.O.P. records certified in the 12 years up to and including 1971 and adjusted to provide a smooth transition from the previous (1949-52) standards.

There are lactation standards for each month of freshening but, in the following reference table, only the low (July) and high (December) months are shown. Values for the other months fall between these extremes. There are standards for each month of age, starting at 18 months.

BREED CLASS STANDARDS FOR MILK AND FAT

AYRSHIRE–305 day 2X AGE-MONTH "B.C.A." STANDARDS

Age	July		December	
	Mild (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	5506	228	5968	252
1 yr 9 mos	5834	241	6308	265
2 yr	6136	254	6623	277
2 yr 3 mos	6412	265	6914	288
2 yr 6 mos	6665	275	7182	298
2 yr 9 mos	6895	285	7427	307
3 yr	7103	293	7652	315
3 yr 6 mos	7461	308	8043	330
4 yr	7747	319	8364	342
4 yr 6 mos	7971	327	8622	351
5 yr	8141	334	8825	358
5 yr 6 mos	8264	338	8979	364
6 yr	8347	341	9091	367
7 yr	8420	342	9214	371
8 yr	8405	340	9232	370
9 yr	8336	336	9186	367
10 yr	8248	331	9104	363
11 yr	8131	325	8981	356
12 yr	8019	319	8855	350
13 yr	7899	313	8718	343
14 yr	7760	307	8568	336
15 yr	7581	299	8390	328
16 yr	7330	288	8164	318
17 yr	7104	278	7974	311

BROWN SWISS – 305 day 2X AGE-MONTH "B.C.A." STANDARDS

Age	July		December	
	Milk (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	6163	248	6680	275
1 yr 9 mos	6530	263	7061	289
2 yr	6868	277	7114	302
2 yr 3 mos	7177	289	7739	314
2 yr 6 mos	7460	300	8038	325
2 yr 9 mos	7717	311	8313	335
3 yr	7951	320	8565	344
3 yr 6 mos	8351	335	9003	360
4 yr	8671	348	9362	373
4 yr 6 mos	8922	357	9651	383
5 yr	9112	364	9877	391
5 yr 6 mos	9250	369	10050	397
6 yr	9343	372	10176	401
7 yr	9425	373	10313	404
8 yr	9408	371	10336	404
9 yr	9331	366	10281	400
10 yr	9223	361	10180	395
11 yr	9102	354	10064	389
12 yr	8975	348	9911	382
13 yr	8841	342	9758	374
14 yr	8686	335	9590	366
15 yr	8485	326	9391	358
16 yr	8205	314	9138	347
17 yr	7952	303	8926	339

CANADIENNE – 305 day 2X AGE-MONTH "B.C.A." STANDARDS

Age	July		December	
	Milk (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	4529	205	4909	227
1 yr 9 mos	4799	217	5189	238
2 yr	5047	228	5448	249
2 yr 3 mos	5274	239	5687	259
2 yr 6 mos	5482	248	5907	268
2 yr 9 mos	5671	256	6109	276
3 yr	5842	264	6294	284
3 yr 6 mos	6137	277	6616	297
4 yr	6372	287	6879	308
4 yr 6 mos	6556	295	7092	316
5 yr	6696	301	7258	323
5 yr 6 mos	6797	305	7385	327
6 yr	6866	307	7478	331
7 yr	6926	308	7579	334
8 yr	6913	306	7595	333
9 yr	6857	302	7555	330
10 yr	6777	298	7481	326
11 yr	6688	292	7387	321
12 yr	6595	287	7283	315
13 yr	6497	282	7171	309
14 yr	6383	276	7047	303
15 yr	6235	269	6901	295
16 yr	6029	259	6715	287
17 yr	5843	251	6559	280

GUERNSEY – 305 day 2X AGE-MONTH "B.C.A. STANDARDS

Age	July		December	
	Milk (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	5579	276	6044	295
1 yr 9 mos	5810	290	6329	311
2 yr	6023	302	6590	326
2 yr 3 mos	6217	313	6830	339
2 yr 6 mos	6395	323	7049	352
2 yr 9 mos	6556	332	7248	362
3 yr	6702	340	7429	372
3 yr 6 mos	6953	354	7739	388
4 yr	7153	364	7986	400
4 yr 6 mos	7308	371	8179	409
5 yr	7423	376	8324	415
5 yr 6 mos	7506	378	8428	418
6 yr	7559	379	8497	419
7 yr	7596	377	8551	418
8 yr	7568	372	8527	412
9 yr	7501	364	8456	404
10 yr	7413	357	8364	396
11 yr	7319	349	8266	388
12 yr	7227	342	8173	381
13 yr	7139	336	8087	376
14 yr	7060	330	8002	370
15 yr	6951	323	7906	363
16 yr	6824	314	7776	353
17 yr	6715	305	7658	344

HOLSTEIN – FRIESIAN – 305 day 2X AGE-MONTH "B.C.A." STANDARDS

Age	July		December	
	Milk (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	7294	264	7883	285
1 yr 9 mos	7729	281	8350	303
2 yr	8132	296	8783	319
2 yr 3 mos	8505	311	9184	335
2 yr 6 mos	8849	324	9555	349
2 yr 9 mos	9165	336	9897	362
3 yr	9454	348	10211	374
3 yr 6 mos	9959	367	10762	394
4 yr	10373	382	11216	411
4 yr 6 mos	10704	394	11583	424
5 yr	10963	404	11872	434
5 yr 6 mos	11156	410	12092	442
6 yr	11292	415	12250	447
7 yr	11420	418	12412	451
8 yr	11399	415	12411	449
9 yr	11273	409	12294	443
10 yr	11077	400	12098	434
11 yr	10839	390	11855	424
12 yr	10581	379	11589	413
13 yr	10314	368	11314	401
14 yr	10043	357	11038	390
15 yr	9764	346	10761	379
16 yr	9467	334	10477	367
17 yr	9249	325	10275	359

JERSEY – 305 day 2X AGE-MONTH "B.C.A." STANDARDS

Age	July		December	
	Milk (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	4780	253	5231	275
1 yr 9 mos	5048	270	5535	294
2 yr	5296	285	5815	311
2 yr 3 mos	5524	300	6072	326
2 yr 6 mos	5732	312	6308	340
2 yr 9 mos	5923	324	6524	353
3 yr	6096	334	6720	364
3 yr 6 mos	6396	352	7058	383
4 yr	6638	365	7332	398
4 yr 6 mos	6829	375	7547	409
5 yr	6975	382	7713	416
5 yr 6 mos	7082	386	7834	421
6 yr	7155	389	7917	424
7 yr	7219	388	7993	424
8 yr	7204	384	7980	420
9 yr	7137	377	7912	413
10 yr	7041	369	7813	405
11 yr	6932	362	7703	398
12 yr	6820	356	7591	392
13 yr	6708	350	7481	386
14 yr	6594	344	7370	380
15 yr	6469	337	7245	374
16 yr	6316	328	7089	364
17 yr	6188	319	6955	355

SHORTHORN – 305 day 2X AGE-MONTH "B.C.A." STANDARDS

Age	July		December	
	Milk (lb)	Fat (lb)	Milk (lb)	Fat (lb)
1 yr 6 mos	4377	177	4744	196
1 yr 9 mos	4638	187	5015	206
2 yr	4878	197	5266	215
2 yr 3 mos	5098	206	5497	223
2 yr 6 mos	5299	214	5709	231
2 yr 9 mos	5481	221	5905	238
3 yr	5647	228	6083	245
3 yr 6 mos	5931	239	6394	256
4 yr	6159	248	6649	265
4 yr 6 mos	6337	254	6854	273
5 yr	6472	259	7016	278
5 yr 6 mos	6636	265	7228	285
6 yr	6707	267	7228	285
7 yr	6694	266	7325	288
8 yr	6682	264	7341	288
9 yr	6627	261	7303	285
10 yr	6550	257	7231	281
11 yr	6465	252	7140	277
12 yr	6375	248	7039	272
13 yr	6280	243	6931	267
14 yr	6169	238	6811	261
15 yr	6027	232	6670	255
16 yr	5827	224	6491	247
17 yr	5648	216	6340	241