



Electronic Data Handling - INTERGIS

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Basic Principles

It is the aim of Intergis 2000 to provide a simple and efficient means for handling data electronically. Although some decisions were made to simplify the way data is handled electronically there are a number of legacy applications that still need to be supported and thus some exceptions to the principles outlined below still exist.

Data sent from Intergis 2000

For simplicity it was decided to provide all data in CSV (Comma separated values) format with the following principles:

- 1 Fields are separated by commas (,)
- 2 Fields are optionally enclosed in double quotation marks (“”) this allows the use of a comma in a text field e.g. “Field1”, “Field 2, still 2”, “Field 3”. When a field contains a quotation mark it is escaped by using two quotation marks. E.g. the field (My “name” is) will be shown as ...”, “My “”name”” is”, “... .
- 3 Each record is on a new line. Lines are separated in either DOS (CR/LF) or UNIX (LF) format. Thus the ASCII character 10 as well as 13 must be seen as a record delimiter and consecutive record delimiters must be ignored.
- 4 The first record contains field names for information purposes only; do not use the names to identify the field as the spelling/description might change. Use the position of the field to identify it.
- 5 The layout may change without notice by additional fields being appended to the end of each record. Thus ignore information past the last field being used.
- 6 Dates are in the format DD/MM/YYYY. (Although some older files do contain dates in YYYY/MM/DD format)
- 7 CSV files have the benefit that it can easily be viewed in Microsoft Excel. Please note that Excel® does not display leading zeroes in fields that it thinks is numeric e.g. the Animal Number field.
Be very careful not to edit and/or save the file in Excel as it will save the field without zeroes.

Data sent to Intergis

The official format for sending data to Intergis 2000 is a fixed width text file as this is also the format used internally. Some documents can also be sent in CSV format (Birth notifications and phase A/B weights) as programs have been adapted to cater for it.

Data can be sent by email to intergis@arc.agric.za . Data can also be mailed to Saul van Wyk, ARC, PO BOX 12578, BRANDHOF, 9324 marked with “Electronic Data” on CD.

Telephone: (051) 447 5629 Fax: (051) 447 9847.

Intergis 2000 can unfortunately not take responsibility for CDs thus mailed to The Agricultural Research Council and will not be mailed back.

Note that dates are in DDMMYYYY format (Without the slashes {/})

Files sent in fixed width format should have a .DAT extension and files in CSV format should have a .CSV extension.

Files can also be zipped (Using the ZIP file format) before sending which is preferable.

Formats mostly begin with the following fields:

- 1 Batch – this is used to identify a batch (group of transactions). This can be 15 characters long and it is recommended that the batch consists of an indicator of the software used (e.g. LX is used for the old logix) the participant number in full (e.g. 0412352BON) and a sequence number (e.g. count from 000 to 999 and start at 000 again).
- 2 Employee – this is used as a reference and can be anything up to 10 characters long. When feedback is given (esp. births that were accepted) this field will also be included. For paper documents typed by the ARC the typist's name is stored and in the Intergis Interface the user submitting the data is stored. A recommendation is to use an internal reference (Primary Key) to identify the record when feedback is received. E.g. (When an animal is created on farm software the animal might get an internal ID of 1. When Intergis processes this birth notification and 1 is in the employee field it will allocate a computer number e.g. 0061121212 and send an email with the information and also include the reference of 1)
- 3 Document Code – This is used to identify the type of document in batch processing (E.g. ANIM = Birth Notification and WLAB = Phase A/B Weights)
- 4 Action Type – This theoretically could be Create, Update or Delete. Currently only Create is supported in batch.

Reports sent by Intergis 2000

Reports sent out by Intergis 2000 are all in PDF (Portable Document Format) and can be read by, amongst others, Adobe® Reader which is freely available on the internet at <http://www.adobe.com>.

Document formats of data sent from Intergis 2000

Data sent automatically from Intergis 2000

Some data documents are sent automatically to a breeder who is marked as an “electronic” herd and has a valid email address. This can be confirmed by checking that “Electronic Data Capture” is “yes” on the Participant Details screen on the Intergis Interface. A breeder can opt out of these emails, whilst remaining marked as an electronic herd, by replying to an email and requesting same.

New animals accepted on the system

A list of animals accepted on the system is sent automatically at 16:00.

The fields are:

1	BATCH	4	ANIMAL ID
2	REFERENCE	5	SECTION
3	COMPUTER NUMBER		

For a sample file see <http://www.intergis.agric.za/docs/Births.csv>

Results of beef tests

Results of beef tests are sent automatically at 16:00 following the completion of the calculation.

The fields are:

1	ANIMAL_NUMBER	26	KR
2	BEEF_TEST_CODE	27	KR_INDEX_GRP
3	DERIVATION_DTM	28	KR_TYR
4	ADAPTATION_START_DTM	29	SC_UNADJ
5	GROUP_CODE	30	SC
6	TEST_CODE	31	BODY_LENGTH_UNADJ
7	CONTS	32	BODY_LENGTH_ADJ
8	TEST_START_DTM	33	SHOULDER_HEIGHT_UNADJ
9	TEST_FINISH_DTM	34	SHOULDER_HEIGHT_ADJ
10	WEIGHING_DTM	35	HLR
11	AGE_AT_TEST	36	SKIN_THICKNESS
12	WEIGHT_UNADJ	37	COW_EFFICIENCY
13	WEIGHT_BEGIN_ADAPTATION	38	COW_EFFICIENCY_INDEX
14	WEIGHT_BEGIN_TEST	39	ANIMAL_ID
15	WEIGHT_END_TEST	40	RTU_DTM
16	WEIGHT	41	RTU_RUMP_FAT

17	ADA	42	RTU_FAT_DEPTH
18	ADA_IDX	43	RTU_MUSCLE_AREA
19	ADA_TYR	44	MARBLING
20	ADG	45	MARBLING_INDEX
21	ADG_IDX	46	MEAT_PERC
22	ADG_TYR	47	MEAT_PERC_INDEX
23	FCR	48	MUSCLE_PERC
24	FCR_IDX	49	MUSCLE_PERC_INDEX
25	FCR_TYR	50	KG_MEAT

The beef test results are supplied in the same format for all phases. However some of the fields will be empty when the field does not apply to that test.

For a sample of a phase B test see <http://www.intergis.agric.za/docs/BeefTestB.csv> and for a sample of a phase D test see <http://www.intergis.agric.za/docs/BeefTestD.csv>

Results of lactation tests

Results of lactation tests are sent automatically at 16:00 following the completion of the calculation.

1	Animal Number	14	Fat Yield (305 days)
2	Parity	15	Protein Yield
3	Calving Date	16	Protein Yield (305 days)
4	End of Lactation	17	Lactose Yield
5	Termination Reason	18	Lactose Yield (305 days)
6	Milk Index	19	Fat%
7	Fat Index	20	Protein%
8	Protein Index	21	Lactose%
9	Number of measurements	22	Lactation Index
10	Lactation Length	23	SCC 24H
11	Milk Yield	24	SCC Index 24H
12	Milk Yield (305 days)	25	Urea Concentration 24H
13	Fat Yield	26	Lactation Date

Only information about completed lactations in the test are sent.

SCC 24H, SCC Index 24H and Urea concentration 24H are not considered important if using Taurus 4000 reports.

For a sample see <http://www.intergis.agric.za/docs/LactTest.csv>

Data sent on request from Intergis 2000

Data extraction for beef software

Dairy data extraction is not sent automatically, but upon request and there is a fee involved based on the number of records extracted. All animals in a herd (optionally with 1, 3 or 5 generations of ancestors) or specific animals can be requested with 1, 3 or 5 generations of ancestors) or specific animals can be requested.

Animal information

1	GEN	27	WEAN WEIGHT RELIABLE
2	ANI_ID	28	WEAN DATE
3	BREED CODE	29	APPROVED / REJECTED
4	SEX	30	INSPECTION DATE
5	HDM	31	DATE OF DEATH
6	YEAR VALUE	32	CANCELLATION DATE
7	SEQUENCE VALUE	33	REASON FOR CANCELLATION
8	ANIMAL ID NUMBER	34	SERVICE CODE
9	ANIMAL COMPUTER NUMBER	35	BIRTH STATUS
10	ANIMAL PREFIX	36	SEX OF TWIN
11	ANIMAL NAME	37	DNA or LIDCAT or BLOOD TYPE
12	SIRE ID NUMBER	38	CALVING STATUS
13	SIRE COMPUTER NUMBER	39	EASE OF CALVING
14	DAM ID NUMBER	40	AFTER BIRTH REMARK
15	DAM COMPUTER NUMBER	41	NOT FOR REGISTRATION
16	SECTION	42	MAIN ID METHOD
17	SUB SECTION	43	COLOUR
18	BREEDER PARTICIPANT NUMBER	44	DAM WEIGHT AT BIRTH
19	OWNER PARTICIPANT NUMBER	45	DAM WEIGHT AT WEAN
20	IN HERD START DATE	46	DAM EFFICIENCY INDEX
21	IN HERD END DATE	47	BIRTH ABNORMALITIES 1
22	BIRTH DATE	48	BIRTH ABNORMALITIES 2
23	BIRTH WEIGHT	49	BIRTH ABNORMALITIES 3
24	BIRTH WEIGHT RELIABLE	50	HORN/POLL STATUS
25	BIRTH WEIGH DATE	51	REGISTRATION STATUS
26	WEAN WEIGHT	52	n/a

53	COUNTRY CODE	85	B2 RANK
54	A1 BEEF RECORDING GROUP	86	B2 AGE
55	A1 WEIGH DATE	87	B2 WEIGHT CORRECTED
56	A1 WEIGHT	88	B2 ADA
57	A1 CONTEMPORARIES	89	B2 ADA INDEX
58	A1 RANK	90	C/D ADAPTATION DATE
59	A1 AGE	91	C/D ADAPTATION WEIGHT
60	A1 WEIGHT CORRECTED	92	C/D START DATE
61	A1 ADA	93	C/D START WEIGHT
62	A1 ADA INDEX	94	C/D END DATE
63	A2 BEEF RECORDING GROUP	95	C/D END WEIGHT
64	A2 WEIGH DATE	96	C/D DAYS IN TEST
65	A2 WEIGHT	97	C/D CONTEMPORARIES
66	A2 CONTEMPORARIES	98	C/D RANK
67	A2 RANK	99	C/D ADG
68	A2 AGE	100	C/D ADG INDEX
69	A2 WEIGHT CORRECTED	101	C/D ADA
70	A2 ADA	102	C/D ADA INDEX
71	A2 ADA INDEX	103	C/D FEED CONVERSION RATIO (FCR)
72	B1 BEEF RECORDING GROUP	104	C/D FCR INDEX
73	B1 WEIGH DATE	105	C/D KLEIBER RATIO
74	B1 WEIGHT	106	C/D KLEIBER RATIO INDEX
75	B1 CONTEMPORARIES	107	C/D SHOULDER HEIGHT
76	B1 RANK	108	C/D ADJUSTED SHOULDER HEIGHT
77	B1 AGE	109	C/D BODY LENGTH
78	B1 WEIGHT CORRECTED	110	C/D ADJUSTED BODY LENGTH
79	B1 ADA	111	C/D SKIN THICKNESS
80	B1 ADA INDEX	112	C/D ADJUSTED SKIN THICKNESS
81	B2 BEEF RECORDING GROUP	113	C/D SCROTUM CIRCUMFERENCE (SCR)
82	B2 WEIGH DATE	114	C/D ADJUSTED SCR
83	B2 WEIGHT	115	INBREEDING COEFFICIENT
84	B2 CONTEMPORARIES	116	BLUP AB DATE

117	BLUP CD DATE	149	B1 TEST NUMBER
118	EBV BIRTH WEIGHT DIRECT	150	B2 TEST NUMBER
119	BIRTH WEIGHT DIRECT ACCURACY	151	C/D TEST NUMBER
120	EBV BIRTH WEIGHT MATERNAL	152	KEEPER PARTICIPANT NUMBER
121	BIRTH WEIGHT MATERNAL ACCURACY	153	A1 KEEPER PARTICIPANT NUMBER
122	EBV EASE OF CALVING	154	A2 KEEPER PARTICIPANT NUMBER
123	EASE OF CALVING ACCURACY	155	B1 KEEPER PARTICIPANT NUMBER
124	EBV WEAN DIRECT	156	B2 KEEPER PARTICIPANT NUMBER
125	WEAN DIRECT ACCURACY	157	C/D KEEPER PARTICIPANT NUMBER
126	EBV WEAN MATERNAL	158	EBV MATURE WEIGHT
127	WEAN MATERNAL ACCURACY	159	MATURE WEIGHT ACCURACY
128	EBV WEAN COMBINED MATERNAL	160	EBV STAYABILITY
129	WCM ACCURACY	161	STAYABILITY ACCURACY
130	EBV 12 MONTH WEIGHT	162	EBV FEED PROFIT
131	12 MONTH WEIGHT ACCURACY	163	FEED PROFIT ACCURACY
132	EBV 18 MONTH WEIGHT	164	EBV FEED INTAKE
133	18 MONTH WEIGHT ACCURACY	165	FEED INTAKE ACCURACY
134	EBV C/D ADG	166	EBV FAT THICKNESS
135	C/D ADG ACCURACY	167	FAT THICKNESS ACCURACY
136	EBV C/D KLEIBER	168	EBV EYE MUSCLE AREA
137	C/D KLEIBER ACCURACY	169	EYE MUSCLE AREA ACCURACY
138	EBV C/D SCROTUM CIRCUMFERENCE	170	EBV MARBLING
139	C/D SCR ACCURACY	171	MARBLING ACCURACY
140	EBV C/D HEIGHT	172	EBV C/D FEED CONVERSION RATIO
141	C/D HEIGHT ACCURACY	173	FEED CONVERSION RATIO ACCURACY
142	EBV C/D BODY LENGTH	174	RTU PERFORMANCE TEST NUMBER
143	C/D BODY LENGTH ACCURACY	175	RTU MEASUREMENT DATE
144	EBV CALVING TEMPO	176	WEIGHT ON RTU DATE
145	CALVING TEMPO ACCURACY	177	RTU RIB FAT
146	EBV COW PROFIT	178	RTU RUMP FAT
147	A1 TEST NUMBER	179	RTU EYE MUSCLE AREA
148	A2 TEST NUMBER	180	RTU EQUIPMENT

181	RTU MARBLING	193	2. MATING SIRE NAME
182	RTU MARBLING INDEX	194	2. MATING SIRE COMPUTER NUMBER
183	RTU MEAT %	195	2. MATING SIRE DNA NUMBER
184	RTU MEAT % INDEX	196	1. MATING TYPE
185	RTU MUSCLE %	197	1. MATING DATE IN
186	RTU MUSCLE % INDEX	198	1. MATING DATE OUT
187	RTU KG MEAT	199	1. MULTISIRE MATING
188	ANIMAL DNA NUMBER	200	1. MATING SIRE NAME
189	2. MATING TYPE	201	1. MATING SIRE COMPUTER NUMBER
190	2. MATING DATE IN	202	1. MATING SIRE DNA NUMBER
191	2. MATING DATE OUT		
192	2. MULTISIRE MATING		

Note:

- This is an old routine and the dates are still in YYYY/MM/DD format.
- Field 37: Dna if available, else lidcat if available, else blood type number
- Field 188: Dna if available, else nothing.
- Fields 189-195. Before last mating after last calving date. Only for female animals
- Fields 196-202: Last mating after last calving date. Only for female animals.
- Fields 189,196: Mating Type: 1=natural mating,2=AI,3=embryo implantation
- Fields 192,199: Y=multi sire mating, N=not multi sire mating

Data extraction for dairy software

Dairy data extraction is not sent automatically, but upon request and there is a fee involved based on the number of records extracted. All animals in a herd (optionally with 1, 3 or 5 generations of ancestors) or specific animals can be requested.

Animal information

1	GEN	28	MOERIDNOMMER
2	ANIMAL_NUMBER	29	MOERREKENAARNR
3	RASKODE	30	BLOEDDNANOMMER
4	GESLAG	31	DIERSTATUS
5	KKM	32	NVR
6	JAARSYFER	33	IDMETODE1
7	VOLGNOMMER	34	IDMETODE2
8	GEREGKOMM	35	DEKKODE
9	DIERIDNOMMER	36	KALFSTATUS
10	REKENAARNOMMER	37	GEMAKVKALWING
11	TELERNOMMER	38	ABNORMALITEITE1
12	EIENAARNOMMER	39	ABNORMALITEITE2
13	EIENDATUM	40	ABNORMALITEITE3
14	EINDEIEN	41	KLEURKODE
15	VOORVOEGSEL	42	HORINGS
16	NAAM	43	INSPEKSIEDATUM
17	GEBDATUM	44	AFGOEDGEKEUR
18	DOODDATUM	45	KANSELLASIEDATUM
19	GEBGEWIG	46	KANSELLASIEREDE
20	GGRELIABLE	47	PERFRECORDERD
21	GEBSTATUS	48	COUNTRY_CODE
22	TWEELINGMET	49	LINCLAS
23	AFDELING	50	BODY
24	OAFDELING	51	FL
25	VAARIDNOMMER	52	UDDER
26	VAARREKENAARNR	53	FINPOINT
27	MSINDICATOR		

Note: This is an old routine and the dates are still in YYYY/MM/DD format.

Completed lactations

1	ANIMAL NUMBER	16	PROTEIN YIELD 305
2	NO	17	LACTOSE YIELD
3	CALVING DATE	18	LACTOSE YIELD305
4	END DATE	19	FAT%
5	TERMINATION REASON	20	PROTEIN%
6	MILK INDEX	21	LACTOSE%
7	FAT INDEX	22	FAT % 305
8	PROTEIN INDEX	23	PROTEIN % 305
9	NO MILK YIELD MEASUREMENTS	24	LACTOSE % 305
10	LACTATION LENGTH	25	LACTATION INDEX
11	MILK YIELD	26	AVG. SOMATIC CELL COUNT
12	MILK YIELD305	27	SOMATIC CELL COUNT INDEX
13	FAT YIELD	28	LACTATION CALCULATION DATE
14	FAT YIELD 305	29	AVG. MILKING'S PER DAY
15	PROTEIN YIELD		

Note: This is an old routine and the dates are still in YYYY/MM/DD format.

i) Test day results

Information pending...

ii) Linear Classifications

Information pending...

Field explanations – Beef

ADA	Average Daily Gain (ADG) per Day of Age
ADA_IDX.....	ADA Index
ADA_TYR.....	ADA Ten Year Rolling Average
ADAPTATION_START_DTM.....	Adaptation start date
ADG	Average Daily Gain
ADG_IDX	ADG Index
ADG_TYR.....	ADG Ten Year Rolling Average
AGE_AT_TEST.....	Age at test
ANIMAL_NUMBER.....	Animal s computer number (10 characters with leading zeroes)
BEEF_TEST_CODE.....	Beef Test Code
BODY_LENGTH_ADJ.....	Adjusted Body Length
BODY_LENGTH_UNADJ.....	Unadjusted Body Length
CONTS	Number of Contemporaries
COW_EFFICIENCY.....	Cow efficiency
COW_EFFICIENCY_INDEX.....	Cow efficiency index
DERIVATION_DTM.....	Date of derivation
FCR	Feed Conversion Ratio
FCR_IDX	FCR Index
FCR_TYR	FCR Ten Year Rolling Average
GROUP_CODE.....	Group Code
HLR	Height to Length Ratio
KR	Kleiber Ratio
KR_INDEX_GRP.....	KR Index
KR_TYR	KR Ten Year Rolling Average
SC	Scrotum Circumference
SC_UNADJ.....	Unadjusted SC
SHOULDER_HEIGHT_ADJ.....	Adjusted Height
SHOULDER_HEIGHT_UNADJ.....	Unadjusted Height
SKIN_THICKNESS.....	Skin Thickness
TEST_CODE.....	Test Code
TEST_FINISH_DTM.....	Finishing date of test
TEST_START_DTM.....	Starting date of test
WEIGHING_DTM.....	Weighing date
WEIGHT	Weight
WEIGHT_BEGIN_ADAPTATION.....	Weight at beginning of Adaptation
WEIGHT_BEGIN_TEST.....	Weight at beginning of Test
WEIGHT_END_TEST.....	Weight at end of Test
WEIGHT_UNADJ.....	Unadjusted Weight

ANIMAL_ID.....	Animal New ID (BBBSHHHHYYSSSS)
RTU_DTM.....	RTU Measurement Date
RTU_RUMP_FAT.....	RTU Measured Rump Fat Thickness
RTU_FAT_DEPTH.....	RTU Measured Fat Depth
RTU_MUSCLE_AREA.....	RTU Measured Eye Muscle Area
MARBLING.....	RTU Measured Marbling
MARBLING_INDEX.....	RTU Calculated Marbling Index
MEAT_PERC.....	RTU Calculated Carcass Red Meat %
MEAT_PERC_INDEX.....	RTU Calculated Carcass Red Meat % Index
MUSCLE_PERC.....	RTU Calculated Muscle %
MUSCLE_PERC_INDEX.....	RTU Calculated Muscle % Index
KG_MEAT.....	RTU Calculated KG Predicted Red Meat

Field explanations – Dairy

Animal Number.....	Animal s computer number/registration number
Parity/No.....	Calf Number
Calving date.....	Latest calving date applicable to lactation results
End of lactation.....	Date on which lactation is terminated
Fat %	Average fat percentage for the lactation
Fat index.....	Index relating fat yield to age group average
Fat yield	Kg fat produced during the lactation
Fat yield (305 days).....	Predicted/actual kg fat produced during 305 day period
Lactation date.....	Date on which lactation was calculated
Lactation index.....	Combined index for milk, fat and protein, over age groups
Lactation length.....	Number of day's cow was milked
Lactose %.....	Average lactose percentage for the lactation
Lactose yield.....	Kg lactose produced during the lactation
Lactose yield (305 days).....	Predicted/actual kg lactose produced during 305 day period
Milk index.....	Index relating milk production to that of group average
Milk yield.....	Kg milk produced during the lactation
Milk yield (305 days).....	Predicted/actual kg milk produced over 305 day period
Number of measurements.....	Actual number of milk weights recorded during lactation
Protein %.....	Average protein percentage for the lactation
Protein index.....	Index relating protein yield to age group average
Protein yield.....	Kg protein produced during the lactation
Protein yield (305 days).....	Predicted/actual kg protein produced during 305 day period
SCC 24H	Average Somatic cell count for lactation
SCC Index 24H.....	A value presenting the average somatic cells in milk
Urea concentration 24H.....	Average urea concentration during the lactation
Termination reason/Afsluitrede.....	Lactation Termination reason

Document formats of data sent to Intergis 2000

Birth notification

The preferred format for the Batch nr field for birth notifications is:

Character(s)	Description	Example
1	Document type (should be "A")	A
2 – 4	Herd breed code	ABC
5 – 11	Member nr	1234567
12 - 15	Software identifier and daily sequence nr	Z001 or KD01

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	ANIM
Action type	Alpha	1	C-create, U-update, D-delete
Document type	Alpha	1	B-birth notification F-First Acceptance
Purpose	Alpha	1	M-Milk B-Beef D-Dual
NFR	Alpha	1	Y-if not for registration N-if for registration
Participant code	Alphanum	10	Member nr (7) + ICAR breed code(3)
Sex	Alpha	1	F-Female M-Male
Registered/ Commercial	Alpha	1	R-Registered C- Commercial
Animal Breed Code	Alpha	3	ICAR breed code of animal
Animal Id Nr	A,A,A,A,A,R	15	ICAR Breed Code(3), Sex(1), HDM(4), Year(2), Seq(4), Regis/Comm(1) *for commercial and blank for registered animal
Main Id method	Num	1	1 – Tattoo 5 – Color 2 – Ear code 6 - Brand 3 – Tag 7 – Photo 4 - Double tag 8 - Electronic
Name	Alphanum	20	Name of animal
Sub Id method	Num	1	As for Main Id method

Farm Animal Nr	Alphanum	10	The farmer's animal number
Field name	Field Type	Field Length	Contents
Service	Num	1	1-Natural; 2-AI ; 3-Inovulation
Birthdate	Date	8	Birth date of animal (DDMMCCYY)
Birth weight	Num	3	Birth weight of animal
Birth weight date	Date	8	DDMMCCYY
Birth weight reliable	Alpha	1	Y-reliable N-not reliable
Birth weight contemporary group	Num	6	See Appendix A
Dam weight at calving	Num	3	Dam weight at calving
Dam weight date	Date	8	DDMMCCYY
Dam weight reliable	Alpha	1	Y-reliable N-not reliable
Birth status	Num	1	1-single 2-twins 3-triplets or more
Sex of twin	Alpha	1	F-female M-male
Cow feeding status	Num	1	1-Ca-P 4-Concentrate 2-Mixed 5-Other lick 3-No lick 6- Pastures
Take on Animal Preg Status	Num	1	T-Pregnant F-Not pregnant D-Dubious
Pregnancy Status date	Date	8	Date on which pregnancy status was checked (DDMMCCYY)
Birth abnormalities (X3)	Num	9 (3,3,3)	A valid birth abnormality code
Calf status	Num	1	1-Alive, 2-Abort, 3-Abort before 7 months, 4-Still born, 5-Died at birth, 6-Destroyed
Calf ease	Num	1	1-Normal, 2-Little, 3-Serious, 4-Casarian, 5-Cut out
Section	Alphanum	2	To indicate section of First Acceptance animal
Subsection	Alphanum	2	To indicate subsection of First Acceptance animal. Also to be used on Birth Notification for Aberdeen Angus and Friesland's to override black and red subsections (if necessary)
Horn Poll	Alpha	2	H, P, PP, PH, HP, DH, SC
Inspection weight	Num	4	Inspection weight
Inspector Participant code	Alphanum	10	Participant code of inspector
Inspection date	Date	8	Inspection date (DDMMCCYY)
Colour	Num	2	1-Typical 2-Red

			3-Red/White 4-White/Red 5-Black 6-Yellow, & Roadin 8-White 9-Red White under 10-Yellow/White 11-Grey 12-Black/White 13-Whole 14-Broken
Dam comp nr	Num	10	Dam computer number
Sire comp nr	Num	10	Sire computer number
Dam id nr	A,A,A,A,N,R	15	Dam id nr – Format as for Animal Id Nr
Sire id nr	A,A,A,A,N,R	15	Sire id nr – Format as for Animal Id Nr
Semen code	Alphanum	7	Sire semen code
Date received	Date	8	The current date (DDMMCCYY)
Multiple sires	Alpha	1	Y indicate multiple sires
Lowest section	Alphanum	2	Lowest section of sires if multiple sires are used
Blank field	Alpha	27	Reserved / (Future use)
Computer Number <i>ONLY APPLICABLE WHEN LOADING DATA RECEIVED FROM AN INSTITUTION LIKE SA STUDBOOK</i>	Num	10	Comp No. - To be used (for this animal) instead of the normal system generated one. Must be valid according to the Intergis specifications.
Blank field	Alpha	15	Reserved / (Future use)

Phase A/B weights

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	WLAB
Keeper nr	Alphanum	10	Participant code of keeper of this animal
Beef Test code	A,A,N,N	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example A11BON200301
Test start date	Date	8	DDMMCCYY

Field name	Field Type	Field Length	Contents
Test end date	Date	8	DDMMCCYY
Observer nr	Alphanum	10	Participant code of observer who has perform the actual weighing of the animal
Farmers animal nr	Alphanum	10	A number that a farmer allocates to this animal
Animal comp nr	Num	10	Computer number allocated to this animal
Birthdate	Date	8	DDMMCCYY
Animal weight	Num	3	Weight of animal at time of this test
Dam weight	Num	4	Weight of dam at time of this test (use leading zero's e.g. 0040 for 40kg) – Leave blank or use 0000 if the dam was not weighed
Weighing date	Date	8	DDMMCCYY
Record group code	A,N,N	5 (1,2,2)	The recording group consists of 3 separate fields: sex, rear status code, feeding status code
Dam feeding status	Num	2	Feeding status of the dam
Reason for unreliable	Num	2	Reason for unreliable

- **Records C to G as described below at Phase C/D performance tests can also be sent in for A/B performance tests, all records in one file**

Phase C/D performance tests

a) General Test Record

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	TEST
Keeper nr	Alphanum	10	Participant code of keeper of this animal
Test type	Alpha	3	Example D1 1
Beef test code	A,A,N,N	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example D1 1BON201101
Adaptation date	Date	8	DDMMCCYY
Test start date	Date	8	DDMMCCYY
Test end date	Date	8	DDMMCCYY
Feeding regime code	Alpha	1	
Feeding system code	Alpha	1	
Diet code	Alpha	1	

b) Weight Records

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	WLCD
Keeper nr	Alphanum	10	Participant code of keeper of this animal
Beef test code	A,A,N,N	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example D1 1BON201101
Observer nr	Alphanum	10	Participant code of observer who has perform the actual weighing of the animal
Farmers animal nr	Alphanum	10	A number that a farmer allocates to his animal
Animal comp nr	Num	10	Computer number allocated to this animal
Birthdate	Date	8	DDMMCCYY
Test date	Date	8	DDMMCCYY Date on which weight was taken
Weight date	Alpha	3	BAD Phase C or D begin Adaptation weight BTE Phase C or D begin Test weight ITE Phase C or D Intermediate Test weight ETE Phase C or D End Test weight
Animal weight	Num	3	Left padded with zeros

c) Body Measurement Records

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	BODY
Keeper nr	Alphanum	10	Participant code of keeper of this animal
Beef test code	A,A,N,N	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example D1 1BON201101
Observer nr	Alphanum	10	Participant code of observer who has perform the actual weighing of the animal
Farmers animal nr	Alphanum	10	A number that a farmer allocates to his animal
Animal comp nr	Num	10	Computer number allocated to this animal
Test date	Date	8	DDMMCCYY Date on which body measurements were taken
Shoulder weight	Num	4	In mm Left padded by zeros
Hip height	Num	4	In mm Left padded by zeros
Body length	Num	4	In mm Left padded by zeros

Field name	Field Type	Field Length	Contents
Scrotum Circumference	Num	4	In mm Left padded by zeros
Skin thickness	Num	4	In mm Left padded by zeros
Unreliable	Alpha	1	Y / N
Future use	Num	21	Reserved for future use. Enter 21 zeros in this field

d) Feed Intake Records

Field name	Field Type	Field Length	Contents
Batch nr	Alphanumeric	15	Batch nr allocated by data editing
Reference code	Alphanumeric	10	Any reference code
Document code	Alpha	4	FEED
Keeper nr	Alphanumeric	10	Participant code of keeper of this animal
Beef test code	A,A,N,N,	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example D11BON201101
Observer nr	Alphanumeric	10	Participant code of observer who has performed the actual weighing of the animal
Farmers animal nr	Alphanumeric	10	A number that a farmer allocates to his animal
Animal comp nr	Num	10	Computer number allocated to this animal
Test date	Date	8	DDMMYYYY Date on which feed was eaten
Roughage	Num	4	In kg Left padded by zeros
Concentrates	Num	4	In kg Left padded by zeros
Complete ration	Num	4	In kg Left padded by zeros
Unreliable	Alpha	1	Y / N
Future use	Num	21	Reserved for future use. Enter 21 zeros in this field

e) Functional Appearance Records

Field name	Field Type	Field Length	Contents
Batch nr	Alphanumeric	15	Batch nr allocated by data editing
Reference code	Alphanumeric	10	Any reference code
Document code	Alpha	4	FUNC
Keeper nr	Alphanumeric	10	Participant code of keeper of this animal
Beef test code	A,A,N,N,	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example D11BON201101

Observer nr	Alphanum	10	Participant code of observer who has perform the actual weighing of the animal
Farmers animal nr	Alphanum	10	A number that a farmer allocates to his animal
Animal comp nr	Num	10	Computer number allocated to this animal
Test date	Date	8	DDMMYYYY Date on which feed was eaten
Temperament	Num	1	The mark given to the applicable trait
Hair straightness	Num	1	The mark given to the applicable trait
Skin pigmentation	Num	1	The mark given to the applicable trait
Lower jaw length	Num	1	The mark given to the applicable trait
Face straightness	Num	1	The mark given to the applicable trait
Overall muscling	Num	1	The mark given to the applicable trait
Girth fullness	Num	1	The mark given to the applicable trait
Topline	Num	1	The mark given to the applicable trait
Rump angle	Num	1	The mark given to the applicable trait
Testicle hypoplasia	Num	1	The mark given to the applicable trait
Scrotum circumference	Num	1	The mark given to the applicable trait
Epididimus size	Num	1	The mark given to the applicable trait
Sheath length	Num	1	The mark given to the applicable trait
Sheath fleshiness	Num	1	The mark given to the applicable trait
Hock angle	Num	1	The mark given to the applicable trait
Pasterns angle	Num	1	The mark given to the applicable trait
Front legs Strg. (fv)	Num	1	The mark given to the applicable trait
Front feet alignment	Num	1	The mark given to the applicable trait
Hoove split	Num	1	The mark given to the applicable trait
Hoove length	Num	1	The mark given to the applicable trait
Hoove inside Wall strg.	Num	1	The mark given to the applicable trait
General appearance	Num	1	The mark given to the applicable trait
Masculinity	Num	1	The mark given to the applicable trait
Future use	Num	21	Reserved for future use. Enter 21 zeros in this field

f) Tick Count Records

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	TICK
Keeper nr	Alphanum	10	Participant code of keeper of this animal
Beef test code	A,A,N,N,	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr Example D11BON201101

Field name	Field Type	Field Length	Contents
Observer nr	Alphanum	10	Participant code of observer who has perform the actual weighing of the animal
Farmers animal nr	Alphanum	10	A number that a farmer allocates to his animal
Animal comp nr	Num	10	Computer number allocated to this animal
Test date	Date	8	DDMMYYYY Date on which feed was eaten
Measurement type	Num	1	1 = All ticks
Measurement	Num	4	Number of tick counted, left padded by zeros
Unreliable	Alpha	1	Y / N
Future use	Num	21	Reserved for future use. Enter 21 zeros in this field

g) Ultrasonic Measurement Records

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	RTUM
Keeper nr	Alphanum	10	Participant code of keeper of this animal
Beef test code	A,A,N,N,	12 (3,3,4,2)	The beef test code consists of 4 separate fields: test type, breed code, test year and test nr.: Example d11bon201101
Observer nr	Alphanum	10	Participant code of observer who has perform the actual weighing of the animal
Farmers animal nr	Alphanum	10	A number that a farmer allocates to his animal
Animal comp nr	Num	10	Computer number allocated to this animal
Test date	Date	8	DDMMYYYY Date on which feed was eaten
Measurement site	Num	1	1 = Rib 12-13 2 = Rump P8
Rump subcutaneous Fat	Num	5	Left padded with zeros; 1 Decimal ex: 123,4
Rib subcutaneous Fat	Num	5	Left padded with zeros; 1 Decimal ex: 123,4
Eye muscle area	Num	5	Left padded with zeros
DELETED	Num	5	00000
Intramuscular Fat %	Num	5	Left padded with zeros 1 Decimal ex: 123,4
Scanning system	Num	1	1 = Pie 200 2 = Aloca 500 3 = Pie 100 4 = Aquila Vet
Unreliable	Alpha	1	Y / N
Future use	Num	21	Reserved for future use. Enter 21 zeros in this field

Records A to G are all entered in the same file.

Matings

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	SERV
Action type	Alpha	1	C
Service type	Alpha	1	N = Natural mating A = Artificial insemination
Dam participant nr	Num	10	Optional
Dam comp nr	Num	10	Computer nr of the animal which have been mated
Dam ID nr	A,A,A,A,A,R	15 (3,1,4,2,4,1)	Optional: Dam Official ID
Sire participant nr	Alpha	10	Optional
Sire comp nr	Num	10	Computer nr of the sire which have been mated with
Sire ID nr	A,A,A,A,A,R	15 (3,1,4,2,4,1)	Optional: Official ID of the Sire
Date in	Date	8	DDMMYYYY AI date or starting date when sire walked with dam
Date out	Date	8	DDMMYYYY AI date or ending date when sire walked with dam

Transfers

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	TRNS
Action type	Alpha	1	C
Action code	Alpha	1	B
Animal comp nr	Num	10	Computer number allocated to this animal
Animal ID nr	A,A,A,A,A,R	15 (3,1,4,2,4,1)	Animal official ID
Owner participant nr	Num	10	Participant code of existing owner of the animal

Buyer participant nr	Num	10	Optional: Participant code of the new owner of the animal. Although the field is optional, its highly recommended to include it in the file
Transfer date	Date	8	DDMMYYYY
Date received	Date	8	DDMMYYYY Optional: Date the animal was received by the new owner
Buyer initials	Alpha	4	Optional when buyer participant nr has been specified
Buyer name	Alpha	25	Optional when buyer participant nr has been specified
Buyer address	Alpha	24	Optional when buyer participant nr has been specified
Buyer address	Alpha	24	Optional when buyer participant nr has been specified
Buyer address	Alpha	24	Optional when buyer participant nr has been specified
Buyer postal code	Alpha	4	Optional when buyer participant nr has been specified

Cancellations

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	4	CANC
Action type	Alpha	1	C
Participant nr	Num	10	Participant code of owner of the animal. Replace breed part of participant code with 000, for example 0123456000
Animal comp nr	Num	10	Computer number allocated to this animal
Animal ID nr	A,A,A,A,A,R	15 (3,1,4,2,4,1)	Animal official ID
Cancellation date	Date	8	DDMMYYYY
Cancellation reason	Num	2	Left padded with 0 01 = Animal died 03 = Per capita cancellation 02 = Culled at inspection 04 = TB positive

Photos

Allowable Image Size: Any Size, preferably in landscape

Image Format: JPG

Photo File Name: Animal Computer Number followed by image file extension,
Example: 0012345678.jpg

Pack photo file(s) in a zip archive and send to the ARC

Milk Weights

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	3	Must always be TST
Participant code	Alpha	10	Code of participant which consists of a member nr of 7 digits and breed code of 3 characters
Test date	Num	8	Test date of test which is in the format DDMMCCYY
Time 1	Num	4	First milking time that is HHMM. If a value is entered here leading zeroes must be punched e.g. 0805. If nothing is entered, 4 blanks must be given in file
Time 2	Num	4	Second milking time that is HHMM. If a value is entered here leading zeroes must be punched e.g. 0805. If nothing is entered, 4 blanks must be given in file
Time 3	Num	4	Third milking time that is HHMM. If a value is entered here leading zeroes must be punched e.g. 0805. If nothing is entered, 4 blanks must be given in file
Time 4	Num	4	Fourth milking time that is HHMM. If a value is entered here leading zeroes must be punched e.g. 0805. If nothing is entered, 4 blanks must be given in file
Farmers animal nr	Alpha	10	A number given by the farmer can be entered here. If nothing is entered, 10 blanks must be given in file
Animal computer nr	Num	10	The computer number of the animal can be entered. If nothing is entered, 10 blanks must be given in file
Animal alternative nr	Alpha	15	The identification nr of the animal can be entered here. If nothing is entered, 15 blanks must be given in file
Calving date	Num	8	If there is a new calving date for an animal, it can be entered here. If nothing is entered, 8 blanks must be given in file
Lactation termination date	Num	8	If the lactation is terminated, the date can be entered here. If nothing is entered, 8 blanks must be given in file
Bottle nr	Num	4	If a sample was taken the bottle nr can be entered here. If nothing is entered, 4 blanks must be given in file
Milk weight 1	Num	3	If milk weight 1 was taken, the weight can be entered. If nothing is entered, 3 blanks must be given in file
Milk weight 2	Num	3	If milk weight 2 was taken, the weight can be entered. If nothing is entered, 3 blanks must be given in file
Milk weight 3	Num	3	If milk weight 3 was taken, the weight can be entered. If nothing is entered, 3 blanks must be given in file
Milk weight 4	Num	3	If milk weight 4 was taken, the weight can be entered. If nothing is entered, 3 blanks must be given in file

Field name	Field Type	Field Length	Contents
Cow condition	Alpha	1	If a cow condition is available, this field will be entered. If nothing is entered, 1 blank must be given in file
Termination reason	Num	2	When the lactation is terminated and a reason is available, it can be entered here. If nothing is entered, 2 blanks must be given in file
Cow weight	Num	3	Cow's weight when milked. If nothing is entered, 3 blanks must be given in file

Milk Lab data

Normal procedures will be followed for obtaining the Milk Lab data from the relevant Laboratories as is the case currently.

In the event of a data extraction from an institution like SA Studbook, the Intergis Development Team at the ARC's central office or Saul van Wyk at the Bloemfontein Office (ARC) should first be contacted for guidance regarding the format in which the ARC would like to receive the milk performance data.

Below is the format and layout currently:

The file is in CSV format.

There are 2 "sections" – a header section, and then a data section.

The first 8 lines make up the header section. They are as follows:

1. Batch,[value],,,,,
2. Batch Date, [value],,,,,
3. Total, [value],,,,,
4. Lab Date,[value],,,,,
5. Instrument ID,[value],,,,,
- 6.,,,,,,
7. Pos.,No.,Fat B,Protein,Lactose,Cells,Urea,pH
- 8.,,,,,,

Line 1: is the Participant Number, excluding Breed Code. Compulsory, Numeric.

Line 2: is the Test Date. Compulsory, Date.

Line 3: is the Bottle Count. Compulsory, Numeric.

Line 4: is the Date which Tests were done at Lab. Optional, Date.

Line 5: is the ID of Instrument used at Lab. Optional, Numeric.

Link 6: is a blank line.

Link 7: is the Columns headers. Compulsory, text.

Link 8: is a blank line.

There are 8 fields for each record in the data section.

- Pos. - is a record counter. Compulsory, Numeric.
- No. - is the Bottle No. Compulsory, Numeric.
- Fat B - is the Butter Fat result. Optional, Numeric.
- Protein - is the Protein result. Optional, Numeric.
- Lactose - is the Lactose result. Optional, Numeric.
- Cells - is the Somatic Cell Count result. Optional, Numeric.
- Urea - is the Milk Urea Nitrogen result. Optional, Numeric.
- pH - is the PH result. Optional, Numeric.

Example of the Milk Lab File:

```
Batch,592150,,,,,
Batch Date,23/07/2012,,,,,
Total,75,,,,,
Lab Date,,,,,,
Instrument ID,,,,,,
,,,,,
Pos.,No.,Fat B,Protein,Lactose,Cells,Urea,pH
,,,,,
1,2,4.54,3.39,4.61,222,9.8,
2,3,4.63,3.87,4.18,2453,12.2,
3,5,5.12,3.59,4.72,196,7.7,
4,6,4.71,3.95,4.79,164,13,
5,7,4.77,3.37,4.82,105,12.8,
```

LINEAR CLASSIFICATIONS

Field name	Field Type	Field Length	Contents
Batch nr	Alphanum	15	Batch nr allocated by data editing
Reference code	Alphanum	10	Any reference code
Document code	Alpha	3	LNCL
Observer nr	Num	10	Member no. of person who did the classification
Animal comp nr	Num	10	Computer number allocated to this animal
Animal ID nr	A,A,A,A,A,R	15 (3,1,4,2,4,1)	Animal official ID
Classification date	Date	8	DDMMYYYY
Classification	Num	500	See below

Field 8, Classification Encoding:

[Trait Identification Code ":" Trait Value] { ";" Trait Identification Code ":" Trait Value }

Say for example 3 traits are measured: Front Legs Front, Rear Legs Rear and General Appearance and their values measured / pointed, were 1, 7.5 and M++. The ARC's Stud Book codes for these traits are FLF, RLR and GAP. This will be written as:
FLF:1;RLR:7.5;GAP:M++

The order of the traits are not important. Any number of traits and corresponding value for each trait can be specified as long as valid ARC's Stud Book Trait Codes for the animal s breed are used and total length of encoding isn't longer than 500 characters.

See Appendix B for a list of valid trait codes for each breed

APPENDIX A: BIRTH WEIGHT GROUP CODE

For BLUP analysis of birth weights, calves are currently divided in contemporary groups according to herd and birth dates of the calves. However, time and experience have learned that this procedure is not always sufficient, and that it can be done more accurately by the producer himself. For example, the current system does not make provision for calves in the same herd that are heavier or lighter than other calves simply because their mothers were on another farm or in another management group (with better or worse food than the rest). Although the current system does take calving season into account, it is not always sufficient to account for differences between calves born either early or late in the calving season.

Breeders can now define the birth weight contemporary groups themselves, regardless of when exactly the calving season in his herd begin and end. It is simply and easily done by filling in a new field, the Birth Weight Group Code with the birth weight of calves.

In order for a breeder to compile understandable, unique contemporary groups, the Birth Weight Group Code is composed of the Year, Season and Farm/Management group as follows:

- In the first two characters the year of birth of (most of) the relevant group of calves is entered, for example "11" for calves born in 2011 and "12" for calves born in 2012.
- In the next two characters a code is entered for the season in which the group of calves is born. Based on recent research on the influence of month of birth on birth weight (see attached article), we recommend that the same season code is allocated to calves with age differences of not more than two months. If a calving season is for example 90 days, the calves born in the first 45 days should receive one season code and a subsequent season code for the calves born in the second 45 days. For this purpose we give the following eight season codes for you to choose from:

Season	Code	Calves born in months
Early Spring	ES	August, September, October
Late Spring	LS	October, November, December
Early Summer	EU	November, December, January
Late Summer	LU	January, February, March
Season	Code	Calves born in months
Early Autumn	EA	February, March, April
Late Autumn	LA	April, May, June
Early Winter	EW	May, June, July
Late Winter	LW	July, August, September

* Please note that the months of adjacent seasons overlap. This is to enable you to choose the relevant season code(s) that suits your specific calving season. If your calves for example are born from 1 September to 30 November, then enter season code "ES" for calves born 1 Sep - 15 Oct and season code "LS" for calves born 16 Oct - 30 Nov.

- In the last two characters a free-choice code should be entered for the farm and/or management group, for example FP for the calves from the farm Fairview where the cows are on Planted Pastures and FN for the calves from the farm Fairview where the cows are on Natural Pasture.

Example

Let us give an example to illustrate the above: A breeder named Peter has two farms, farm B at Bethlehem and farm E at Escourt. At the Bethlehem farm the cows are the entire calving season on planted pasture and on the farm at Escourt on natural pasture. On the Bethlehem farm cows calve from 1 September to 31 October (2 months). On the Escourt farm cows calve from 1 September to 30 November (3 months). The calves born later in the season on the Escourt farm are heavier than the calves born earlier in the season. For calves born in 2011, Peter's Birth Weight Group Codes will be as follows:

- 11ESBA - 2011Early Spring calves born 1 Sep - 30 Oct at the Bethlehem farm on planted pasture
- 11ESEN - 2011Early Spring calves born 1 Sep - 15 Oct at the Escourt farm on Naturally pasture
- 11LSEV - 2011Late Spring calves born 16 Oct - 30 Nov on the Escourt farm on Natural pastures

Keep in mind:

- The completion of a Birth Weight Group Code is not mandatory at present, but breeders are strongly encouraged to record it, where possible, when calves are weighed at birth.
- The maximum age variation allowed for calves with the same Birth Weight Group Code is 60 days.
- Only calves born in the same environment and time period should be in the same group. Please beware not to divide calves unnecessary into small groups. Try to keep groups as large as possible,

provided the environment is the same for all calves in the group. If a group of 50 calves born in the same calving season is for example divided into two contemporary groups due to a seasonal effect, it is better to make two groups of approximately 25 calves each than to make one group of 48 calves and a second group of 2 calves. (Try to have, wherever possible, at least five calves from two sires together in a group).

APPENDIX B: VALID BREED SPECIFIC LINEAR CLASSIFICATION CODES

Breed	Trait Name	Trait Code
AAN	Colour	COL
AAN	Weight	WHT
AAN	Scrotum Circumference	SC
AAN	Horn Status	HSTA
AAN	Reason 1	RES1
AAN	Reason 2	RES2
AAN	Reason 3	RES3
AAN	Tot. Mark	TOTP
AAN	In/Out	INOT
AAN	Remarks	REM

Breed	Trait Name	Trait Code
AFR	Reason 1	RES1
AFR	Reason 2	RES2
AFR	Reason 3	RES3
AFR	Reason 4	RES4
AFR	Reason 5	RES5
AFR	In/Out	INOT

Breed	Trait Name	Trait Code
ALH	Wither height	WTHT
ALH	Chest width	CHST

Breed	Trait Name	Trait Code
ANK	In/Out	INOT
ANK	Reason 1	RES1
ANK	Reason 2	RES2
ANK	Reason 3	RES3
ANK	Reason 4	RES4
ANK	Reason 5	RES5

Breed	Trait Name	Trait Code
AYR	Stature	ST
AYR	Strength	SR
AYR	Body depth	BD
AYR	Dairy form	DF
AYR	Rump angle	RA
AYR	Rump width	RW
AYR	Rear legs side	LS
AYR	Foot angle	FA
AYR	Fore udder att	FU
AYR	Udder height	UH
AYR	Udder width	UW
AYR	Udder support	UC
AYR	Udder depth	UD
AYR	Teat placement	TP
AYR	Teat length	TL
AYR	Rear legs rear	LR
AYR	Final Score	FS

Breed	Trait Name	Trait Code
BAG	Head	HEAD
BAG	Shoulder att	SHAT
BAG	Loin	LOIN
BAG	Wither height	WTHT
BAG	Pigment	PIGM
BAG	Rump width	RW
BAG	Rump length	RMPL
BAG	Rump angle	RA
BAG	Chest width	CHST
BAG	Heart girth	HRTG
BAG	Depth	DEPT
BAG	Length	LENG
BAG	Dairy chara	SCHA
BAG	Bone quality	BNQT
BAG	Rear legs side	LS
BAG	Rear legs rear	LR
BAG	Pasterns	PAST
BAG	Front legs	FL
BAG	Udder cleft	UCLF
BAG	Udder depth	UD
BAG	Fore udder att	FU

BAG	Rear udder height	RUH
BAG	Rear udder width	RUW
BAG	Rear udder prf	RUPR
BAG	Teat placement	TP
BAG	Teat length	TL
BAG	Teat thick	THIC
BAG	Body	BDY
BAG	Feet & legs	FLEG
BAG	Udder	UDDR
BAG	Final class	FCLA
BAG	Scrotum	SCR
BAG	In/Out	INOT

Breed	Trait Name	Trait Code
BBG	Horns	HOR

Breed	Trait Name	Trait Code
BBS	Gen. App	GAP
BBS	Reason 1	RES1
BBS	Reason 2	RES2
BBS	Reason 3	RES3
BBS	Reason 4	RES4
BBS	Reason 5	RES5
BBS	In/Out	INOT

Breed	Trait Name	Trait Code
BDE	Head	HEAD
BDE	Shoulder att	SHAT
BDE	Loin	LOIN
BDE	Wither height	WTHT
BDE	Pigment	PIGM
BDE	Rump width	RW
BDE	Rump length	RMPL
BDE	Rump angle	RA
BDE	Chest width	CHST
BDE	Heart girth	HRTG
BDE	Depth	DEPT
BDE	Length	LENG
BDE	Dairy chara	SCHA
BDE	Bone quality	BNQT
BDE	Rear legs side	LS

BDE	Rear legs rear	LR
BDE	Pasterns	PAST
BDE	Front legs	FL
BDE	Udder cleft	UCLF
BDE	Udder depth	UD
BDE	Fore udder att	FU
BDE	Rear udder height	RUH
BDE	Rear udder width	RUW
BDE	Rear udder prf	RUPR
BDE	Teat placement	TP
BDE	Teat length	TL
BDE	Teat thick	THIC
BDE	Body	BDY
BDE	Feet & legs	FLEG
BDE	Udder	UDDR
BDE	Final class	FCLA
BDE	Scrotum	SCR
BDE	In/Out	INOT

Breed	Trait Name	Trait Code
BMA	In/Out	INOT

Breed	Trait Name	Trait Code
BON	Gen. app	GAP
BON	Reason 1	RES1
BON	Reason 2	RES2
BON	Reason 3	RES3
BON	Reason 4	RES4
BON	Reason 5	RES5
BON	In/Out	INOT

Breed	Trait Name	Trait Code
BOR	Reason 1	RES1
BOR	Reason 2	RES2
BOR	Reason 3	RES3
BOR	Reason 4	RES4
BOR	Up/Down gr	GRDE
BOR	In/Out	INOT
BOR	Embryo flush	EMBR

Breed	Trait Name	Trait Code
CHL	Condition score	COND
CHL	Weight	WHT
CHL	Head/Neck	HNEK
CHL	Pigm/Coat	PIGH
CHL	Front legs front	FLF
CHL	Pasterns	PAST
CHL	Hooves	HOOV
CHL	Frame	FRAM
CHL	Back	BACK
CHL	Rump length	RMPL
CHL	Topline	TOPL
CHL	Rump flat	RMPF
CHL	Rump form	RMPV
CHL	Tail att	TAIL
CHL	Hip width	HIPW
CHL	Back width	BWDH
CHL	Hind legs	HL
CHL	Thighs	THIG
CHL	Depth	DEPT
CHL	Sheath	SHEA
CHL	Scr/Vulva	SCVL
CHL	Udder	UDDR
CHL	Temperament	TEMP
CHL	Approved	APPR

Breed	Trait Name	Trait Code
DOP	Horns	HOR

Breed	Trait Name	Trait Code
DRB	Gen. app	GAP
DRB	Mass. Size. age	MSA
DRB	Head/Horns	HH
DRB	Neck/Hump/Skin	NHS
DRB	Shoulders	SHOU
DRB	Back	BACK
DRB	Thighs	THIG
DRB	Legs	LEGS
DRB	Reproduction	REP

DRB	Skin/Coat	COAT
DRB	Tot. Mark	TOTP
DRB	Approved	APPR

Breed	Trait Name	Trait Code
GNS	Chest width	CHST
GNS	Body depth	BD
GNS	Angularity	ANG
GNS	Rump angle	RA
GNS	Rump width	RW
GNS	Rear legs rear	LR
GNS	Rear legs side	LS
GNS	Foot angle	FA
GNS	Fore udder att	FU
GNS	Rear udder hgt	RUH
GNS	Rear udder wid	RUW
GNS	Udder cleft	UCLF
GNS	Udder depth	UD
GNS	Front teat placement	FTP
GNS	Rear teat placement	RTP
GNS	Teat length	TL
GNS	Feet & legs	FLEG
GNS	Udder	UDDR
GNS	Frame	FRAM
GNS	Capacity	CAP
GNS	Dairy character	SCHA
GNS	Final score	FS

Breed	Trait Name	Trait Code
GVH	Colour	COL
GVH	Shoulder height	SHHG
GVH	Weight	WHT
GVH	Scrotum Circumference	SC
GVH	Sheath	SHEA
GVH	True to gender	TGEN
GVH	Nutrition	NUTR
GVH	Horn status	HSTA
GVH	Coat	COA
GVH	Legs	LEG
GVH	Muscling	MUSC

GVH	Length	LENG
GVH	Width	WIDT
GVH	Depth	DEPT
GVH	Head/Neck	HNEK
GVH	Fore quarter	FQRT
GVH	Mid peace	MIDP
GVH	Hind quarter	HQ
GVH	Gen. app	GAP
GVH	Approved	APPR

Breed	Trait Name	Trait Code
HFD	Weight	WHT
HFD	Horn Status	HSTA
HFD	Performance	PERF
HFD	Approved	APPR
HFD	Up/Down gr	GRDE
HFD	Reason 1	RES1
HFD	Scrotum Circumference	SC
HFD	Frame	FRAM
HFD	Eyelid pigm. L	PGLY
HFD	Eyelid pigm. R	PGRY
HFD	Eyelashes	ELS
HFD	Eyebrow	EBR
HFD	Front legs front	FLF
HFD	Coat	COA
HFD	Scr. Pigm	SCPG
HFD	Rear legs rear	LR
HFD	Rear legs side	LS
HFD	Pasterns	PAST
HFD	Muscling	MUSC
HFD	Constitution	CONS
HFD	Cap/Vol	CVOL

Breed	Trait Name	Trait Code
JSE	Wither height	WTHT
JSE	Chest width	CHST
JSE	Body depth	BD
JSE	Angularity	ANG
JSE	Dairy chara	SCHA
JSE	Rump angle	RA
JSE	Thurl width	TW

JSE	Rear legs side	LS
JSE	Foot angle	FA
JSE	Rear legs rear	LR
JSE	Bone structure	BS
JSE	Fore udder att	FU
JSE	Rear udder hgt	RUH
JSE	Rear udder wid	RUW
JSE	Udder cleft	UCLF
JSE	Udder depth	UD
JSE	Front teat placement	FTP
JSE	Rear teat placement	RTP
JSE	Teat length	TL
JSE	Body	BDY
JSE	Feet & legs	FLEG
JSE	Udder	UDDR
JSE	Final score	FS

Breed	Trait Name	Trait Code
MER	Horns	HOR

Breed	Trait Name	Trait Code
MMS	Gen. app	GAP
MMS	Body condition score	BCS
MMS	Retention	RET
MMS	Reason 1	RES1
MMS	Reason 2	RES2
MMS	Reason 3	RES3
MMS	In/Out	INOT

Breed	Trait Name	Trait Code
NGI	Gen. app	GAP
NGI	Reason 1	RES1
NGI	Reason 2	RES2
NGI	Reason 3	RES3
NGI	Reason 4	RES4
NGI	Reason 5	RES5
NGI	In/Out	INOT

Breed	Trait Name	Trait Code
PGR	Classification	CLAS
PGR	Horn status	HSTA
PGR	Weight	WHT
PGR	Scrotum	SCR
PGR	Frame	FRAM
PGR	Front legs front	FLF
PGR	Coat	COA
PGR	Scr. Pigm	SCPG
PGR	Rear legs rear	LR
PGR	Rear legs side	LS
PGR	Pasterns	PAST
PGR	Muscling	MUSC
PGR	Constitution	CONS
PGR	Remarks	REM
PGR	In/Out	INOT

Breed	Trait Name	Trait Code
RMG	In/Out	INOT
RMG	Reason 1	RES1
RMG	Reason 2	RES2
RMG	Reason 3	RES3
RMG	Reason 4	RES4
RMG	Reason 5	RES5

Breed	Trait Name	Trait Code
SAH	Head	HEAD
SAH	Neck	NEK
SAH	Front body	FBDY
SAH	Mid peace	MIDP
SAH	Hind quarter	HQ
SAH	Hooves	HOOV
SAH	Front legs	FL
SAH	Hind legs	HL
SAH	Movement	MOV
SAH	Gen. app	GAP
SAH	Type	TYP
SAH	Quality	QUAL
SAH	Temperament	TEMP

Breed	Trait Name	Trait Code
SEN	Approved	APPR
SEN	Up/Down gr	GRDE

Breed	Trait Name	Trait Code
SGT	Gen. app	GAP
SGT	In/Out	INOT
SGT	Reason 1	RES1
SGT	Reason 2	RES2
SGT	Reason 3	RES3
SGT	Reason 4	RES4
SGT	Reason 5	RES5

Breed	Trait Name	Trait Code
SMG	Head	HEAD
SMG	Shoulder att	SHAT
SMG	Loin	LOIN
SMG	Wither height	WTHT
SMG	Pigment	PIGM
SMG	Rump width	RW
SMG	Rump length	RMPL
SMG	Rump angle	RA
SMG	Chest width	CHST
SMG	Heart girth	HRTG
SMG	Depth	DEPT
SMG	Length	LENG
SMG	Dairy character	SCHA
SMG	Bone quality	BNQT
SMG	Rear legs side	LS
SMG	Rear legs rear	LR
SMG	Pasterns	PAST
SMG	Front legs	FL
SMG	Udder cleft	UCLF
SMG	Udder depth	UD
SMG	Fore udder att	FU
SMG	Rear udder height	RUH
SMG	Rear udder width	RUW
SMG	Rear udder prf	RUPR
SMG	Teat placement	TP
SMG	Teat length	TL

SMG	Teat thick	THIC
SMG	Body	BDY
SMG	Feet & legs	FLEG
SMG	Udder	UDDR
SMG	Final class	FCLA
SMG	Scrotum	SCR
SMG	In/Out	INOT

Breed	Trait Name	Trait Code
SSX	Reason 1	RES1
SSX	Reason 2	RES2
SSX	Reason 3	RES3
SSX	Reason 4	RES4
SSX	Reason 5	RES5
SSX	In/Out	INOT

Breed	Trait Name	Trait Code
TOG	Head	HEAD
TOG	Shoulder att	SHAT
TOG	Loin	LOIN
TOG	Wither height	WHTH
TOG	Pigment	PIGM
TOG	Rump width	RW
TOG	Rump length	RMPL
TOG	Rump angle	RA
TOG	Chest width	CHST
TOG	Heart girth	HRTG
TOG	Depth	DEPT
TOG	Length	LENG
TOG	Dairy character	SCHA
TOG	Bone quality	BNQT
TOG	Rear legs side	LS
TOG	Rear legs rear	LR
TOG	Pasterns	PAST
TOG	Front legs	FL
TOG	Udder cleft	UCLF
TOG	Udder depth	UD
TOG	Fore udder att	FU
TOG	Rear udder height	RUH
TOG	Rear udder width	RUW
TOG	Rear udder prf	RUPR

TOG	Teat placement	TP
TOG	Teat length	TL
TOG	Teat thick	THIC
TOG	Body	BDY
TOG	Feet & legs	FLEG
TOG	Udder	UDDR
TOG	Final class	FCLA
TOG	Scrotum	SCR
TOG	In/Out	INOT

Breed	Trait Name	Trait Code
TUL	Horn status	HSTA
TUL	Gen. app	GAP
TUL	Approved	APPR
TUL	Reason 1	RES1
TUL	Reason 2	RES2
TUL	Reason 3	RES3
TUL	Up/Down gr	GRDE