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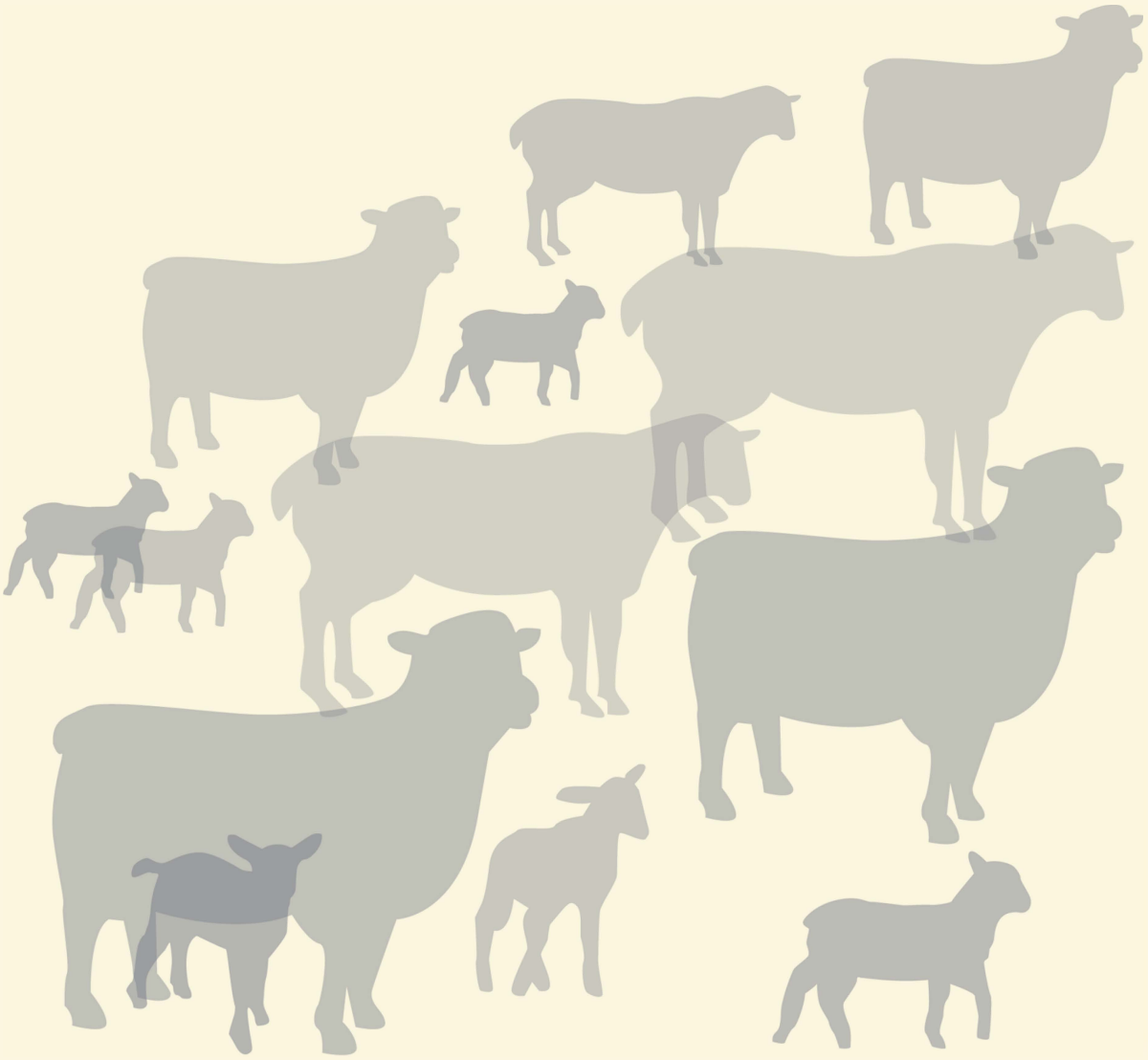
Milk recording results of Sheep

France 2022



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MINISTÈRE DE L'AGRICULTURE ET DE LA SOUVERAINETÉ ALIMENTAIRE
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Milk recording results - Sheep
France – Year 2022

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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 bet 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
2021	Rayon	192 923 (19%)	88%	297	346 (176)	483 869
	Pyrénées	123 388 (28%)	47%	262	239 (159)	38 532
	Corse	18 860 (22%)	35%	21	153 (188)	9 397
2022	Rayon	197 817 (19%)	87%	309	346 (176)	480 299
	Pyrénées	124 878 (28%)	47%	284	234 (160)	37 580
	Corse	18 403 (22%)	38%	20	153 (189)	9 856

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 2022. Thus, these results concern the year 2022. 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 2022

Increasing by 5,810 (+1.7%), the total number of ewes present at the lambing period reached 340,981 in 2022. At the same time the total number of ewes with lactation calculation raised to 4,600 and reached 289,921 (+1.6%).
This increase of the ewes number on official milk recording (CLO) confirms the trend observed the previous years.

754 flocks are counted up in Official Milk Recording in 2022, a figure slightly over the one in the previous year. Meanwhile, with 452 ewes, the average size of flock still progressed in 2022 (447 ewes in 2021, 441 ewes in 2020, 433 in 2019 and 428 in 2018).

In 2022, at the national level, with an average of 298.2 liters (-1 liter) in 172 days of lactation during the milking period (+1 day) the milk yield is slightly decreasing. Excepted for the Corse breed that shows an increase in milk yield (+0.7 liter), in all the other breeds, milk yields are more or less decreasing: -0,4 liter in Lacaune breed, -0,6 liter in Manech Tête Noire breed, -2,1 liters in Basco Béarnaise breed and -6 liters in Manech Tête Rousse breed.

A simplified milk recording, corresponding to the D recording method in the ICAR guidelines 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). 1,151 flocks and 527,735 ewes present at the lambing period were submitted to D recording in 2022.

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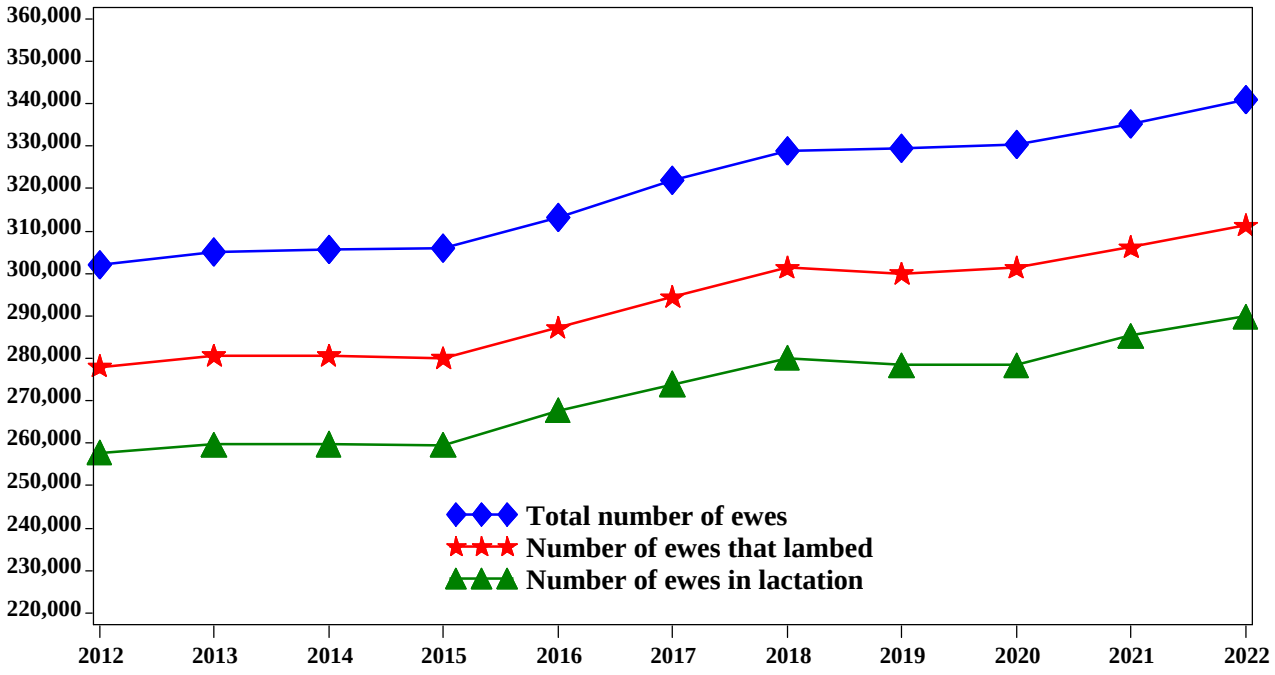
I - GLOBAL RESULTS

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*
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
2021	**335,171**	306,167	*91.3*	285,321	*93.2*	299.2	171
2022	**340,981**	311,301	*91.3*	289,921	*93.1*	298.2	172



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	**99,478**	81,064	*81.5*	74,874	*92.4*	263.7	159
2nd lactation and over	**241,503**	230,237	*95.3*	215,047	*93.4*	310.2	176
Overall total	**340,981**	**311,301**	**91.3**	**289,921**	**93.1**	**298.2**	**172**

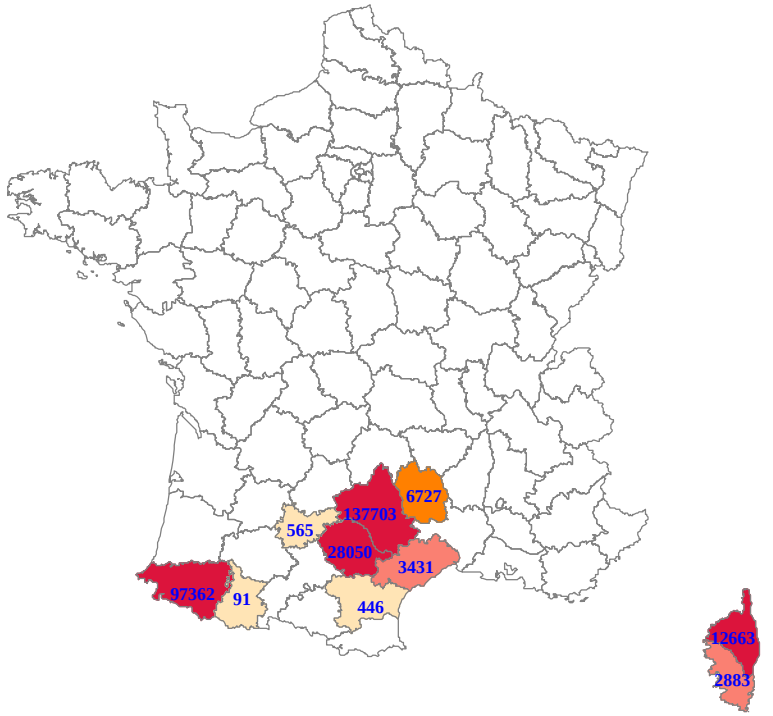
1.2.2 - Number of flocks and average number of ewes per flock

Total number of ewes in lactation	Total number of flocks	Average number of ewes per flock
289,921	754	384.5

1.2.3 - Results per local area

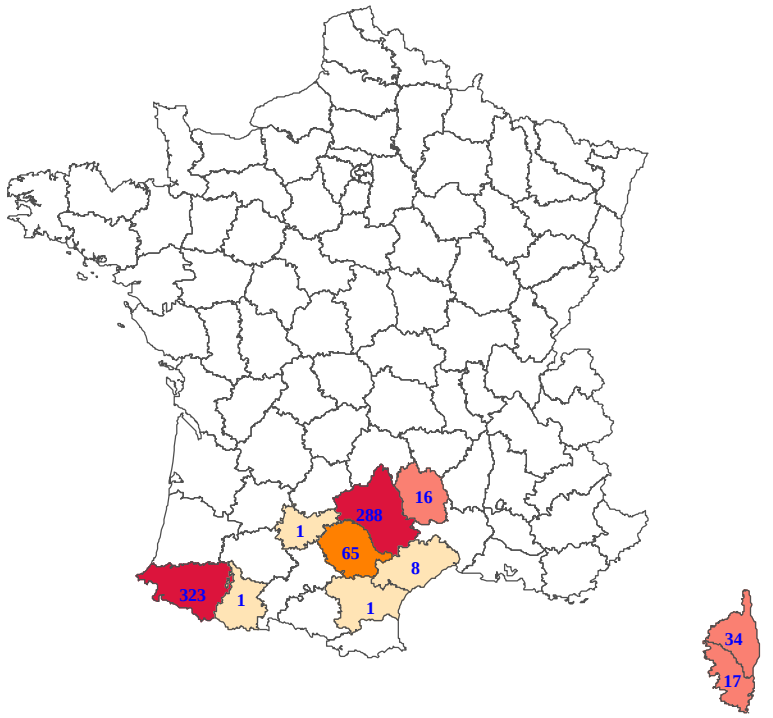
Local area	Number of flocks	Number of ewes in lactation	Milk yield *l*	Lactation duration *d*
Aude	**1**	446	337.7	187
Aveyron	**288**	137,703	346.7	176
Corse du Sud	**17**	2,883	151.5	172
Haute Corse	**34**	12,663	153.7	193
Hérault	**8**	3,431	322.0	175
Lozère	**16**	6,727	325.2	177
Pyrénées Atlantiques	**323**	97,362	234.3	160
Hautes Pyrénées	**1**	91	177.9	151
Tarn	**65**	28,050	351.1	178
Tarn & Garonne	**1**	565	342.0	171
Overall total	**754**	**289,921**	**298.2**	**172**

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



Number of lactations <1,000 >=1,000 & <5,000 >=5,000 & <10,000 >=10,000

Distribution of flocks per local area



Number of flocks <10 >=10 & <50 >=50 & <100 >=100

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	48,179	298.4	163
	2nd lactation	38,932	366.3	182
	3rd lactation	30,696	383.4	185
	4th lactation	23,067	374.3	183
	5th lactation	16,425	359.1	181
	6th lactation	10,292	339.2	177
	7th lactation and over	9,002	300.9	168
	Unknown	329	293.9	163
Total breeding area		***176,922***	***346.1***	***176***
02	1st lactation	3,103	112.3	146
	2nd lactation	2,847	158.4	190
	3rd lactation	2,303	175.7	205
	4th lactation	1,803	180.1	208
	5th lactation	1,568	176.9	211
	6th lactation	1,235	166.0	205
	7th lactation and over	1,979	143.1	193
	Unknown	708	124.5	178
Total breeding area		***15,546***	***153.3***	***189***
03	1st lactation	23,592	212.8	152
	2nd lactation	20,313	245.5	162
	3rd lactation	16,713	257.0	167
	4th lactation	12,823	250.4	167
	5th lactation	9,504	239.2	165
	6th lactation	6,261	224.0	160
	7th lactation and over	6,279	199.8	152
	Unknown	1,968	196.0	151
Total breeding area		***97,453***	***234.3***	***160***
Overall total		**289,921**	**298.2**	**172**

[1]Refer 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	8,536	278.3	151
		February	6,484	261.5	143
		March	2,250	230.9	121
		April	444	156.1	89
		May	97	142.7	80
		June	18	154.3	105
		July	290	325.1	198
		August	1,311	353.2	196
		September	3,286	349.2	193
		October	8,094	328.9	181
		November	11,284	320.1	175
		December	6,085	282.6	152
	2nd lactation and over	January	18,876	354.5	171
		February	8,584	326.4	153
		March	2,788	255.9	119
		April	791	205.2	96
		May	141	160.9	78
		June	199	247.9	192
		July	1,299	347.3	192
		August	6,900	380.6	196
		September	15,182	377.3	194
		October	36,473	378.1	192
		November	27,126	370.7	184
		December	10,384	362.3	173
Total breeding area			***176,922***	***346.1***	***176***
02	1st lactation	January	889	100.4	124
		February	461	77.7	94
		March	136	51.4	68
		April	32	24.0	37
		May	3	7.5	29
		June			
		July			
		August	8	152.1	255
		September	192	168.8	225
		October	501	156.1	205
		November	276	129.3	177
		December	605	112.5	151
	2nd lactation and over	January	556	116.9	122
		February	254	91.9	94
		March	83	65.3	68
		April	30	26.9	39
		May	1	4.6	29
		June			
		July			
		August	65	180.3	233
		September	4,937	177.3	222
		October	5,070	165.7	202
		November	1,161	152.8	180
		December	286	121.2	146

[1]Refer 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*
Total breeding area			***15,546***	***153.3***	***189***
03	1st lactation	January	2,708	192.8	132
		February	2,284	147.8	97
		March	2,280	106.0	71
		April	380	70.2	48
		May	36	34.3	24
		June	1	24.4	14
		July			
		August			
		September	4	225.9	191
		October	2,416	264.3	195
		November	8,551	252.9	181
		December	4,932	220.8	162
	2nd lactation and over	January	3,446	219.9	134
		February	3,049	175.4	99
		March	2,861	131.0	73
		April	536	88.7	52
		May	46	52.7	33
		June			
		July			
		August			
		September	40	286.0	207
		October	12,899	254.1	184
		November	38,731	253.1	173
		December	12,253	244.9	160
Total breeding area			***97,453***	***234.3***	***160***
Overall total			**289,921**	**298.2**	**172**

[1]Refer 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	**3**	492	373.6	172
	>=200 & <250	**11**	2,493	347.8	177
	>=250 & <300	**24**	6,497	341.1	176
	>=300 & <350	**52**	16,926	346.5	177
	>=350 & <400	**50**	18,585	353.6	179
	>=400 & <450	**51**	21,637	337.3	176
	>=450 & <500	**54**	25,590	348.8	176
	>=500 & <550	**37**	19,254	335.9	175
	>=550 & <600	**27**	15,478	358.0	176
	>= 600	**70**	49,970	346.1	175
Total breeding area		***379***	***176,922***	***346.1***	***176***
02	< 200	**24**	3,401	147.6	181
	>=200 & <250	**6**	1,286	137.3	184
	>=250 & <300	**4**	1,098	115.7	191
	>=300 & <350	**4**	1,272	181.3	183
	>=350 & <400	**4**	1,478	158.9	186
	>=400 & <450	**4**	1,766	155.1	191
	>=550 & <600	**1**	588	126.1	186
	>= 600	**4**	4,657	163.9	197
Total breeding area		***51***	***15,546***	***153.3***	***189***
03	< 200	**54**	9,035	206.8	152
	>=200 & <250	**65**	14,488	215.2	158
	>=250 & <300	**63**	17,237	234.3	160
	>=300 & <350	**59**	19,044	239.8	164
	>=350 & <400	**37**	13,852	245.7	164
	>=400 & <450	**15**	6,366	224.8	160
	>=450 & <500	**12**	5,756	243.4	160
	>=500 & <550	**6**	3,176	256.0	162
	>=550 & <600	**5**	2,797	277.8	166
	>= 600	**8**	5,702	247.8	157
Total breeding area		***324***	***97,453***	***234.3***	***160***
Overall total		**754**	**289,921**	**298.2**	**172**

[1]Refer 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 *liters*	Lactation duration *days*
CDEO	**324**	97,453	234.3	160
Confédération Générale de Roquefort	**189**	86,819	341.1	176
EDE 48	**7**	3,725	320.0	174
EDE 81	**27**	11,732	354.4	183
SUAE CORSE DU SUD	**17**	2,883	151.5	172
SUAE HAUTE-CORSE	**34**	12,663	153.7	193
UNOTEC 12	**156**	74,646	351.9	175
Overall total	**754**	**289,921**	**298.2**	**172**

[1]Refer 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	**323**	97,362	234.3	160
	Hautes Pyrénées	**1**	91	177.9	151
Total MRO		***324***	***97,453***	***234.3***	***160***
Confédération Générale de Roquefort	Aude	**1**	446	337.7	187
	Aveyron	**137**	64,631	340.1	177
	Hérault	**3**	1,857	321.4	184
	Lozère	**9**	3,002	331.6	180
	Tarn	**38**	16,318	348.8	174
	Tarn & Garonne	**1**	565	342.0	171
Total MRO		***189***	***86,819***	***341.1***	***176***
EDE 48	Lozère	**7**	3,725	320.0	174
Total MRO		*7*	***3,725***	***320.0***	***174***
EDE 81	Tarn	**27**	11,732	354.4	183
Total MRO		*27*	***11,732***	***354.4***	***183***
SUAE CORSE DU SUD	Corse du Sud	**17**	2,883	151.5	172
Total MRO		*17*	***2,883***	***151.5***	***172***
SUAE HAUTE-CORSE	Haute Corse	**34**	12,663	153.7	193
Total MRO		*34*	***12,663***	***153.7***	***193***
UNOTEC 12	Aveyron	**151**	73,072	352.6	175
	Hérault	**5**	1,574	322.7	165
Total MRO		*156*	*74,646*	***351.9***	***175***
Overall total		**754**	**289,921**	**298.2**	**172**

[1]Refer 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	**324**	97,453	234.3	160
OS Lacaune	**379**	176,922	346.1	176
SUAE CORSE DU SUD	**17**	2,883	151.5	172
SUAE HAUTE-CORSE	**34**	12,663	153.7	193
Overall total	**754**	**289,921**	**298.2**	**172**

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

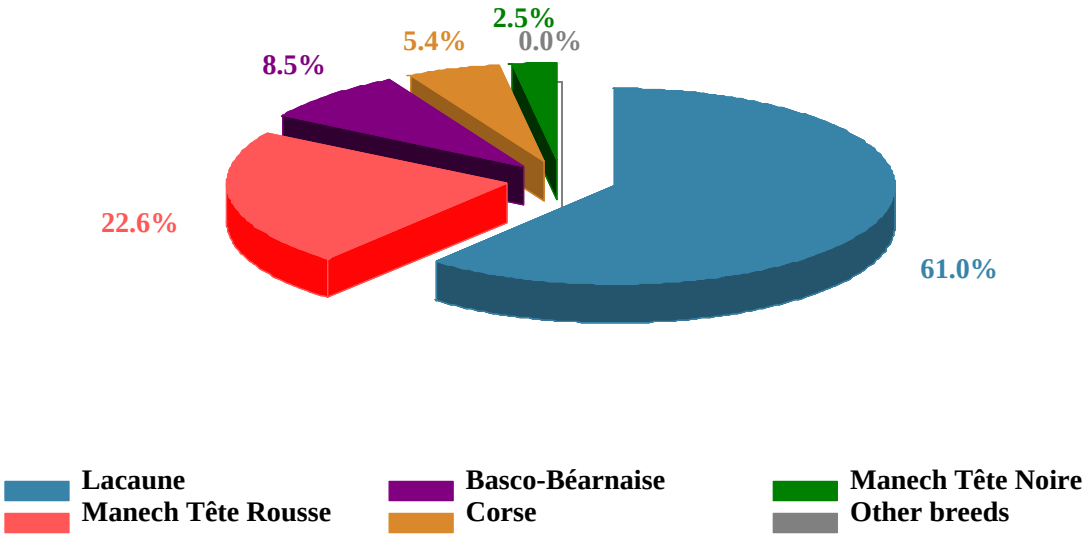
RPRO	Local area	Number of flocks	Number of ewes in lactation	Milk yield *liters*	Lactation duration *days*
CDEO	Pyrénées Atlantiques	**323**	97,362	234.3	160
	Hautes Pyrénées	**1**	91	177.9	151
Total RPRO		***324***	***97,453***	***234.3***	***160***
OS Lacaune	Aude	**1**	446	337.7	187
	Aveyron	**288**	137,703	346.7	176
	Hérault	**8**	3,431	322.0	175
	Lozère	**16**	6,727	325.2	177
	Tarn	**65**	28,050	351.1	178
	Tarn & Garonne	**1**	565	342.0	171
Total RPRO		***379***	***176,922***	***346.1***	***176***
SUAE CORSE DU SUD	Corse du Sud	**17**	2,883	151.5	172
Total RPRO		***17***	***2,883***	***151.5***	***172***
SUAE HAUTE-CORSE	Haute Corse	**34**	12,663	153.7	193
Total RPRO		***34***	***12,663***	***153.7***	***193***
Overall total		**754**	**289,921**	**298.2**	**172**

[1]Refer 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 *liters*	Milk yield standard deviation *liters*	Lactation duration *days*	Lactation duration standard deviation *days*
Lacaune	379	176,914	**346.1**	*106.1*	176	*41*
Manech Tête Rousse	231	65,497	**244.6**	*91.8*	165	*47*
Basco-Béarnaise	99	24,598	**222.3**	*85.1*	150	*48*
Corse	51	15,546	**153.3**	*67.5*	189	*57*
Manech Tête Noire	66	7,294	**183.2**	*75.4*	151	*45*
Other breeds	45	72	**141.9**	*102.7*	109	*57*

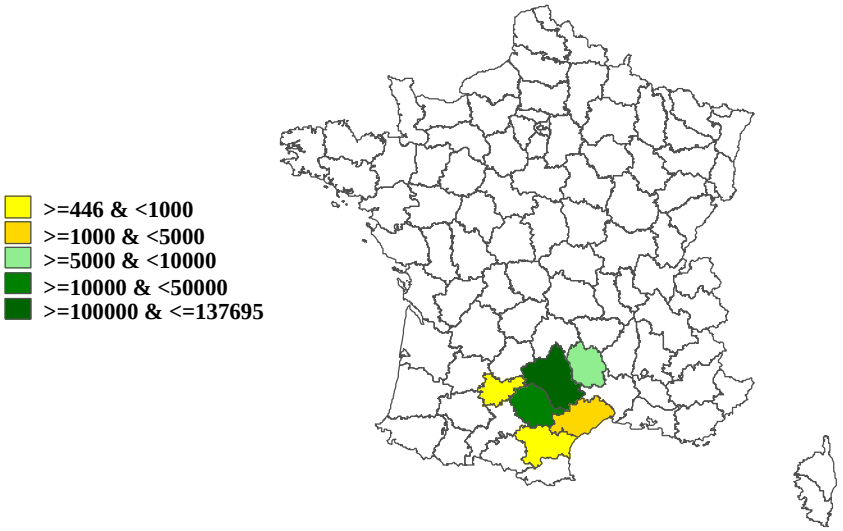


[1]Refer to the Introduction paragraph for details.

2.2 - Breed LACAUNE

(French breed code: 010)

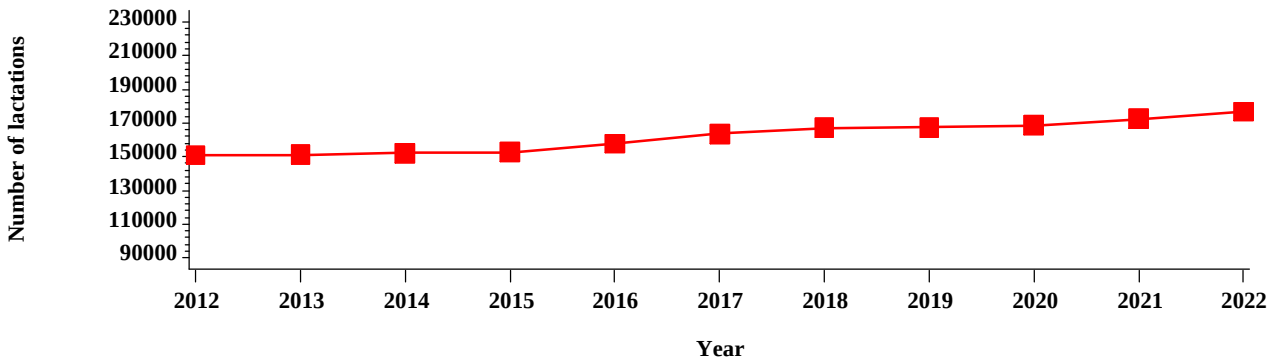
Geographical distribution of ewes with lactations of Lacaune breed



Distribution by parity for Lacaune breed

Parity	Number of ewes in lactation	Milk yield *liters*	Milk yield standard deviation *liters*	Lactation duration *days*	Lactation duration standard deviation *days*
1st lactation	48,172	298.4	*94.8*	162.7	*41*
2nd lactation	38,931	366.3	*102.7*	181.9	*40*
3rd lactation	30,696	383.4	*101.3*	184.9	*37*
4th lactation	23,067	374.3	*102.3*	183.0	*37*
5th lactation	16,425	359.1	*103.4*	180.6	*39*
6th lactation	10,292	339.2	*102.8*	176.7	*41*
7th lactation and over	9,002	300.9	*102.2*	167.7	*45*
Unknown	329	293.9	*106.5*	163.4	*49*
Overall total	**176,914**	**346.1**	**106.1**	**176.2**	**41**

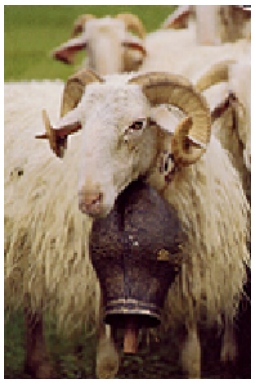
Evolution of the number of lactations for Lacaune breed

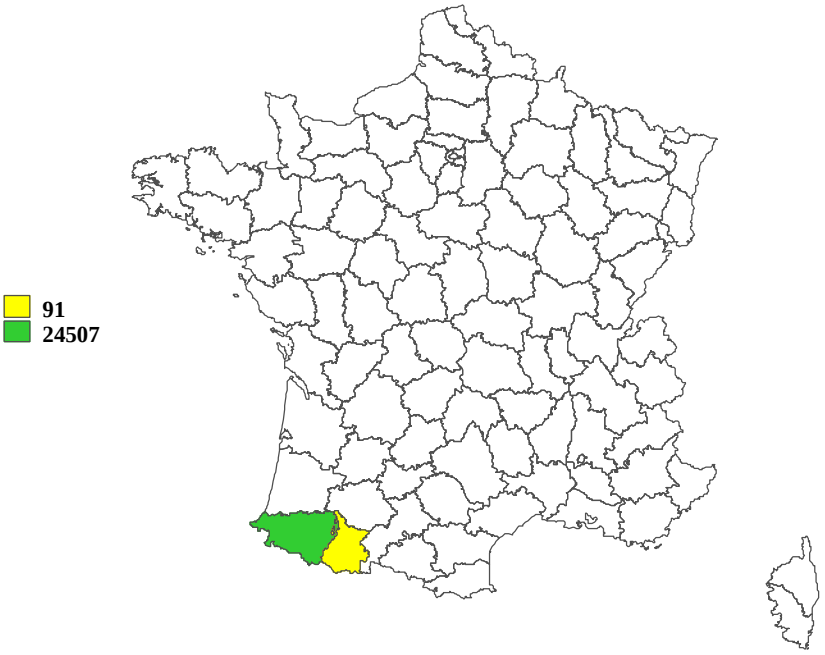


2.3 - Breed BASCO BEARNAISE

(French breed code: 030)

Geographical distribution of ewes with lactations of Basco Bearnaise breed

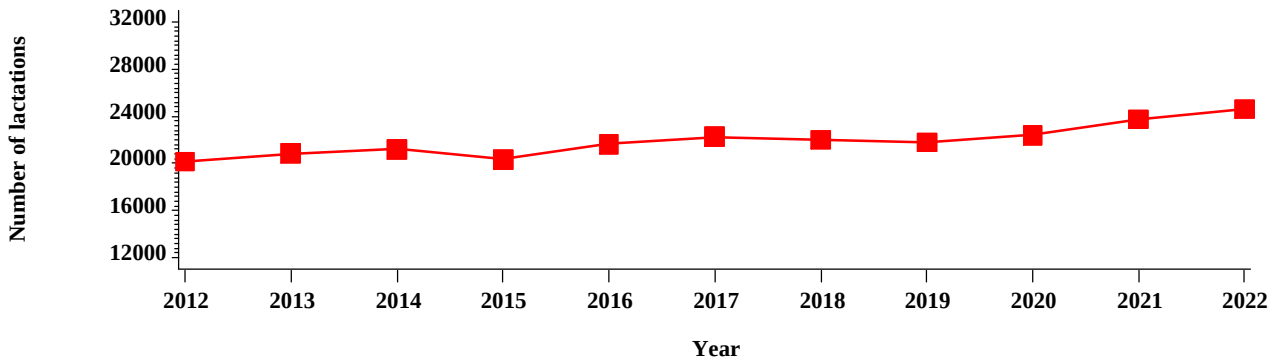




Distribution by parity for Basco Bearnaise breed

Parity	Number of ewes in lactation	Milk yield *liters*	Milk yield standard deviation *liters*	Lactation duration *days*	Lactation duration standard deviation *days*
1st lactation	5,513	176.0	*73.9*	120.9	*48*
2nd lactation	4,915	228.1	*77.4*	149.9	*45*
3rd lactation	4,205	248.1	*79.7*	162.6	*42*
4th lactation	3,261	250.3	*84.7*	165.1	*42*
5th lactation	2,558	242.8	*85.9*	163.4	*43*
6th lactation	1,670	231.0	*85.8*	160.6	*44*
7th lactation and over	1,751	208.7	*85.2*	150.7	*48*
Unknown	725	199.8	*86.0*	153.2	*52*
Overall total	**24,598**	**222.3**	**85.1**	**149.9**	**48**

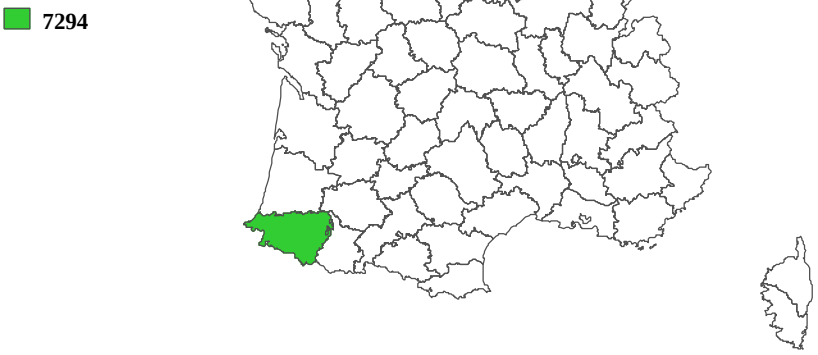
Evolution of the number of lactations for Basco Bearnaise breed



2.4 - Breed MANECH TETE NOIRE

(French breed code: 052)

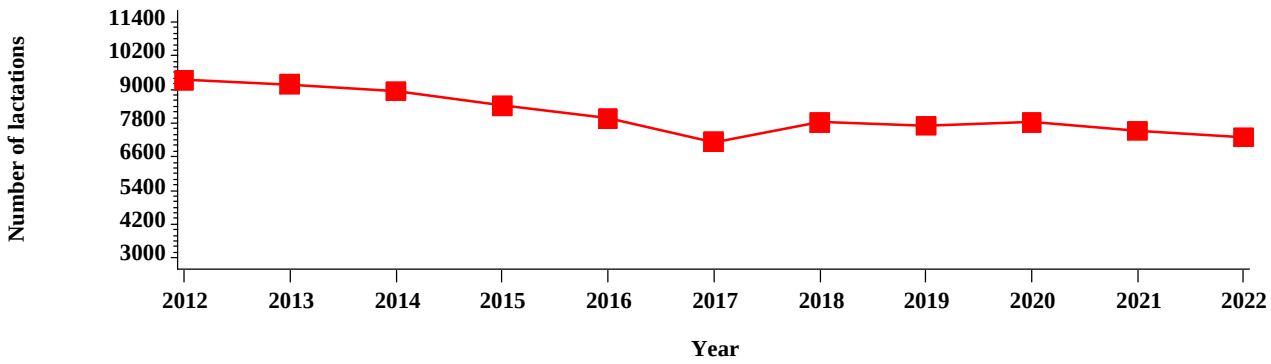
Geographical distribution of ewes with lactations of Manech Tete Noire breed



Distribution by parity for Manech Tete Noire breed

Parity	Number of ewes in lactation	Milk yield *liters*	Milk yield standard deviation *liters*	Lactation duration *days*	Lactation duration standard deviation *days*
1st lactation	1,712	168.7	*73.4*	146.0	*51*
2nd lactation	1,462	199.2	*73.9*	156.3	*44*
3rd lactation	1,287	204.3	*76.7*	157.6	*43*
4th lactation	981	195.6	*71.9*	156.4	*41*
5th lactation	735	178.2	*75.5*	150.1	*44*
6th lactation	477	160.8	*65.0*	147.3	*41*
7th lactation and over	457	142.9	*65.7*	136.3	*44*
Unknown	183	152.7	*66.8*	140.2	*43*
Overall total	**7,294**	**183.2**	**75.4**	**151.3**	**45**

Evolution of the number of lactations for Manech Tete Noire breed

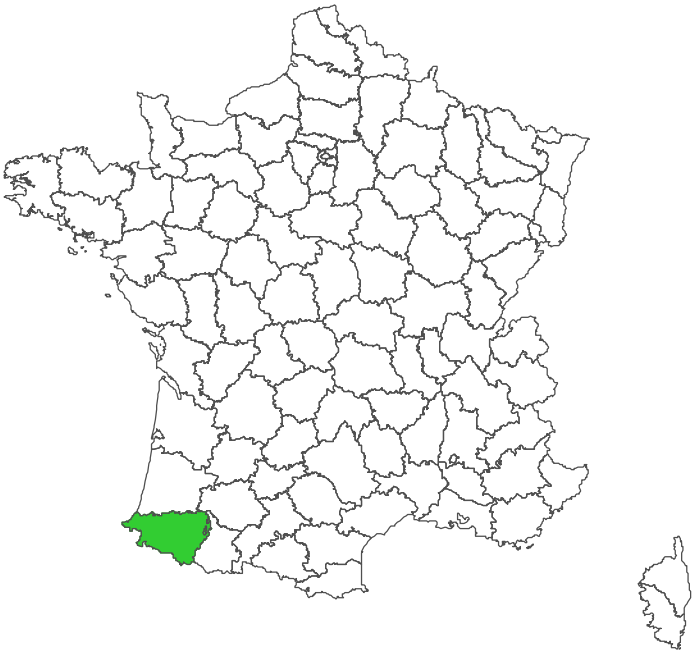


2.5 - Breed MANECH TETE ROUSSE

(French breed code: 053)

Geographical distribution of ewes with lactations of Manech Tete Rousse breed

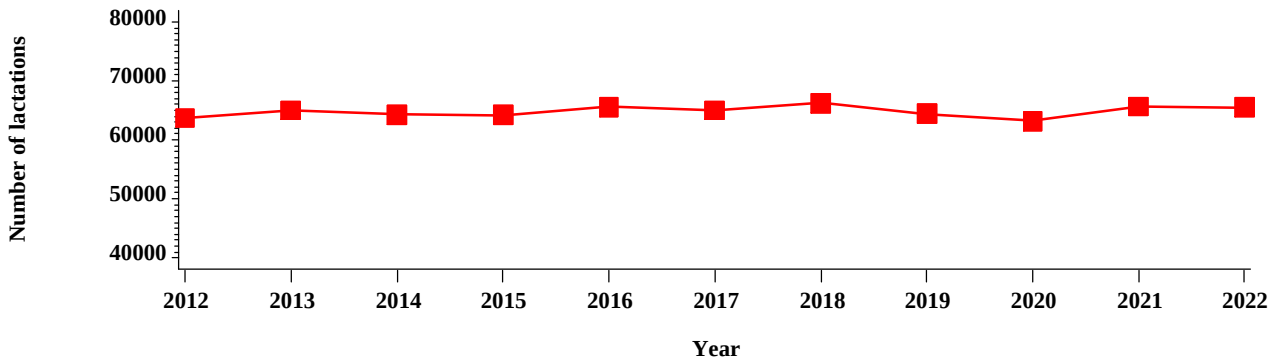
65497



Distribution by parity for Manech Tete Rousse breed

Parity	Number of ewes in lactation	Milk yield *liters*	Milk yield standard deviation *liters*	Lactation duration *days*	Lactation duration standard deviation *days*
1st lactation	16,351	230.0	*87.6*	163.2	*46*
2nd lactation	13,922	256.6	*90.3*	166.7	*47*
3rd lactation	11,211	266.5	*91.6*	170.2	*46*
4th lactation	8,573	256.9	*92.8*	169.0	*46*
5th lactation	6,204	245.1	*91.3*	166.9	*46*
6th lactation	4,111	228.6	*90.1*	161.9	*47*
7th lactation and over	4,070	202.4	*85.5*	154.5	*49*
Unknown	1,055	201.3	*82.3*	151.3	*49*
Overall total	**65,497**	**244.6**	**91.8**	**165.4**	**47**

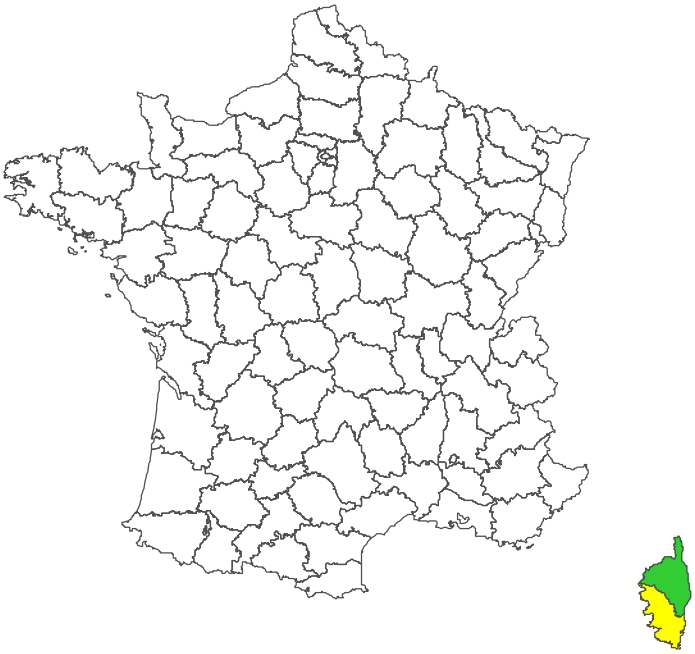
Evolution of the number of lactations for Manech Tete Rousse breed



2.6 - Breed CORSE

(French breed code: 046)

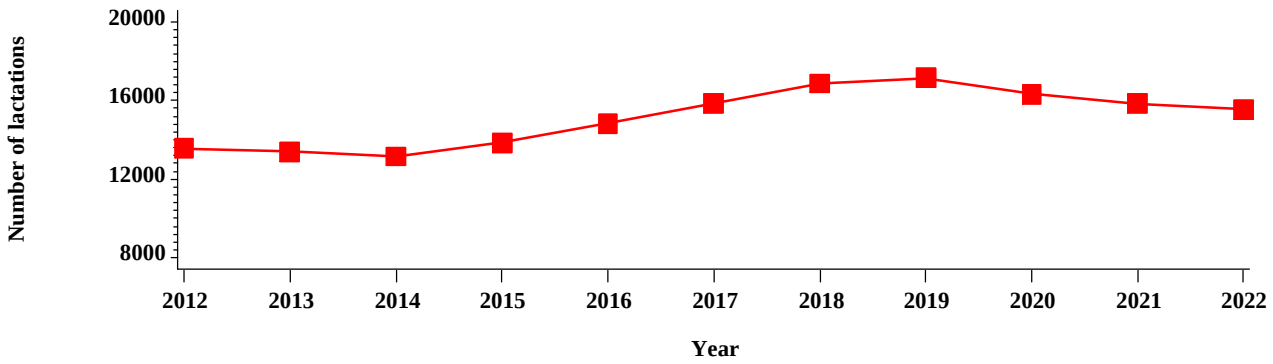
Geographical distribution of ewes with lactations of Corse breed



Distribution by parity for Corse breed

Parity	Number of ewes in lactation	Milk yield *liters*	Milk yield standard deviation *liters*	Lactation duration *days*	Lactation duration standard deviation *days*
1st lactation	3,103	112.3	*51.1*	145.8	*51*
2nd lactation	2,847	158.4	*62.3*	190.5	*56*
3rd lactation	2,303	175.7	*66.9*	204.9	*50*
4th lactation	1,803	180.1	*68.3*	208.4	*48*
5th lactation	1,568	176.9	*66.0*	210.6	*48*
6th lactation	1,235	166.0	*67.3*	205.3	*51*
7th lactation and over	1,979	143.1	*64.8*	193.4	*56*
Unknown	708	124.5	*59.9*	177.7	*61*
Overall total	**15,546**	**153.3**	**67.5**	**188.8**	**57**

Evolution of the number of lactations for Corse breed



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COLLECTION
RESULTATS

Milk recording results of Sheep
France 2022

Increasing by 5,810 (+1.7%), the total number of ewes present at the lambing period reached 340,981 in 2022. At the same time the total number of ewes with lactation calculation raised to 4,600 and reached 289,921 (+1.6%). This increase of the ewes number on official milk recording (CLO) confirms the trend observed the previous years. 754 flocks are counted up in Official Milk Recording in 2022, a figure slightly over the one in the previous year. Meanwhile, with 452 ewes, the average size of flock still progressed in 2022 (447 ewes in 2021, 441 ewes in 2020, 433 in 2019 and 428 in 2018). In 2022, at the national level, with an average of 298.2 liters (-1 liter) in 172 days of lactation during the milking period (+1 day) the milk yield is slightly decreasing. Excepted for the Corse breed that shows an increase in milk yield (+0.7 liter), in all the other breeds, milk yields are more or less decreasing: -0,4 liter in Lacaune breed, -0,6 liter in Manech Tête Noire breed, -2,1 liters in Basco Béarnaise breed and -6 liters in Manech Tête Rousse breed. A simplified milk recording, corresponding to the D recording method in the ICAR guidelines 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). 1,151 flocks and 527,735 ewes present at the lambing period were submitted to D recording in 2022.

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