

Milk recording results of Sheep

France 2020



Collection

Résultats

Responsable de la rédaction :

Gilles THOMAS – Jean Michel ASTRUC - Xavier BOURRIGAN (Institut de l'Élevage)

Editorial team :

People who contributed to the development of this document:

Statistical analyses : Jean Michel Astruc jean-michel.astruc@idele.fr

Gilles Thomas gilles.thomas@idele.fr

Format and edition: Gilles Thomas gilles.thomas@idele.fr

Xavier Bourrigan xavier.bourrigan@idele.fr

Layout design :

Gilles THOMAS (Institut de l'Élevage)

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Milk recording results - Sheep France – Year 2020

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*Statistical analyses: Jean Michel Astruc jean-michel.astruc@idele.fr
Gilles Thomas gilles.thomas@idele.fr*

*Format and edition: Gilles Thomas gilles.thomas@idele.fr
Xavier Bourrigan xavier.bourrigan@idele.fr*

*Translation: Michèle Bousseley michele.bousseley@idele.fr
and Gilles Thomas gilles.thomas@idele.fr*



Introduction

The research and development process in genetic improvement of dairy sheep successively dealt with productivity of ewes and herds (during the 70s and 80s), chemical milk composition and its suitability for cheese production (during the 80s and 90s), finally functional abilities such as resistance to subclinical mastitis and udder morphology (2000 decade). These functional characteristics enable the animals' functional longevity to be improved. This improvement matches with their ability to postpone their culling for other reasons than those linked with their milk yield level. In other words, functional longevity contributes to have flocks with a better cost-effectiveness, not by increasing takings, but by decreasing production costs through reduced early culling. Genomics has been fully involved during these last years in dairy sheep breeding schemes with, on one hand, the selection for resistance to scrapie thanks to the genetic typing of the PrP gene widely implemented right at the beginning of the 2000s, on the other hand genomic breeding prospects which are subject to Roquefort' in (Lacaune breed) and Genomia (Pyrenean dairy sheep breeds – Manech and Basco-Béarnaise) programmes. Since 2015 (choice of young rams at the end of 2014), Lacaune breed implemented a genomic selection with a new scheme design.

The genetic improvement of dairy sheep within the three French traditional breeding areas (“Rayon” de Roquefort, Pyrénées-Atlantiques, Corse) is based on the breeding of local breeds within their own production area and systems. This principle is strengthened by the French AOC label (which guarantees the origin of a product) of each area. This label requires the local breed as the genetic material to be used for the cheese production of Roquefort (Lacaune breed), of Issau-Iraty (Basco-Béarnaise and Manech breeds) and Brucciu (Corse breed). The implementation of dairy sheep breeding programmes is based on milk recording and progeny testing of animal insemination rams. It has systematically been well-reasoned in order to increase its efficiency-cost ratio

Pyramidal structure of the population

Breeds' population is organized on the basis of a pyramidal structure made up of breeders, creators of the genetic gain and farmers using genetic gain, in order to select the local breeds in population-wide terms. Selection tools are gathered in flocks of breeders who are registered at the official milk recording organizations. These tools include qualitative recording and breeding animals' qualification with possibly udder scoring. Breeding flocks serve as a testing medium and provide the breeding centers with young rams. Testing has been developed in order to maximize breeding schemes. The effort required for its implementation is considerable as (depending on the breeds) 50 to 60 % of the inseminated ewes within a flock under breeding are inseminated with tested rams. Breeders receive as compensation inseminations with the elite rams, i.e. the sires of the breed's rams. If they wish it, the breeders who use the genetic gain may receive a simplified milk recording. Its objective is firstly to get a within-flock ranking of the ewes, but also the technical monitoring of the dairy flock.

Rationalization and optimization over the time

Breeding objectives have been planned gradually. Official milk recording implemented in the 60s was at the beginning only a quantitative control (milk yield) due to the industry needs of milk on one hand, and because of the low initial productivity of the French local breeds on the other hand. The first objective was clearly to increase ewes' productivity. The breeding criteria taken in consideration was the milk yield during the milking period which steps up fat and protein contents quantities, and thereby cheese quantities.

Such an objective may be accepted during the start-up period of the breeding scheme. However, when this objective is fully operational and becomes completely effective (in the 80s for the Lacaune breed, in the 90s – 2000s for the Pyrenean breeds), the milk quality (fat and protein contents) deteriorates on a genetic level speaking. Thus, it is becoming essential to be interested in the chemical quality of the milk also in order to know about cheese yield and the fat/dry ratio of cheese in the framework of AOC cheese produced with raw milk and whole milk. That's why a qualitative recording was to be performed, although it is difficult and expensive to implement in dairy sheep because of the flocks' size and the rapid mechanical milking routines.

Finally, when the context of the industry was such as productivity was no longer directly looked for, breeders became then interested in functional characteristics which are going to enable to decrease production costs and to improve work conditions, especially milking conditions which represent the first work station of dairy ewes' breeding.

Today, farmers and stakeholders of selection schemes raise the question of hardiness and plasticity and evoke the wish to work on resistance to gastro intestinal parasitism, dairy persistency, ability to one-milking per day, feed efficiency, but also the ability to transhumance and at the valorization of rangelands.



Milk recording simplification

The official AC design (monthly recording of one of the two daily milkings, whatever the milking) has been widespread. The qualitative recording has been even more simplified. Only a part of the ewes is recorded: the primiparous (Pyrenean breeds) or the first two lactations (Lacaune breed). Only the middle of the lactation is controlled, because it is the most representative period from a genetic point of view. Thus, the objective is to carry out three samples at the first four test-days of the ewe during the morning milking. The morning milking enables a better milk sampling, especially of the fat content and somatic cells. The partial recording as described here above enables to save about 85% of the samplings and analyses in order to get an efficiency a bit lower (the loss of precision may easily be compensated for rams by increasing the testing daughters' number by about 10%), compared to the exhaustive A4 recording method (on a monthly rhythm for the two daily milkings and for all the ewes on milking). This process is also systematically used for functional characteristics.

Table 1 : Evolution of the main criteria related to breeding schemes for the 3 French breeding areas

		Official milk recording (OMR)			Simplified milk recording (SMR)	
		Number of recorded ewes (% of the OMR population)	AI rate in the nucleus	Number of progeny-tested rams	Milk yield in liters (lactation duration)	Number of recorded ewes
1985	Rayon	113 519 (17%)	70%	430	186 (162)	311 000
	Pyrénées	38 026 (12%)	30%	52	92 (127)	13 000
	Corse	7 300 (7%)			88 (151)	
2005	Rayon	176 936 (21%)	81%	477	277 (163)	585 000
	Pyrénées	108 836 (23%)	55%	200	158 (146)	32 000
	Corse	20 408 (20%)	39%	40	124 (181)	
2020	Rayon	189 147 (17%)	87%	319	339 (174)	505 457
	Pyrénées	121 136 (28%)	48%	278	231 (156)	38 026
	Corse	20 157 (24%)	36%	17	149 (189)	13 446



Data processing

Annual results of the sheep official milk recording are calculated from an extract of the French national dairy sheep database used for indexing and research, which is part of the SIEOL Information System. This extract was performed at the end of the dairy sheep year in December 2020. Thus, these results concern the year 2020. Regarding the seasonality of the dairy sheep production in France, all lactations are considered as finished and qualified if they are calculated.

The results are presented by breeding area, French local administrative area (=French “département”), Milk Recording Organization (MRO), Performance Testing organization and by breed. Here are the definitions of these terms:

Breeding areas: 1 = 'Rayon de Roquefort' ; 2 = 'Corse' ; 3 = 'Pyrénées-Atlantiques'.

French local administrative areas: 11, 12, 2A, 2B, 30, 34, 48, 64, 65, 81, 82.

Milk Recording Organizations (=MRO): 'CDEO', 'Confédération Générale de Roquefort', 'EDE 48', 'EDE 81', 'EDE 82', 'SCP 30-34', 'SUAE Corse du Sud', 'SUAE Haute-Corse', 'UNOTEC 12'.

Recognized Performance Recording Organizations (=RPRO): 'CDEO', 'OS Lacaune', 'EDE 82', 'SUAE Corse du Sud', 'SUAE Haute-Corse'.

Breeds: 'Lacaune', 'Manech tête rousse', 'Manech tête noire', 'Basco-Béarnaise', 'Corse'. Other breeds representing less than 50 ewes nationwide are not taken into account in these results.

NB : In paragraphs 2.2 to 2.6, maps only show French local administrative areas where at least 10 lactations haven been calculated for the corresponding breed.

Warning:

Results between breeds or populations (Basco-Béarnaise, Corse, Lacaune, Manech Tête Rousse, Manech Tête Noire) should not be compared, mainly for two reasons:

- Each breed is represented only in one breeding area. Therefore, genetic type and dominant farming system(s) of each French administrative region are closely linked.
- The calculation of milk yield at milking period varies from one region to another (and for breeds accordingly), in relation with the average suckling length, depending on the farming system:
 - 25 days in the area of Roquefort,
 - 35 days in the Pyreneans area and in Corsica.

Some definitions :

Total number of ewes: ewes present in the flock at the beginning of the lambing period.

Number of ewes in lactation: ewes for which calculating a lactation has been possible (so this total takes into account ewes that had at least one test-date with non-null milk production record).

Number of ewes that lambed: ewes with a date of lambing, non-pregnant ewes, aborted ewes without milk and not mated ewe in 1st lactation are therefore excluded from this total.

Lambing rate: number of ewes which lambed divided by the total number of ewes (expressed in %).

Lactation rate: number of ewes with calculation of lactation divided by the number of ewes which lambed (expressed in %).

Milk yield: it represents the milk yield at the milking-only period.

This milk yield is calculated only on the period of exclusive milking of the animal after the weaning of the lamb(s), and doesn't take into account the milk yield during the initial period of suckling or suckling x milking. So the **milking duration** matches only to this milking-only period. The milk yield is expressed in liters and the length in days.

The official milk recording is an AC milk recording protocol, i.e. a monthly control of one of the two daily milkings, without any obligation of rotation. However, the recording occurs mainly in the morning because the sampling for the qualitative control is more precise during the morning milking (more milk in the morning).

Results for fat and protein contents are not provided. The sheep qualitative control is indeed a very simplified control (partial qualitative recording). It is based on a sampling performed only at the milking of the morning, on 3 recordings during the middle of the lactation and it concerns only a part of the flock (the primiparous or the first 2 lactations, depending on the breed). The way of recording and calculating the fat and protein contents are relevant for genetics, but are not representative of current economic reality.



Trends for 2020

The total number of ewes present at the lambing period reached 330,431 in 2020, that is quite similar to the previous year (+ 0.3%). At the same time the total number of ewes with lactation calculation is stable at 278,442 (+0.01%). This stability confirms the trend observed the previous year and puts an end to the increase observed from 2016 to 2018 (+22,000 ewes over 3 years).

750 flocks are counted up today in Official Milk Recording, which means a decrease of 10 flocks compared to the previous year. Meanwhile, the average size of flock still progressed in 2020 (441 ewes present at the lambing period in average versus 433 ewes in 2019 and 428 ewes in 2018).

In 2020 the average milk yield is increasing for the Lacaune breed (+9.2 liters) and for the Corsican breed (+1.3 liter), is stable for the “Manech tête noire” breed (-0.1 liter) and is decreasing for the “Manech tête Rousse” breed (-3.2 liters) and for the “Basco Béarnaise” breed (-3.8 liters). At the national level the milk yield reached 291.6 liters (+5.3 liters) in 169 days in milking-only period (identical duration to the previous year).

A simplified milk recording, corresponding to the D recording method in the ICAR nomenclature and not presented in this document, exists in addition to the Official Milk Recording AC design. It concerns commercial flocks out of the selection nucleus (while the Official Milk Recording is devoted only to breeders involved in the selection program). 1,232 flocks and 556,929 ewes present at the lambing period were submitted to D recording in 2020.



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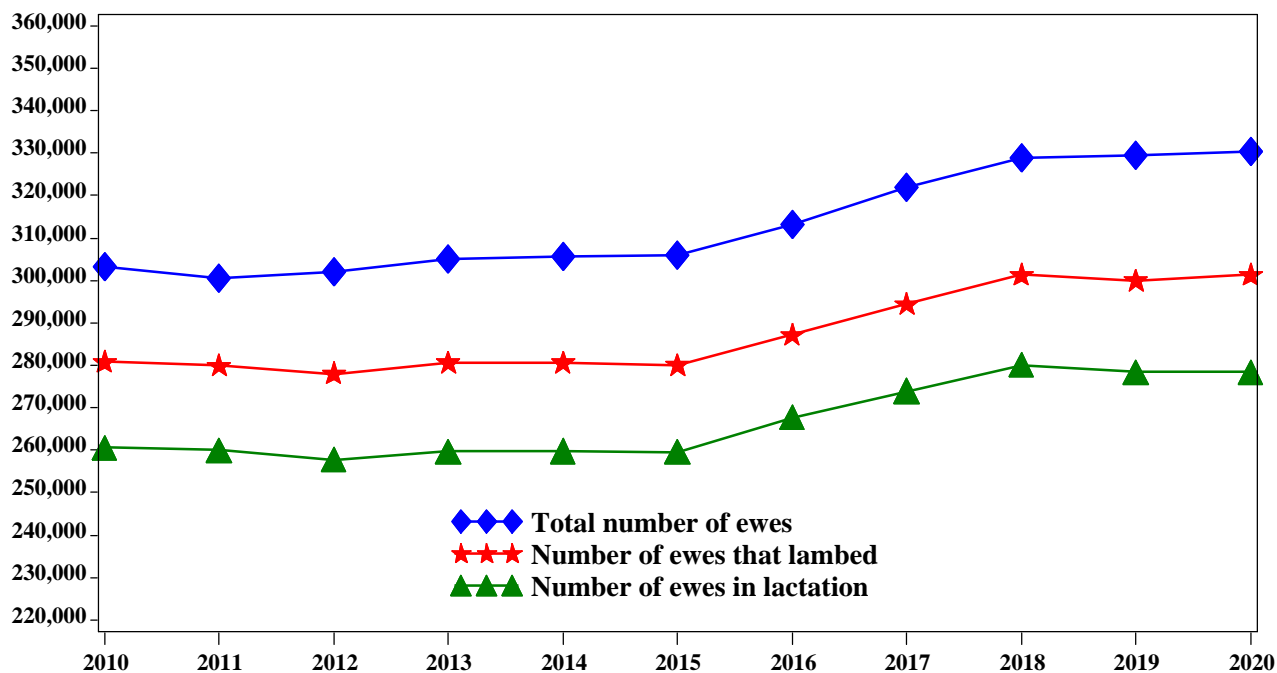
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I - GLOBAL RESULTS

1.1 - Reminder of the previous years

Year	Total number of ewes	Number of ewes that lambed	Lambing rate	Number of ewes in lactation	Lactation rate	Milk yield liters	Lactation duration days
2010	303,201	280,796	92.6	260,629	92.8	241.2	161
2011	300,488	279,941	93.2	260,029	92.9	246.8	162
2012	302,102	277,961	92.0	257,826	92.8	250.8	163
2013	304,925	280,581	92.0	259,666	92.5	247.5	164
2014	305,619	280,575	91.8	259,791	92.6	254.2	165
2015	306,047	280,001	91.5	259,589	92.7	256.9	166
2016	313,291	287,171	91.7	267,737	93.2	273.9	166
2017	321,968	294,415	91.4	274,003	93.1	278.6	167
2018	328,980	301,292	91.6	280,117	93.0	284.2	167
2019	329,394	299,938	91.1	278,423	92.8	286.3	169
2020	330,431	301,305	91.1	278,442	92.4	291.6	169



1.2 - Results of the year

1.2.1 - Distribution by parity

Parity	Total number of ewes	Number of ewes that lambed	Lambing rate	Number of ewes in lactation	Lactation rate	Milk yield liters	Lactation duration days
1st lactation	95,274	77,105	80.9	69,912	90.7	256.0	156
2nd lactation and over	235,157	224,200	95.3	208,530	93.0	303.5	173
Overall total	330,431	301,305	91.1	278,442	92.4	291.6	169

1.2.2 - Number of flocks and average number of ewes per flock

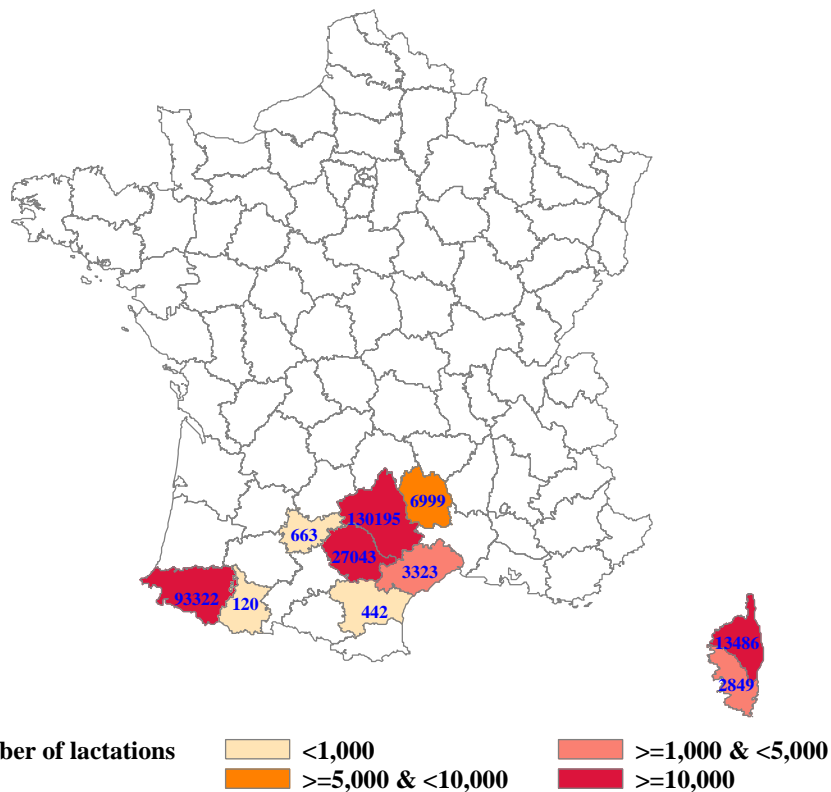
Total number of ewes in lactation	Total number of flocks	Average number of ewes per flock
278,442	750	371.3

1.2.3 - Results per local area

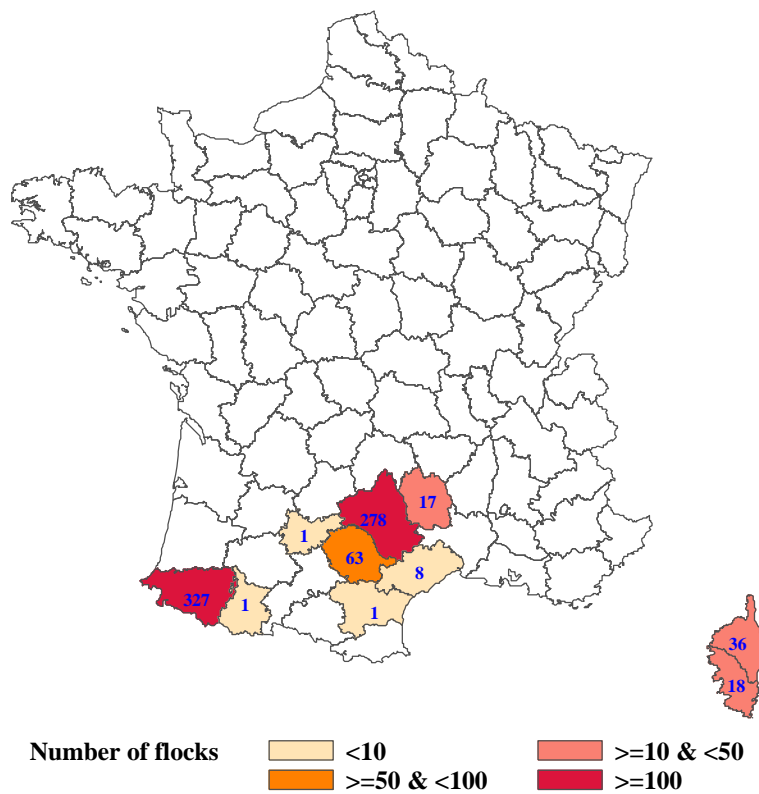
Local area	Number of flocks	Number of ewes in lactation	Milk yield l	Lactation duration d
Aude	1	442	343.4	199
Aveyron	278	130,195	339.2	174
Corse du Sud	18	2,849	162.9	184
Haute Corse	36	13,486	145.8	190
Hérault	8	3,323	326.2	179
Lozère	17	6,999	326.8	173
Pyrénées Atlantiques	327	93,322	230.7	156
Hautes Pyrénées	1	120	138.1	139
Tarn	63	27,043	345.1	177
Tarn & Garonne	1	663	293.6	139
Overall total	750	278,442	291.6	169



Distribution of lactations per local area (= French « département »)



Distribution of flocks per local area



1.2.4 - Results per breeding area and parity

Breeding area ¹	Parity	Number of ewes in lactation	Milk yield liters	Lactation duration days
01	1st lactation	45,402	286.8	161
	2nd lactation	37,390	357.5	180
	3rd lactation	29,359	377.7	183
	4th lactation	21,995	371.4	182
	5th lactation	15,524	354.8	179
	6th lactation	10,083	335.6	175
	7th lactation and over	8,350	299.8	165
	Unknown	541	297.4	159
Total breeding area		168,644	339.2	174
02	1st lactation	2,770	105.7	145
	2nd lactation	2,841	150.0	189
	3rd lactation	2,595	168.9	204
	4th lactation	2,088	172.1	206
	5th lactation	1,792	170.2	208
	6th lactation	1,356	155.4	199
	7th lactation and over	1,909	142.5	192
	Unknown	984	127.5	178
Total breeding area		16,335	148.8	189
03	1st lactation	21,740	210.7	148
	2nd lactation	18,753	243.6	158
	3rd lactation	16,298	251.7	162
	4th lactation	12,630	246.0	162
	5th lactation	9,216	235.7	160
	6th lactation	6,290	219.9	155
	7th lactation and over	6,542	195.2	146
	Unknown	1,994	182.8	144
Total breeding area		93,463	230.6	156
Overall total		278,442	291.6	169

¹Refer to the Introduction paragraph for details.



1.2.5 - Results per breeding area, parity and month of lambing

Breeding area	Parity	Month of lambing	Number of ewes in lactation	Milk yield liters	Lactation duration days
01	1st lactation	January	8,270	272.2	149
		February	6,988	252.3	142
		March	2,183	215.7	115
		April	514	168.9	101
		May	124	185.5	100
		June	4	97.6	53
		July	213	309.7	189
		August	1,322	347.4	199
		September	1,905	345.7	194
		October	7,312	324.6	184
		November	9,997	304.8	171
		December	6,570	277.2	155
	2nd lactation and over	January	17,602	343.2	169
		February	8,411	310.7	147
		March	2,611	245.6	117
		April	855	208.4	112
		May	291	237.1	114
		June	27	155.4	69
		July	1,628	351.0	189
		August	6,163	386.1	197
		September	11,668	366.3	190
		October	34,990	377.8	193
		November	28,288	368.0	183
		December	10,708	353.2	170
Total breeding area			168,644	339.2	174
02	1st lactation	January	707	95.0	125
		February	361	74.0	96
		March	173	43.6	61
		April	47	21.4	39
		May			
		June			
		July			
		August	3	151.0	225
		September	117	146.1	208
		October	529	144.7	202
		November	472	124.3	176
		December	361	104.2	143
	2nd lactation and over	January	355	110.6	123
		February	258	96.0	99
		March	129	50.0	64
		April	24	26.9	38
		May			
		June			
		July			
		August	113	160.2	217
		September	4,895	162.7	213
		October	6,220	164.4	202
		November	1,350	149.2	182
		December	221	125.9	148

¹Refer to the Introduction paragraph for details.



1.2.5 - Results per breeding area, parity and month of lambing

Breeding area	Parity	Month of lambing	Number of ewes in lactation	Milk yield liters	Lactation duration days
<i>Total breeding area</i>			16,335	148.8	189
03	1st lactation	January	2,252	195.9	133
		February	2,334	148.0	100
		March	2,455	107.1	74
		April	390	75.6	50
		May	50	68.2	44
		June			
		July			
		August			
		September	7	273.0	211
		October	1,995	265.0	189
		November	7,851	254.0	178
		December	4,406	220.9	161
	2nd lactation and over	January	3,371	219.6	135
		February	3,546	172.5	101
		March	2,892	129.3	75
		April	558	89.9	51
		May	44	51.0	29
		June			
		July			
		August			
		September	84	253.9	198
		October	11,269	252.1	178
		November	37,746	248.3	168
		December	12,213	242.6	157
<i>Total breeding area</i>			93,463	230.6	156
Overall total			278,442	291.6	169

¹Refer to the Introduction paragraph for details.



1.2.6 - Results per breeding area and flock size

Breeding area	Flock size	Number of flocks	Number of ewes in lactation	Milk yield liters	Lactation duration days
01	< 200	5	880	323.9	176
	>=200 & <250	14	3,103	331.3	180
	>=250 & <300	23	6,307	334.9	170
	>=300 & <350	57	18,727	342.6	175
	>=350 & <400	46	17,181	335.7	177
	>=400 & <450	53	22,664	339.2	179
	>=450 & <500	47	22,437	347.5	177
	>=500 & <550	34	17,781	324.9	173
	>=550 & <600	29	16,643	354.8	179
	>= 600	60	42,921	336.2	169
Total breeding area		368	168,644	339.2	174
02	< 200	26	3,307	149.1	180
	>=200 & <250	3	691	158.5	182
	>=250 & <300	7	1,917	140.4	194
	>=300 & <350	5	1,599	161.0	202
	>=350 & <400	3	1,082	136.8	166
	>=400 & <450	3	1,274	150.2	203
	>=450 & <500	1	457	148.4	194
	>= 600	6	6,008	148.8	189
Total breeding area		54	16,335	148.8	189
03	< 200	71	11,924	196.6	149
	>=200 & <250	64	14,252	219.0	153
	>=250 & <300	81	22,084	230.6	156
	>=300 & <350	45	14,427	240.2	159
	>=350 & <400	29	10,689	242.5	161
	>=400 & <450	10	4,292	220.5	154
	>=450 & <500	11	5,184	246.2	157
	>=500 & <550	9	4,695	256.6	159
	>=550 & <600	4	2,244	267.3	163
	>= 600	5	3,672	248.3	152
Total breeding area		329	93,463	230.6	156
Overall total		751	278,442	291.6	169

¹Refer to the Introduction paragraph for details.



1.2.7 - Results per milk recording organization (MRO)

MRO	Number of flocks	Number of ewes in lactation	Milk yield <i>liters</i>	Lactation duration <i>days</i>
CDEO	328	93,442	230.6	156
Confédération Générale de Roquefort	179	81,347	334.8	174
EDE 48	9	4,247	319.9	169
EDE 81	28	11,859	355.3	181
EDE 82	1	663	293.6	139
SUAE CORSE DU SUD	18	2,849	162.9	184
SUAE HAUTE-CORSE	36	13,486	145.8	190
UNOTEC 12	151	70,549	343.1	174
Overall total	750	278,442	291.6	169

¹Refer to the Introduction paragraph for details.



1.2.8 - Results per milk recording organization (MRO) and local area

MRO	Local area	Number of flocks	Number of ewes in lactation	Milk yield liters	Lactation duration days
CDEO	Pyrénées Atlantiques	327	93,322	230.7	156
	Hautes Pyrénées	1	120	138.1	139
Total MRO		328	93,442	230.6	156
Confédération Générale de Roquefort	Aude	1	442	343.4	199
	Aveyron	132	61,251	334.1	174
	Hérault	3	1,718	333.8	196
	Lozère	8	2,752	337.5	180
	Tarn	35	15,184	337.1	174
Total MRO		179	81,347	334.8	174
EDE 48	Lozère	9	4,247	319.9	169
Total MRO		9	4,247	319.9	169
EDE 81	Tarn	28	11,859	355.3	181
Total MRO		28	11,859	355.3	181
EDE 82	Tarn & Garonne	1	663	293.6	139
Total MRO		1	663	293.6	139
SUAE CORSE DU SUD	Corse du Sud	18	2,849	162.9	184
Total MRO		18	2,849	162.9	184
SUAE HAUTE-CORSE	Haute Corse	36	13,486	145.8	190
Total MRO		36	13,486	145.8	190
UNOTEC 12	Aveyron	146	68,944	343.7	174
	Hérault	5	1,605	318.2	160
Total MRO		151	70,549	343.1	174
Overall total		750	278,442	291.6	169

¹Refer to the Introduction paragraph for details.



1.2.9 - Results per recognized performance recording organization (RPRO)

RPRO	Number of flocks	Number of ewes in lactation	Milk yield liters	Lactation duration days
CDEO	328	93,442	230.6	156
EDE 82	1	663	293.6	139
OS Lacaune	367	168,002	339.4	175
SUAE CORSE DU SUD	18	2,849	162.9	184
SUAE HAUTE-CORSE	36	13,486	145.8	190
Overall total	750	278,442	291.6	169

1.2.10 - Results per recognized performance recording organization (RPRO) and local area

RPRO	Local area	Number of flocks	Number of ewes in lactation	Milk yield liters	Lactation duration days
CDEO	Pyrénées Atlantiques	327	93,322	230.7	156
	Hautes Pyrénées	1	120	138.1	139
<i>Total RPRO</i>		<i>328</i>	<i>93,442</i>	<i>230.6</i>	<i>156</i>
EDE 82	Tarn & Garonne	1	663	293.6	139
<i>Total RPRO</i>		<i>1</i>	<i>663</i>	<i>293.6</i>	<i>139</i>
OS Lacaune	Aude	1	442	343.4	199
	Aveyron	278	130,195	339.2	174
	Hérault	8	3,323	326.2	179
	Lozère	17	6,999	326.8	173
	Tarn	63	27,043	345.1	177
<i>Total RPRO</i>		<i>367</i>	<i>168,002</i>	<i>339.4</i>	<i>175</i>
SUAE CORSE DU SUD	Corse du Sud	18	2,849	162.9	184
<i>Total RPRO</i>		<i>18</i>	<i>2,849</i>	<i>162.9</i>	<i>184</i>
SUAE HAUTE-CORSE	Haute Corse	36	13,486	145.8	190
<i>Total RPRO</i>		<i>36</i>	<i>13,486</i>	<i>145.8</i>	<i>190</i>
Overall total		750	278,442	291.6	169

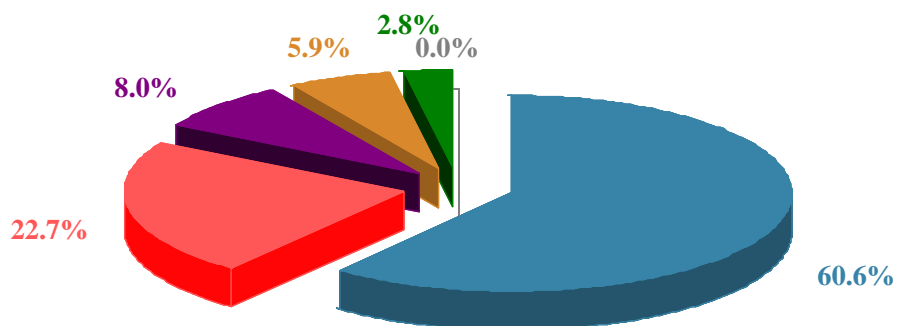
¹Refer to the Introduction paragraph for details.



II - RESULTS PER BREED

2.1 - Results for all breeds

Breed	Number of flocks	Number of ewes in lactation	Milk yield <i>liters</i>	Milk yield standard deviation <i>liters</i>	Lactation duration <i>days</i>	Lactation duration standard deviation <i>days</i>
Lacaune	368	168,661	339.2	106.7	174	43
Manech Tête Rousse	242	63,172	243.3	95.3	161	50
Basco-Béarnaise	95	22,392	214.4	87.7	146	51
Corse	54	16,334	148.8	63.1	189	58
Manech Tête Noire	69	7,831	175.0	73.9	147	49
Other breeds	38	52	156.3	119.4	116	62



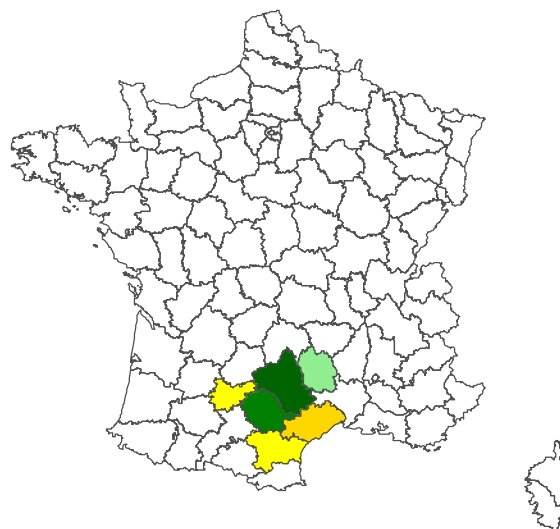
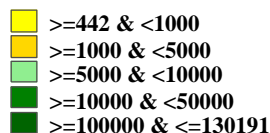
¹Refer to the Introduction paragraph for details.



2.2 - Breed LACAUNE

(French breed code: 010)

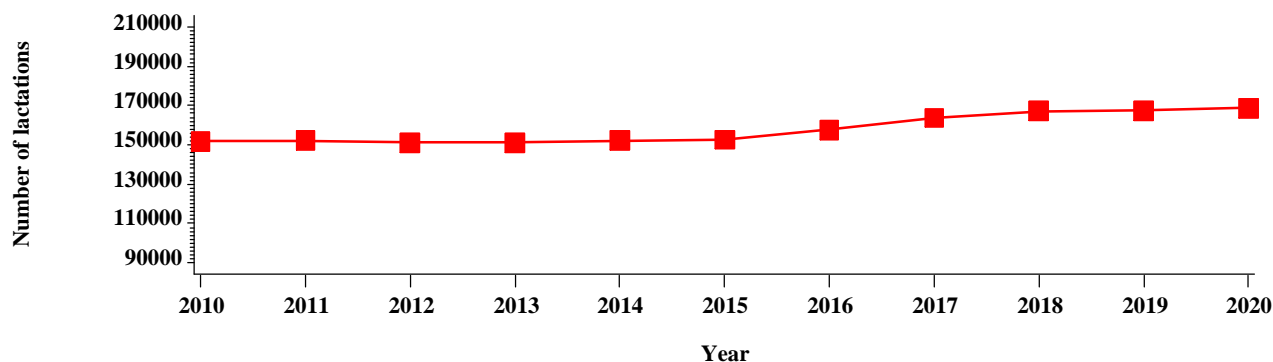
Geographical distribution of ewes with lactations of Lacaune breed



Distribution by parity for Lacaune breed

Parity	Number of ewes in lactation	Milk yield <i>liters</i>	Milk yield standard deviation <i>liters</i>	Lactation duration <i>days</i>	Lactation duration standard deviation <i>days</i>
1st lactation	45,402	286.8	94.0	160.5	43
2nd lactation	37,402	357.5	102.8	180.4	43
3rd lactation	29,362	377.7	102.8	183.4	40
4th lactation	21,998	371.4	102.2	182.1	40
5th lactation	15,526	354.8	102.6	178.9	41
6th lactation	10,081	335.6	101.4	174.7	44
7th lactation and over	8,349	299.8	102.3	165.0	48
Unknown	541	297.4	124.5	158.5	54
Overall total	168,661	339.2	106.7	174.5	43

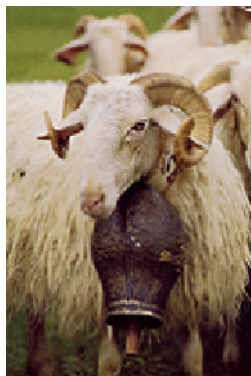
Evolution of the number of lactations for Lacaune breed



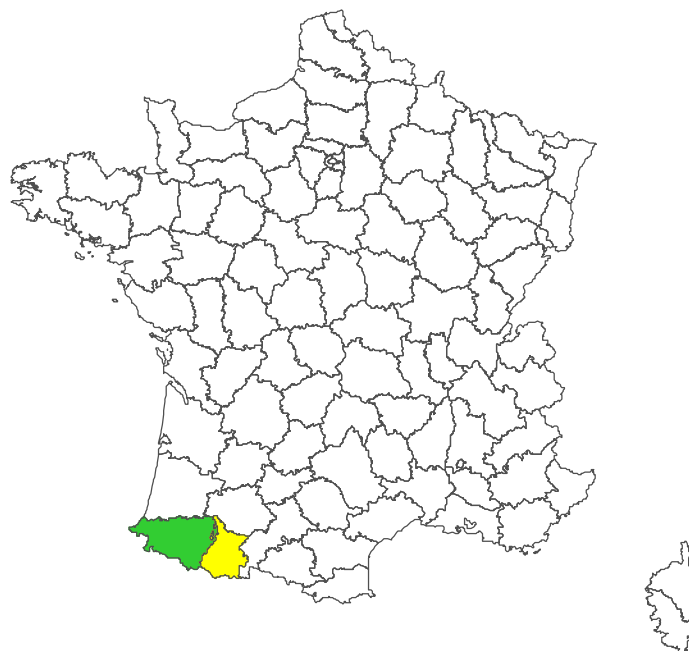
2.3 - Breed BASCO BEARNAISE

(French breed code: 030)

Geographical distribution of ewes with lactations of Basco Bearnaise breed



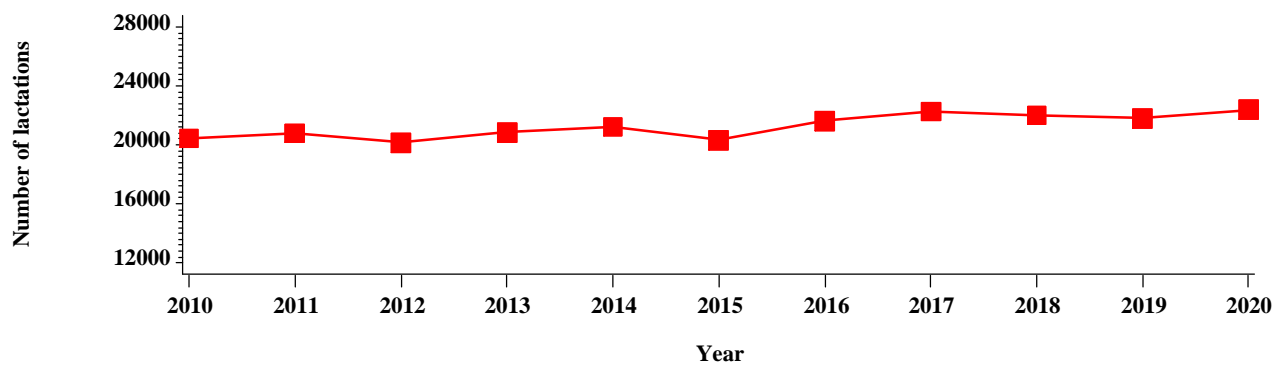
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Distribution by parity for Basco Bearnaise breed

Parity	Number of ewes in lactation	Milk yield <i>liters</i>	Milk yield standard deviation <i>liters</i>	Lactation duration <i>days</i>	Lactation duration standard deviation <i>days</i>
1st lactation	5,061	167.6	74.1	118.2	48
2nd lactation	4,345	219.4	81.0	145.2	48
3rd lactation	3,836	241.0	84.6	158.0	48
4th lactation	2,954	243.3	86.9	161.1	47
5th lactation	2,126	242.6	89.0	160.3	47
6th lactation	1,532	222.2	87.6	154.5	50
7th lactation and over	1,742	202.4	88.4	146.8	51
Unknown	796	184.0	79.1	149.6	55
Overall total	22,392	214.4	87.7	145.7	51

Evolution of the number of lactations for Basco Bearnaise breed



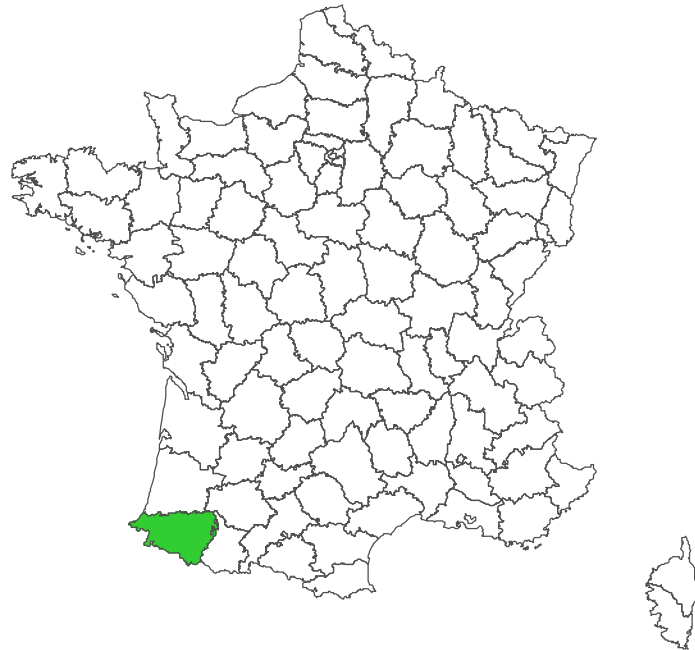
2.4 - Breed MANECH TETE NOIRE

(French breed code: 052)

Geographical distribution of ewes with lactations of Manech Tete Noire breed



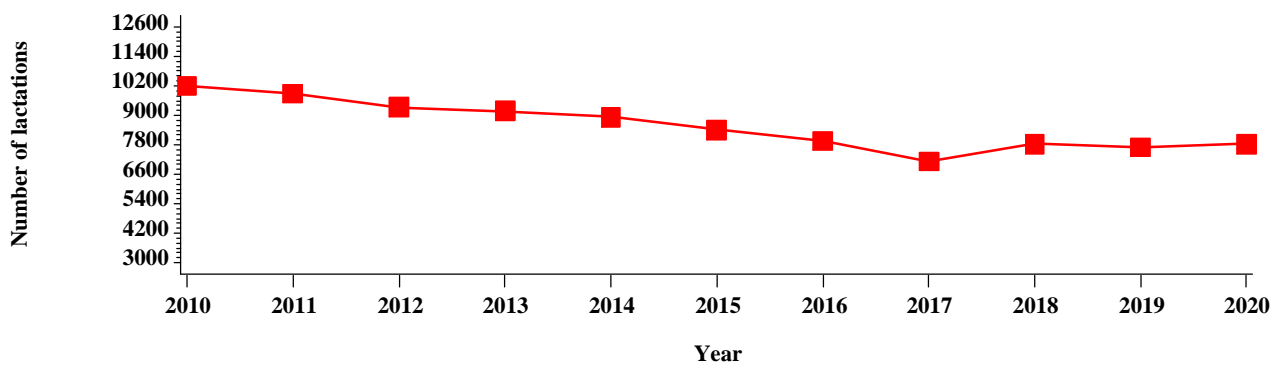
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Distribution by parity for Manech Tete Noire breed

Parity	Number of ewes in lactation	Milk yield <i>liters</i>	Milk yield standard deviation <i>liters</i>	Lactation duration <i>days</i>	Lactation duration standard deviation <i>days</i>
1st lactation	1,721	167.6	75.1	146.0	52
2nd lactation	1,501	187.4	73.2	151.1	48
3rd lactation	1,288	190.5	73.4	150.6	46
4th lactation	1,031	182.6	72.6	150.8	47
5th lactation	766	176.3	72.5	146.7	49
6th lactation	479	166.9	69.1	144.4	46
7th lactation and over	579	147.2	66.8	135.7	48
Unknown	466	143.5	68.2	128.8	51
Overall total	7,831	175.0	73.9	146.6	49

Evolution of the number of lactations for Manech Tete Noire breed



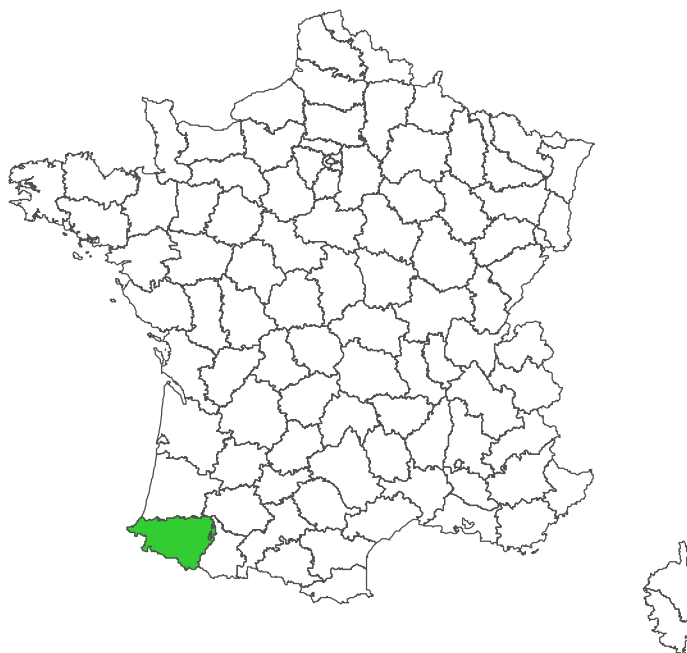
2.5 - Breed MANECH TETE ROUSSE

(French breed code: 053)

Geographical distribution of ewes with lactations of Manech Tete Rousse breed



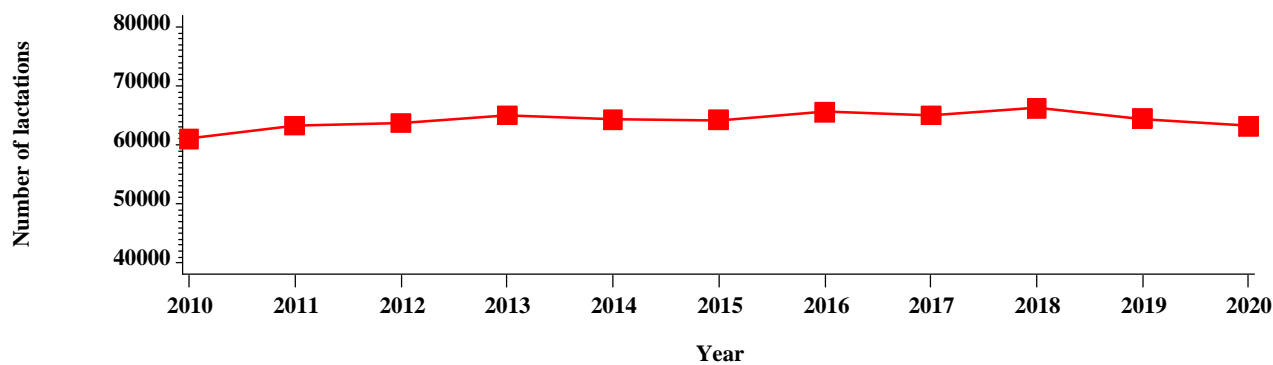
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Distribution by parity for Manech Tete Rousse breed

Parity	Number of ewes in lactation	Milk yield <i>liters</i>	Milk yield standard deviation <i>liters</i>	Lactation duration <i>days</i>	Lactation duration standard deviation <i>days</i>
1st lactation	14,945	230.3	92.4	158.8	49
2nd lactation	12,888	258.3	94.2	162.6	50
3rd lactation	11,158	262.5	94.6	165.0	49
4th lactation	8,635	254.6	95.5	163.8	50
5th lactation	6,320	240.5	93.6	161.8	50
6th lactation	4,277	225.0	91.9	157.0	51
7th lactation and over	4,219	198.9	89.1	147.0	53
Unknown	730	206.3	98.5	148.4	55
Overall total	63,172	243.3	95.3	160.6	50

Evolution of the number of lactations for Manech Tete Rousse breed



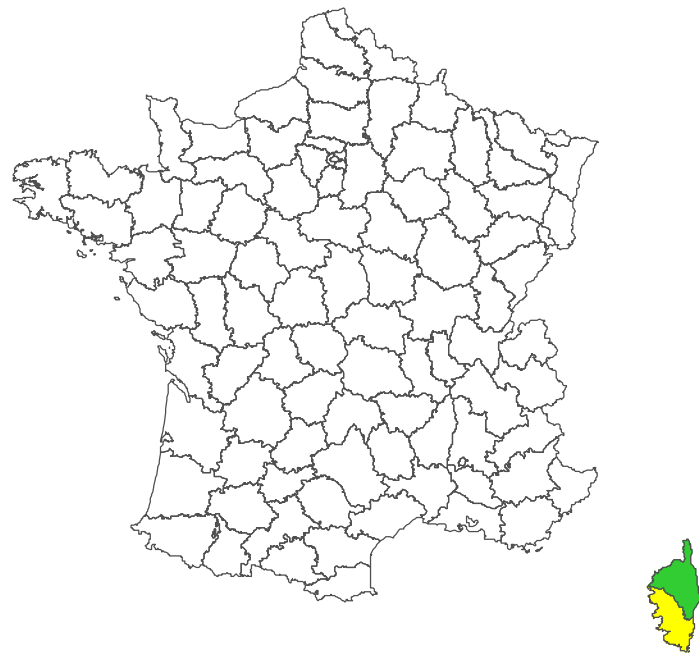
2.6 - Breed CORSE

(French breed code: 046)

Geographical distribution of ewes with lactations of Corse breed



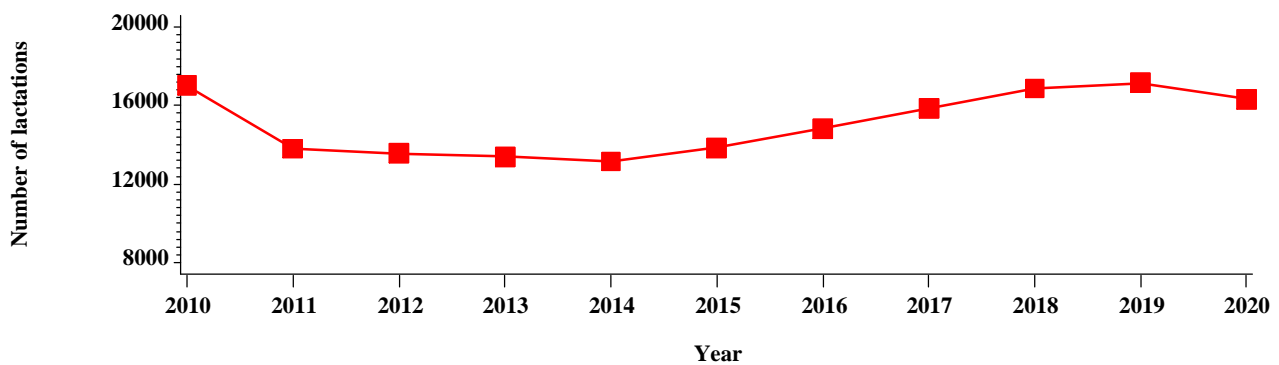
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Distribution by parity for Corse breed

Parity	Number of ewes in lactation	Milk yield <i>liters</i>	Milk yield standard deviation <i>liters</i>	Lactation duration <i>days</i>	Lactation duration standard deviation <i>days</i>
1st lactation	2,769	105.6	49.1	145.0	54
2nd lactation	2,841	150.0	59.7	189.2	56
3rd lactation	2,595	168.9	60.4	204.3	50
4th lactation	2,088	172.1	62.1	205.7	50
5th lactation	1,792	170.2	59.7	207.6	47
6th lactation	1,356	155.4	60.6	199.3	52
7th lactation and over	1,909	142.5	60.5	192.4	56
Unknown	984	127.5	60.9	177.7	68
Overall total	16,334	148.8	63.1	188.7	58

Evolution of the number of lactations for Corse breed



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Milk recording results of Sheep France 2020

The total number of ewes present at the lambing period reached 330,431 in 2020, that is quite similar to the previous year (+ 0.3%). At the same time the total number of ewes with lactation calculation is stable at 278,442 (+0.01%). This stability confirms the trend observed the previous year and puts an end to the increase observed from 2016 to 2018 (+22,000 ewes over 3 years). 750 flocks are counted up today in Official Milk Recording, which means a decrease of 10 flocks compared to the previous year. Meanwhile, the average size of flock still progressed in 2020 (441 ewes present at the lambing period in average versus 433 ewes in 2019 and 428 ewes in 2018). In 2020 the average milk yield is increasing for the Lacaune breed (+9.2 liters) and for the Corsican breed (+1.3 liter), is stable for the "Manech tête noire" breed (-0.1 liter) and is decreasing for the "Manech tête Rousse" breed (-3.2 liters) and for the "Basco Béarnaise" breed (-3.8 liters). At the national level the milk yield reached 291.6 liters (+5.3 liters) in 169 days in milking-only period (identical duration to the previous year). A simplified milk recording, corresponding to the D recording method in the ICAR nomenclature and not presented in this document, exists in addition to the Official Milk Recording AC design. It concerns commercial flocks out of the selection nucleus (while the Official Milk Recording is devoted only to breeders involved in the selection program). 1,232 flocks and 556,929 ewes present at the lambing period were submitted to D recording in 2020.

Contact :
gilles.thomas@idele.fr

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