What is needed to improve sheep productivity in EU and Turkey?

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INTRODUCTION

- Wide variability between systems and flocks in terms of reproductive and productive indicators.
- The number of lambs produced per sheep is in general very low (below 1.5) even in accelerated reproductive systems.
- Low utilization of technologies available (oestrus synchronization, artificial insemination and scanning).
- Therefore, there is a significant margin for improvement of sheep productivity

But… which is the perception of stakeholders (farmers, advisory services, veterinaries, etc.) in terms of the main needs and challenges?

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OBJECTIVE

To identify the main challenges and needs for achieving optimum levels of sheep productivity (efficient reproduction, pregnancy success and reduced lamb mortality), as well the potential best management practices…

… taking into account the expertise and knowledge from the stakeholders (farmers, advisory services, veterinaries, etc.) within the member countries of the SheepNet project (FR, IR, IT, RO, SP, UK and Turkey)

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MATERIALS AND METHODS

A survey was designed in English (and later translated into the language of each partner) to collect the needs and interests of:

- Farmers
- Veterinarians, technicians and advisers
- Researchers

Topics:

- Main challenges and Needs
- Best management practices that potentially have the greatest effect on sheep productivity.
- Sources of information used

Online & face-to-face

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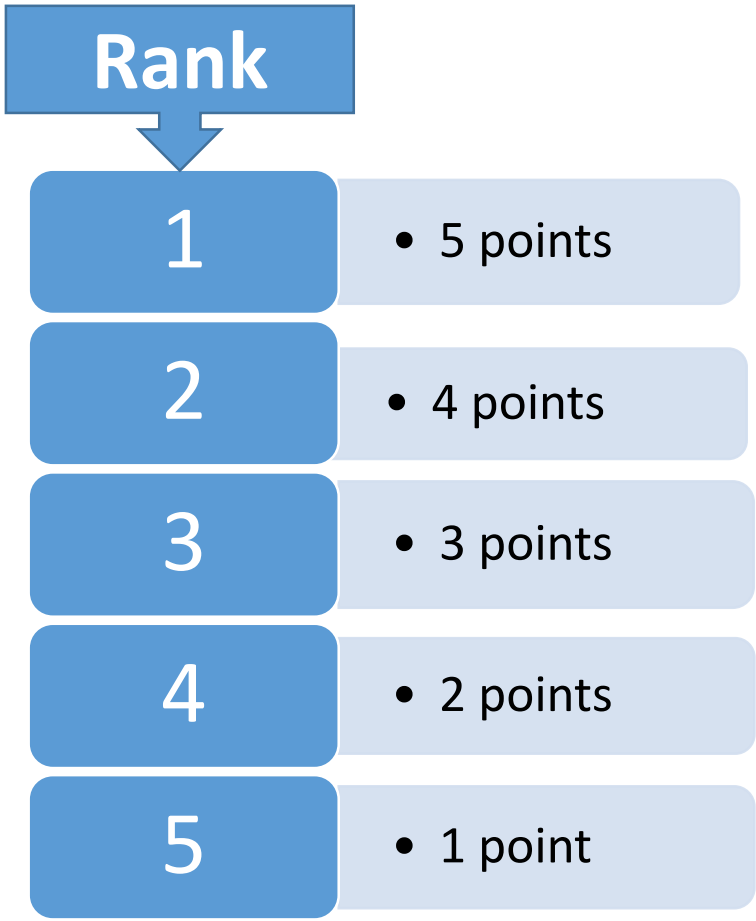
MATERIAL AND METHODS: Data Treatment & Scoring

MAIN CHALLENGES AND NEEDS TO ENHANCE PREGNANCY RATE

Please select from the following list what you consider are the main issues involved in achieving a high **PREGNANCY RATE (please select a maximum of five in order of importance; rank 1-5)**

Ewe lamb management	
Breading period of the year	
Lambing interval	
Systems for the synchronization of oestrus	
Ram management	
Ram effect	
Artificial insemination (method and semen storage)	
Body condition score	
Nutrition/grass land management	
Environmental stress	
Flock health status	
Technology for ewe identification/management (e.g. EID)	
Duration of breeding period	
Ewe to ram ratio	
Culling strategy	
Other (specify)	



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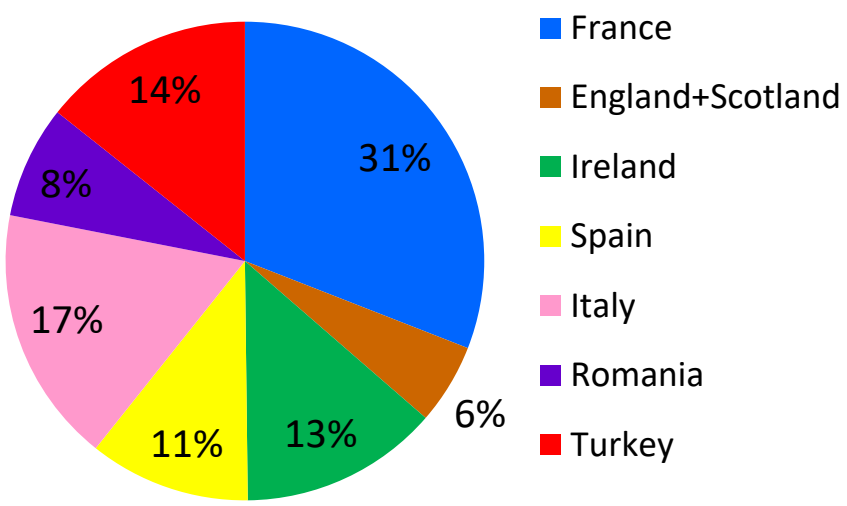
MATERIAL AND METHODS: Respondants

Country	No	Yes	Total
France	259	244	503
England+Scotland	34	43	77
Ireland	20	106	126
Spain	49	86	135
Italy	223	137	360
Romania	36	60	96
Turkey	36	113	149
Wales	3		3
Others	18	5	23
Total	**678**	**794**	**1472**



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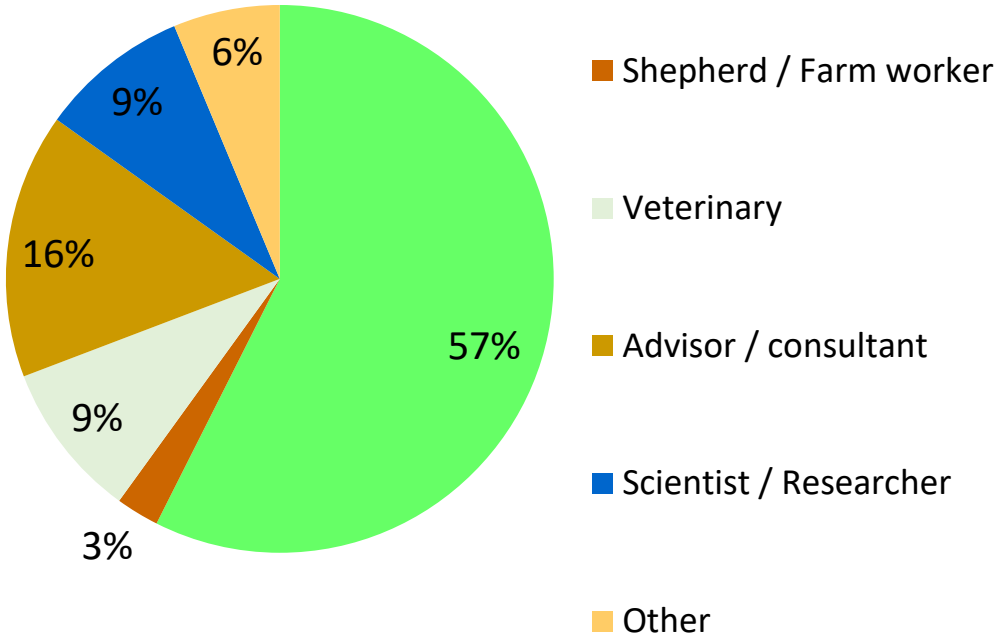
MATERIAL AND METHODS: Profile

	N
Farmer	453
Shepherd / Farm worker	23
Veterinario	75
Técnico / asesor	126
Científico / investigador	68
Otros	49
Total	**794**

310 meat + 140 dairy



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MAIN CHALLENGES AND NEEDS TO ENHANCE PREGNANCY RATE

RESULTS

	TOTAL	Farmers			Technicians			
		TOTAL	MEAT	DAIRY	TOTAL	Adv	Vet	Sci
Ewe lamb management	849	537	371	166	253	124	73	56
Breading period of the year	755	451	272	179	255	104	60	91
Lambing interval	295	162	93	69	104	46	43	15
Systems for the synchronization of oestrus	387	225	129	96	131	36	49	46
Ram management	808	439	291	148	311	127	113	71
Ram effect	491	310	208	102	142	50	53	39
Artificial insemination (method and semen storage)	210	122	71	51	74	36	16	22
Body condition score	1988	1194	934	260	702	358	162	182
Nutrition/grass land management	1946	1164	842	322	648	340	169	139
Environmental stress	418	297	150	147	90	47	5	38
Flock health status	1609	953	663	290	546	238	182	126
Technology for ewe identification/management (e.g. EID)	164	75	65	10	78	37	13	28
Duration of breeding period	194	109	81	28	64	36	13	15
Ewe to ram ratio	753	433	268	165	279	87	106	86
Culling strategy	603	366	313	53	223	155	39	29
Other	87	51	49	2	36	26	0	10

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MAIN CHALLENGES AND NEEDS TO ENHANCE PREGNANCY SUCCESS

RESULTS

	TOTAL	Farmers			Technicians			
		TOTAL	MEAT	DAIRY	TOTAL	Adv	Vet	Sci
Pregnancy diagnosis (scanning): more info on benefits	1220	628	449	177	538	271	133	134
Abortion: diagnostic protocols	560	241	182	59	272	114	95	63
Abortion: control and prevention	1599	826	578	244	657	284	223	150
Nutrition/grassland management during gestation	2306	1396	955	431	764	360	216	188
Mineral nutrition during pregnancy	1110	794	610	177	254	147	52	55
How to assess quality of nutrition plan during gestation	1093	574	358	216	427	197	121	109
Vaccination programme (e.g. clostridial diseases)	888	575	326	242	252	110	60	82
Internal parasite control	1089	754	563	182	288	154	76	58
Technology for ewe identification/management (e.g. IED)	164	93	59	34	54	28	5	21
Animal handling (e.g.facilities)	658	412	238	174	220	83	65	72
Shearing during pregnancy	192	139	114	24	44	26	6	12
Housing requirements	432	277	198	74	118	49	35	34
Other	66	43	34	9	23	14	9	0

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MAIN CHALLENGES AND NEEDS TO REDUCE LAMB MORTALITY (Management)

RESULTS

	TOTAL	Farmers			Technicians			
		TOTAL	MEAT	DAIRY	TOTAL	Adv	Vet	Sci
Advanced preparation for lambing	1996	1161	710	443	713	301	193	219
Predator management	471	360	184	176	96	49	15	32
Records on lamb mortality to improve future lambings	745	338	273	65	350	192	71	87
Sheep shed (air circulation, bedding, hygiene)	1938	1141	732	403	664	292	228	144
Individual lambing pens	930	609	453	155	228	115	48	65
Hygiene (e.g. navel disinfection, tag disinfection…)	1394	828	601	219	497	217	178	102
Labour availability & organisation (e.g. supervision)	1427	843	614	216	506	239	136	131
Artificial feeding management	472	267	205	62	162	58	51	53
Technology e.g. for ewe/lamb identification, lambing observation	316	180	111	69	118	41	29	48
Nutrition/grassland management	1466	892	668	218	493	294	112	87
Other	173	96	88	8	69	41	15	13

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MAIN CHALLENGES AND NEEDS TO REDUCE LAMB MORTALITY (Ewe - lamb)

RESULTS

	TOTAL	Farmers			Technicians			
		TOTAL	MEAT	DAIRY	TOTAL	Adv	Vet	Sci
Litter size	1002	624	419	197	325	170	72	83
Lamb birth weight	1499	904	693	204	517	273	104	140
Lambing difficulties	901	599	381	216	249	106	67	76
Lamb vigour at birth	1884	1098	803	286	654	330	159	165
Mis-mothering (e.g. ewe lamb bond)	987	599	401	196	327	122	84	121
Colostrum issues (e.g. quantity, quality and intake)	2069	1214	896	305	720	356	230	134
Lamb health	1152	612	372	239	453	183	169	101
Ewe/ram genotype	418	226	147	78	151	71	45	35
Internal/external parasite control	533	342	245	97	164	78	51	35
Weak lamb management	851	494	315	177	306	141	74	91
Other	73	52	52	0	17	10	6	1

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Best practices

RESULTS

FERTILITY & PREGNANCY

Good health status of the ewes	41,9%
BCS of the ewes at mating > 2.5	36,1%
Less than 50 ewes per ram	35,8%
Matings during the natural breeding season	34,9%
Well balanced nutrition and good transition management	32,6%
Flushing of ewes with low BCS (< 2.5) for 3 weeks prior to mating and 3 weeks after the rams introduction	28,7%
Weight of the ewe lambs at mating	24,7%
Ram effect	22,4%
Adequate grazing management (rotation, etc.)	19,5%
Body condition score (BCS) of the ram ≥ 3.0	19,0%

MORTALIITY OF LAMBINGS

Quantity of colostrum intake prior to 6h of age	54,41%
Good attendance to observe ewe at lambing and to intervene if needed	39,04%
Post lambing care (e.g. navel disinfection)	36,15%
Hygiene at lambing	28,84%
Lamb vigour at birth	28,46%
Good health status of the ewes	27,71%
Lamb birth weight	27,20%
Good mother-lamb bonding	23,93%
Conception, hygiene and temperature of the shed at lambing	23,43%
Individual pens post lambing	23,17%

Sources of information

RESULTS

	TOTAL	Farmers			Technicians			
		TOTAL	MEAT	DAIRY	TOTAL	Adv	Vet	Sci
Farming press	5038	2967	2354	578	1736	950	360	426
Farming websites	2675	1540	1049	491	988	587	191	210
Scientific articles	3087	927	682	223	1889	639	593	657
Congress/seminars/workshops	3222	1192	830	362	1770	622	571	577
Open days on farm	3170	1947	1485	440	977	537	160	280
Social media (FaceBook, Youtube...)	1446	927	578	340	374	230	81	63
Professional learning	3479	1712	1056	644	1520	756	532	232
Technical advisors/consultants	5100	3428	2295	1123	1372	924	193	255
Veterinarians	5024	3681	2303	1378	1123	637	349	137
Peer to peer (e.g. farmer to farmer)	4183	3101	2156	922	911	508	166	237
Discussion groups	2702	1863	1440	410	720	257	269	194
Technical sales personnel	933	669	413	256	199	81	92	26
Other	260	218	157	61	40	0	40	0

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Main results and conclusions

- The main challenges identified were related to

a) Nutrition management and BCS;

b) Flock health status, and control measures to prevent abortion,

c) Pregnancy diagnosis;

d) Sheep shed condition & advanced preparation for lambing;

e) Colostrum intake and quality, and lamb features (vigour, weight and health at birth).

- However, slight differences were observed between countries, between farmers and technicians, and between meat or dairy sheep farmers, regarding the importance assigned to each issue.
- These results will help SheepNet to propose solutions and to set up the dissemination and communication plan.

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SheepNet
European Knowledge Exchange

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Many Thanks!!

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