Comité international pour le contrôle des performances en élevage
International committee for animal recording
Internationales Komitee für Leistungsprüfungen in der Tierproduction

International beef performance recording Survey

Results for birth period 2000 Country results

May 2004
Compte-rendu Institut de l'Elevage n° 3479

Preface

In 1994 the International Committee for Animal Recording (ICAR) adopted recommendations for beef performance recording. A specialist Beef Performance Working Group was asked to carry out surveys periodically to give an idea of the level of activity and the systems of beef performance recording among the member organisations, and of the degree of acceptance of its recommendations.

The previous surveys was published in 1997, 2000 and 2002 and gave an overview of world-wide beef recording activities. The present survey was designed in 2000 and included an updated questionnaire combining 4 levels of possible answers : the first to specify if beef performance recording existing in a country and to list the types (on farm, performance test…) ; the second to give general figures for each type of control ; the third to give the figure per trait ; and the last to give details per breed.

The questionnaire was an Excel® file send by mail to the national organization or breed societies. One problem was that some of ICAR members wich are dairy organizations didn't forwarded the questionnaire to the national beef organisations. So in several case we choose to send questionnaires directly to the beef breed societies.

Overall, at present, it is clear that the responses to this new questionnaire were rich and the number of answers has increased a lot ! But some part of the world are already "white area" for our knowledge of beef performance recording.

This report is subdivided in two parts :

The first part gives the list of countries and breed societies contacted to complete the questionnaire. A list of country or areas with beef performance recording but with no answer to the questionnaire is therefore made.

The second part give the results of the survey itself. It is divided into six main parts, each one dealing with one of the six different types of beef performance recording schemes approved by ICAR (the appropriate ICAR recommendation is shown in the annex):

- On farm from birth to weaning
- On farm or feed lot from weaning to slaughter
- Performance test station
- Progeny test station
- Abattoir data (Organized progeny test, Commercial data)

The present report has been a joint service of the ICAR Beef Performance Working Group. I take the opportunity and thank all of my colleagues for their valuable help and support. The data collection and evaluation was executed by Laurent Journaux, Thierry Pabiou and Jean Caillette, Institut de l'Élevage, France. For taking over this work I would like to thank Mr. Journaux in particular.

Munich, may 2004
Hans J. Schild
Chairman of the ICAR Beef Performance Working Group

Country who received the questionnaire

Austria	Finland	Norway
Argentina	France	Poland
Australia	Germany	Portugal
Austria	Greece	Reunion Island
Belgium	Hungary	Slovak Republic
Brazil	India	Slovenia
Bulgaria	Italy	South Africa
Canada	Israel	Spain
Chile	Ireland	Switzerland
China	Japan	Sweden
Croatia	Korea	The Netherlands
Cuba	Latvia	Tunisia
Cyprus	Lebanon	Turkey
Czech Republic	Lithuania	UK
Denmark	Luxembourg	Uruguay
Dominican Republic	Mexico	USA
Egypt	New Caledonia	Venezula
Estonia	New Zealand	Zimbabwe

Comments

Number of answer and geographic distribution

We received 30 answers. This answers are detailed in the next part. But we also know that some countries do record beef performances but we don't have any figures.

The list of countries (or breed societies) who have beef performance recording but didn't send us back a completed survey is below :

Argentina
Brazil
Chile
Mexico
Portugal
The Netherlands
Uruguay
Zimbabwe

The lists of countries who received the questionnaire, sent-back an answer (Part A of the Survey) and of countries where we know that beef performance recording exist but didn't answers the survey shows us that we have a good knowledge of beef performance recording in Western and Central Europe and Oceania, only a partial view of Southern Europe, Northern America and Africa activity and no information from East Europe, Central and South America and Asia.

General description of the figures

This first publication of the 2003-2004 ICAR survey give statistic for the countries. The details for breeds will be published at the end of 2004.

The most important form of beef performance recording is on farm performance recording from birth to weaning (29 countries or associations). 26 countries or associations continue performance recording after weaning and specially on beef animals from 1 years old onward American breed societies Autralia and New Zealand associate to the weight some ultrasonic measurements.

The performance test station are only used in west and central Europe (17 countries) and in South Africa. It's use not only for beef breeds but also for dual purpose breeds.

Only 5 countries (Ireland, France, Germany, Slovenia and Australia –research project-) have an organize beef progeny testing for beef qualities on live and in abattoir..

Records in sale are specific to Germany, Austria an Switzeland.

Finally more and more countries have a large development of record of commercial data in abattoir : Germany, Austria, France, USA, Switzerland, Spain and Denmark.

Beef performance recording survey for birth period 2000

Table of contents :

Part A

Details of persons who completed the questionnaire and general information

(p 1 of the original questionnaire)

Person who completed the questionnaire

Reference		Surname	First Name	Function	Adress	Country	Phone / Fax	Mail
AUS	Dr	Graser	Hans	Director	AGBU, University of New England, Armidale NSW 2351	Australia	61 2 6773 3332 61 2 6776 3266	hgraser@pobox.une.edu.au
AUT	Dr	Fuerst-Waltl	Birgit	Univ. Ass.	University of Natural Resources and Applied Life Sciences Vienna, Department of Sustainable Agricultural Systems, Division Livestock Sciences, Gregor-Mendel-Strasse 33, 1180 Vienna	Austria	(43 1) 47654 3273 (43 1) 47654 3254	birgit.fuerst-waltl@boku.ac.at
BEL	Mr Ir	TASIAUX	André	Ingénieur	MRW-DGA, Rue Moulin de Meuse, 4 Bâtiment B (2ème étage), B-5000 BEEZ (Namur)	Belgium	(32) 81 234 886 (32) 81 234 844	a.tasiaux@mrw.wallonie.be
CAN CHL	Mr.	Lowerison	Mark	Breed Improvement Coordinator	2320 41Ave. NE Calgary Alberta T2E6W8	Canada	403-250-9242 403-291-9324	mlowerison@charolais.com
CAN SIM	Mr	McGrath	Sean	Breed Improvement Consultant	5601 - 51st Ave, Vermilion, AB T9X 1V6	Canada	780-853-9673 403-206-7386	smcgrath@telusplanet.net
CAN HEF	Mr.	McGrath	Sean	Breed Improvement Consultant	5601 - 51st Ave, Vermilion, AB, T9X 1V6	Canada	1(780)853-9673 1(403)206-7386	smcgrath@telusplanet.net
CAN LMS	Mr.	McGrath	Sean	Breed Improvement Consultant	5601 - 51st Ave, Vermilion, AB T9X 1V6	Canada	780-853-9673 403-206-7386	smcgrath@telusplanet.net
CHE	Dr.	Berweger Baschnagel	Madeleine	Bereichsleiterin Herdebuch	Laurstrasse 10, 5200 Brugg	Switzerland	41 56 462 54 05 41 56 462 54 06	info@svamh.ch
CZE		Seba	Carel	Director	Prackovice nad Labem 32, PSC 411 33	Ceska Republica	42724007863 42419539041	cshms2@qick.cz
DEN	Dr	Hansen	Hans Christian	National Senior Adviser	Dansk Landbrugsrådgivning, Udkærsvej 15, Skejby, Aarhus N 8200	Denmark	0045-8740 5000 0045-8740 5010	hch@landscentret.dk

Person who completed the questionnaire

Reference		Surname	First Name	Function	Adress	Country	Phone / Fax	Mail
DEU	Dr.	Muegge	Bernhard	Secretary	D-53113 Bonn, Adenauerallee 174	Germany	0049-228-91447-0 0049-228-91447-11	info@bdf-web.de
ESP AVI	Mr.	Villa	Alfonso	Responsable of performance recording	Abarrio, nº 24. 33424. Rondiella. Llanera.	Spain	34-985770201 34-985773311	avilla@viaganadera.com
ESP MRU	Mr.	Jose Manuel	Sanchez	Tecnico Asociacion de Ganaderos de Morucha	c/ Santa Clara nº 20,bajo, 37001-SALAMANCA	Spain	34-923-212607 34-923-211352	morucha@morucha.com
ESP PIR	Mr	Aranguren	Francisco Javier		Paraje el Soto, S/N. 31160 Iza. Navarra	Spain	34 948302021 34 948302113	paranguren@aspina.centroiza.com
ESP RTT	Mr	Pérez García	José Antonio	Secretario Ejecutivo	C/ Murcia Nº 5, 1º - A	España	914682205 914678000	razaretinta@interbook.net
ESP TUD	Rosendo	Sainz	Trueba	Secretario Ejecutivo	C/ Castilla nº 27 1º	España	942313016 942313467	sindo_asaja@jsder.com
EST	Mr	Ilves	Kaivo	Estonian Animal Recording Centre, Director	48A Kreutzwaldi Str., 50094 Tartu	Estonia	3727387700 3727387702	kaivo.ilves@reg.agri.ee
FIN	Mr	Niskanen	Seppo	Breeding Manager	P.O.Box 40 01301 Vantaa	Finland	+358 - 9 - 857 061 +358 - 9 - 857 06 401	seppo.niskanen@faba.fi
FRA	M	Journaux	Laurent	coordonateur bovins viande	Institut de l'Elevage, 149 rue de Bercy, 75595 Paris Cedex 12	France	(33) 1 40 04 52 07 (33) 1 40 04 52 99	laurent.journaux@inst-elevage.asso.fr
GBR	MRS	DAVIS	CAROL	BREEDING SERVICES CO-ORDINATOR	WINTERHILL HOUSE, SNOWDON DRIVE, MILTON KEYNES, MK6 1AU	United Kindom	01908 844196 01908 8442361	carol_davis@mlc.org.uk
HUN	Dr	Balika	Sandor	Executive Director	H-1134 Budapest, LORORTAR u 16	Hungary	(36-1) 412-5098 (36-1) 412-5099	Limousin@mailbox.hu
IRL	Mr	Donnelan	Pat	Genetic evaluation unit	ICBF, Shinagh HSE, Bandon, Co, Cork	Ireland	00-353-23-20214 00-353-23-20229	pdonellan@icbf.com
ITA	Dr	Fioretti	Mauro	Functionnaire	Via Nomentana 134, 00162 Roma	Italy	0039 06 85451307 0039 06 85451322	fioretti.m@aia.it
NOR	Ms	Ausland	Cecilie		P.O.Box 396 Okern, N-0513 Oslo	Norway	(+) 47 22 09 23 00 (+) 47 22 22 00 16	cecilie.ausland@fagkjott.no

Person who completed the questionnaire

Reference		Surname	First Name	Function	Adress	Country	Phone / Fax	Mail
NZL	Mr	Priest	Russel	MWI Beff genetics coordonator	BOX 503, Feilding	New Zealand	64 6 323 4484 64 6 323 3878	russel.priest@mwi.co.nz
SVK	Mr.	RYBA	Stefan	Head of Cattle Department	Starohajska 2/9, 852 27 Bratislava	Slovak Republic	00421 2 623 19 911 00421 2 623 19 782	stefanryba@spusr.sk
SVN	M.Sc.	Čepon	Marko	lecturer	Biotechnical Faculty, Zootechnical Dept., Groblje 3, 1230 Domžale	Slovenia	386 1 7217 800 386 1 7241 005	marko.cepon@bfro.uni-lj.si
TUN	Dr	Guellouz	Mustapha	Directeur Général Président du Conseil de l'Entreprise	30 Rue Alain Savary, TUNIS	Tunisie	216 71 787 813 216 71 793 603	dg.oep@email.ati.tn
USA	Dr.	Bullock	Darrh	Beef Improvement Federation Representative	804 WP Garrigus Bldg., Lexington, Kentucky	USA	(859) 257-7514 (859) 257-3412	dbullock@uky.edu
ZAF	Mr	Bergh	Leslie	Head: National Beef Cattle Improvement Scheme	ARC-Animal Improvement Insitute, Private Bag X2, Irene, 0062	South Africa	#27-12-672-9145 #27-12-665-1563	Leslie@irene.agric.za

Organization in charge of performance recording

Reference	Existing Beef performance recording	time period "2000"	Adress	Web site
AUS	yes	1.Jan to 31.Dec	Agricultural Business Research Institute	abri.une.edu.au/
AUT	yes	1.1.-31.12.	ZAR, Universumstr. 33/8, 1200 Vienna, Austria	www.zar.at
BEL	yes	civil year	A.W.E. a.s.b.l., Rue des Champs-Elysées 4, B-5590 CINEY (BELGIUM)	www.linalux.be
CAN CHL	yes	1st August 1999 to 31st July 2000	Canadian Charolais Association	www.charolais.com
CAN SIM	yes	january 1st, 2000 to december 31st, 2000	Canadian Simmental Association, #13, 4101 - 19St NE, Calgary AB, T2E 7C4	www.simmental.com
CAN HEF	Yes	January 1, 2000 to December 31, 2000	Canadian Hereford Association	www.hereford.ca
CAN LMS	yes	January 1st, 2000 to December 31st, 2000	Canadian Limousin Association, #13, 4101 - 19 St NE, Calgary, AB, T2E 7C4	www.limousin.com
CHE	yes	1.1.2000 - 31.12.2000	Schweizerische Vereinigung der Ammen- und Mutterkuhhalter	www.svamh.ch
CZE	yes	1/10/2000 to 30/9/2001	CSCHMS Tesnov 17, 117 05 Praha 1	wwww.cschms.cz
DEN	yes	1 st of October 1999 to the 30 th of September 2000	National Institute of Cattle, Department of Breeding Systems	www.lr.dk
DEU	yes	01.01.-31.12.2001	13 herdbook associations/1 animal recording association	www.bdf-web.de
ESP AVI	yes	1st of january 2000 to 31st of december 2000	ASEAVA	www.viaganadera.com
ESP MRU	yes	01-07-2000 to 30-06-2001	Asociacion Nacional de Criadores de Morucha	
ESP PIR	yes	Only Pirenaica Breed. Civil year.	CONASPI	
ESP RTT	yes	1 JULIO - 30 JUNIO	ASOCIACION NACIONAL RAZA RETINTA	
ESP TUD	Yes	The civil year	Asociacion Criadores Raza Tudanca C/ Castilla, 27 Santander	
EST	yes	1st of January to the 31st of December	Estonian Animal Recording Centre	www.reg.agri.ee

Organization in charge of performance recording

Reference	Existing Beef performance recording	time period "2000"	Adress	Web site
FIN	yes	the civil year, 1st of January to the 31st of December	Finnish Animal Breeding Association	www.faba.fi
FRA	yes	01/08/1999 to 31/07/2000	Institut de l'Elevage, 149 rue de Bercy, 75595 Paris Cedex 12	www.inst-elevage.asso.fr
GBR	yes	1 January to 31 December 2000	MLC's SIGNET BREEDING SERVICES	www.signetfbc.co.uk
HUN	yes	2000	Limousin breeder association	www.limousin.hu
IRL	yes	civil year	ICBF, Shinagh HSE, Bandon, Co, Cork	www.icbf.com
ITA	yes	civil year	Associazione Italiana Allevatori	www.aia.it
NOR	Yes	1st of January to the 31st of December 2000	Norwegian Beefbreeders Association	www.fagkjott.no
NZL	yes	1/01/2000 to 31/12/2000	Performances beef breeders	www;Beefbreeders.co.nz
SVK	yes	15 st September 1999 to the 14 st October 2000	The State Breeding Institute of The Slovak Republic, Starohajska 29, 852 Bratislava	www.spuza.sk
SVN	yes	civil year	Cattle breeding service	www.bfro.uni-lj.si/zoo/org/centre/angl/index.htm
TUN	no		OFFICE DE L'ELEVAGE ET DES PATURAGES	
USA	Yes		Multiple - Each Breed Records	
ZAF	Yes	1 January to 31 December 2002	ARC-Animal Improvement Insitute, Private Bag X2, Irene, 0062	www.arc-aii.agric.za

Organization in charge of genetics evaluations

Reference	**Adress**	**Web site**
AUS	Animal Genetics and Breeding Unit (development)	ABRI (delivery)
AUT	ZAR, Universumstr. 33/8, 1200 Vienna, Austria	www.zar.at
BEL	Herd-Book Blanc-Bleu Belge a.s.b.l., Rue des Champs-Elysées 4, B-5590 CINEY (BELGIUM)	www.hbbbb.be
CAN CHL	Canadian Charolais Association	www.charolais.com
CAN SIM	Cornell University	www.ansci.cornell.edu/abc.html
CAN HEF	Agricultural Business Research Institute	http://www.abri.une.edu
CAN LMS	University of Georgia, Colorado State University	
CHE	Schweizerische Vereinigung der Ammen- und Mutterkuhhalter	www.svamh.ch
CZE	CSCHMS Tesnov 17, 117 05 Praha 1	wwww.cschms.cz
DEN	National Institute of Cattle, Department of Breeding Systems	www.lr.dk
DEU	VIT Verden; Inst. for Animal Breeding Grub	www.vit.de
ESP AVI	Dept. CC. Agroforestales, ETSIIAA Palencia, Universidad de Valladolid	
ESP MRU	Department of Animal Production, Univerity of Leon	
ESP PIR	Facultad de Veterinaria. Zaragoza. Spain	
ESP RTT	FACULTAD VETERINARIA CORDOBA DEPARTAMENTO DE GENETICA	
ESP TUD	Asociacion Criadores Raza Tudanca	
EST	Estonian Animal Recording Centre	www.reg.agri.ee
FIN	Finnish Animal Breeding Association	www.faba.fi
FRA	INRA (institut national de la recherche agronomique)	www-sgqa.jouy.inra.fr/
GBR	MEAT AND LIVESTOCK COMMISSION	www.mlc.org.uk
HUN	Limousin breeder association	www.limousin.hu
IRL	ICBF, Shinagh HSE, Bandon, Co, Cork	www.icbf.com
ITA	1) ANABIC S. Martino In Colle - 06070 Perugia Italy (for Chianina, Marchigiana, Romagnola, Maremmana, Podolica); 2) ANABORAPI Strada provinciale per Trinità 32/A - 12061 Carrù (CN) (for Piedmontese) 3) ANACLI Via C. Colombo 35 - 29100 Piacenza (for Limousine and Charolaise) 4) ANAPRI via Ippolito Nievo, 19 - 33100 Udine (UD) (for Pezzata Rossa Italiana)	www.anabic.it; www.anaborapi.it; www.anapri.it
NOR	Norwegian Beefbreeders Association	www.kjottfe.no
NZL	ABR, UNE, Armidale, NSW 2351, Australia	www.abr.une.edu.au
SVK		
SVN	Cattle Breeding Service	www.bfro.uni-lj.si/zoo/org/centre/angl/index.htm
TUN	OFFICE DE L'ELEVAGE ET DES PATURAGES	

Organization in charge of genetics evaluations

Reference	Adress	Web site
USA	Multiple - Each Breed Contracts	
ZAF	ARC-Animal Improvement Insitute, Private Bag X2, Irene, 0062	www.arc-agric.za

Part B

General description of beef performance recording in the different countries

(p 2 of the original questionnaire)

Performances recorded on live animals from birth to weaning

Reference	On farm	Other situation	
AUS	**yes**	**yes**	
AUT	**yes**		
BEL	**yes**		
CAN CHL	**yes**		
CAN SIM	**yes**		
CAN HEF	**yes**		
CAN LMS	**yes**		
CHE	**yes**		
CZE	**yes**		
DEN	**yes**		
DEU	**yes**		
ESP AVI	**yes**		
ESP MRU	**yes**		
ESP PIR	**yes**		
ESP RTT	**Yes**		
ESP TUD	**yes**		
EST	**yes**		
FIN	**yes**		
FRA	**yes**	**yes**	Progeny test station for maternal qualities
GBR	**yes**		
HUN	**yes**		
IRL	**yes**	**yes**	
ITA	**yes**	**yes**	Other situation: it is refert to performance test station where some male calves enter at 1 month in age and are weighted monthly, before starting the real period of performance test.
NOR	**yes**		
NZL	**yes**		
SVK	**yes**		
SVN	**yes**		
USA	**yes**		
ZAF	**yes**		

Performances recorded on live animals after weaning

Reference	On farm or feed lot	Station for performance test	Station for progeny test	Point of sale	Other situations	
AUS	**yes**	**yes**	**yes**		**yes**	Many Research projects are designed to allow breed societies to capitalise on some of the data this includes feed intake and carcass data. However data from 2000 born calves have not yet been received from those experiments.
AUT	**yes**	**yes**		**yes**		
BEL	**yes**	**yes**				
CAN CHL	**yes**					
CAN SIM	**yes**	**yes**				primarily all data is collected on farm by the producer. A few animals are tested at central testing facilities post weaning.
CAN HEF	**yes**	**yes**				
CAN LMS	**yes**	**yes**				most data is collected on farm, with very little or no slaughter data collected
CHE	**yes**			**yes**		
CZE	**yes**	**yes**				
DEN	**yes**			**yes**		
DEU	**yes**	**yes**	**yes**	**yes**		
ESP AVI		**yes**				
ESP MRU		**yes**				
ESP PIR						
ESP RTT	**yes**	**yes**				
ESP TUD						
EST						
FIN						
FRA	**yes**	**yes**	**yes**			
GBR	**yes**					
HUN	**yes**					
IRL	**yes**	**yes**	**yes**			
ITA	**yes**	**yes**				
NOR	**yes**	**yes**				
NZL	**yes**					
SVK	**yes**					
SVN	**yes**	**yes**	**yes**			
USA	**yes**					
ZAF	**yes**	**yes**				

Performances recorded on abattoir

Reference	Carcass results in Progeny test	Commercial data	Other situations
AUS	**yes**		
AUT		**yes**	
BEL			Possibility to include carcass traits (weight and EUROPA grade) in progeny test is under study
CAN CHL	**yes**	**yes**	
CAN SIM			
CAN HEF			
CAN LMS			
CHE		**yes**	
CZE			
DEN		**yes**	
DEU	**yes**	**yes**	
ESP AVI		**yes**	
ESP MRU			
ESP PIR			
ESP RTT		**yes**	
ESP TUD			
EST			
FIN			
FRA	**yes**	**yes**	
GBR			
HUN		**yes**	
IRL	**yes**		
ITA			
NOR		**yes**	
NZL			
SVK			
SVN	**yes**	**yes**	**yes**
USA		**Yes**	
ZAF			

Complementary remarks

Reference	*Remarks*
BEL	Ce n'est pas facile de traduire la situation des systèmes de performance en races à viande existant dans notre pays vers le questionnaire proposé. En effet, pour une même situation (ex: from weaning to slaughter on farm or feed-lot), il peut exister 2 systèmes différents qui concernent majoritairement des animaux différents, mais qui peuvent aussi concerner pour partie les mêmes individus (ex: les animaux dont les performances sont recueillies dans le cadre du progeny-test de leur père peuvent aussi être pointés dans un programme de cotation linéaire en tant qu'individu). D'autre part, les statistiques d'activités disponibles sont présentées selon l'année civile où l'activité a été réalisée (ex: nombre de cotations linéaires réalisées en 2001 ou 2002) et pas selon l'année de naissance de l'individu concerné (ex: les individus nés en 2000 peuvent avoir été classifiés en 2001 et/ou 2002 pour la première fois, selon l'âge qu'ils avaient au moment du passage du classificateur dans la ferme).
CAN CHL	I had some trouble with the fields which require an answer other than numerical value. Not on all sheets but some. They would not let me enter a yes or no in some instances. I tried many things to get it to allow me to however it would not. Some data points although indicated that we collect them I was unable to track down how much of this data we obtained. Therefor those fields were left blank. Thank you for allowing the Canadian Charolais Assocition to participate in this survey. On an additional note all figures outlined in this book are those that had at least one comparable contemporary and therefor have been included in our EPD analysis.
CAN SIM	In the Canadian system there is no central authority. Each breed association collects and uses records on their own population. In the last year there have been dramatic changes to the data collection system employed by Simmental that do not apply to 2000 born calves. this includes collection of several additional traits including: breeding data, frame size (hip height), ultrasound data, docilty/temperament scoring, udder scores, body condition scores, cow weight and calf vigour scores.
CAN HEF	The Canadian Hereford Association collects very little data on animals other than purebred Herefords. Some additional information is collected through test stations, although it is very minimal. As well, they actively collect ultrasound information however this is only a few hundred records per year.
CAN LMS	The Canadian Limousin Association is currently collecting records on Limousin animals, however they have recently added several new features to their data collection, including a total herd reporting system (cow based reporting), complete breeding data collection, collection of hip height, cow temperament at calving, udder scoring, mature weight, ultrasound data, temperament of the calf at weaning and yearling. As well, they have sourced some research data for use in genetic evaluation of carcass merit.
GBR	weights taken every 100 days on farm by breeder. Official technician (method A) measures all linear scores and backfat and muscle depth scanning. Many 2000-born animals were not scanned in 2001 when eligible due to Foot and Mouth Disease and inability t

Part C

On live, from birth to weaning, on farm

(p 3 of the original questionnaire)

From birth to weaning on farm, figures and weights

	Number of		ICAR methods			Birht weight			Calving score			Weaning weight		
Reference	Cows	*Breeds*	A	B	C		Number	Description		Number	Description		Number	Description
AUS	196 561	*19*		yes		yes	61 737	kg	yes		5 classes	yes	105 000	kg, adjusted to 200 days
AUT	2 926	*29*	yes	yes	yes	yes	1 758	kg	yes			yes	1 959	kg
BEL	55 000	*2*	yes			yes	30 000	kg	yes	30 000	césarienne traction position numéro de vêlage	yes	300	
CAN CHL	41 535	*1*	yes	yes	yes	yes	60 537	lbs	yes		scale 0-5	yes	60 537	205d adjusted age of dam
CAN SIM	33 292	*1*				yes	32 278	pounds	yes	33 292	u - unassisted e - easy h - hard s - surgery m - malpresentation	yes	26 154	pounds, 205 day adjusted
CAN HEF	38 331	*1*		yes		yes	24 836	pounds	yes	36 914	u - unassisted e - easy h - hard s - surgery m - malpresentation	yes	18 332	pounds at 205 days
CAN LMS	17 768	*1*		yes		yes	12 778	pounds	yes	11 517	u - unassisted e - easy h - hard s - surgery m - malpresentation	yes	7 352	adjusted to 205 days
CHE	5 280	*14*			yes	yes	5 629	kg	yes	5 629	scale from 1 to 4	yes	3 550	kg
CZE	20 183	*12*	yes			yes	19 271	kg	yes	19 271	scoring 1-4	yes	14 501	210 days weight
DEN	23 700			yes		yes	16 900		yes	18 600				
DEU	48 491	*8*	yes	yes	yes	yes	14 595	kg				yes	13 993	kg, 200 days
ESP AVI	14 068	*1*	yes			yes	8 972	kg	yes	12 852	scale from 1 to 5	yes	5 088	kg
ESP MRU	2 076				yes	yes	1 682	kg	yes	1 682	1-2-3-4-5	yes	1 816	kg
ESP PIR	8 024	*1*	yes	yes		yes	2 721	kg	yes	2 721	categorical scale	yes	1 832	kg
ESP RTT	3 107	*1*	YES						YES	4 384		YES	2 090	KG
ESP TUD	666	*666*			yes	yes	666		yes	666		yes	666	

From birth to weaning on farm, figures and weights

	Number of		ICAR methods			Birht weight			Calving score			Weaning weight		
Reference	Cows	*Breeds*	A	B	C		Number	Description		Number	Description		Number	Description
EST				yes		yes		kg	yes		score 1 to 6	yes		kg, adjusted 200 days weight
FIN	2 943	*8*			yes	yes	2 505	kg in birth day	yes	2 505		yes	1 917	kg, 150 - 250 days of age
FRA	564 322	*18*	yes	yes		yes	458 853	kg, B method	yes	458 853	1 : without help 2 : help 3 : hard help 4 ceasrien 5 embryotomy	yes	308 970	210 days weight, kg
GBR	58 700	*20*		yes		yes	36 000	kg	yes	35 000	scale 1 to 5, live or dead, elective ceasarian.	yes	19 700	kgs, 200 days
HUN	5 153			yes		yes	5 153		yes	5 153		yes	2 620	
IRL	30 545	*8*			yes				yes	18 183	scale 1-5 : 1=easy calving 5=vet assisted	yes	7 673	kg
ITA	100 289	*8*	yes			yes	90 366	kg	yes	92 569	scale from 1 to 5	yes	18 287	kg
NOR	7 268	*10*		yes		yes	5 966	kg	yes	6 935	Code 1= No calving difficulties code 2= some c.d. code 3= severe c.d. code 4= don't know	yes	2 476	kg
NZL	38 447	*9*		yes		yes	27 046	kg	yes		% of calving difficulties	yes	32 850	200 days weight (kg)
SVK	32 304	*1510*			yes	yes	14 690		yes	14 543		yes	8 340	
SVN	300	*2*	yes	yes	yes	yes	270	kg	yes	270	score: 1-5	yes	240	210 days weihgt
USA	714 372	*7*		Yes		Yes	588 884	Pounds	Yes	561 363	Score (1-5)	Yes	536 782	Pounds
ZAF	123 072	*30*		yes		yes	41 226	kg	yes	41 226	Score 1 to 5	yes	47 652	kg

From birth to weaning on farm, linear scoring

Reference	Muscular development			Skelatal developement			Functional abilities		
		Number	Description		Number	Description		Number	Description
BEL	yes	30 000	1 à 10				yes	30 000	see other traits
CAN CHL				yes		highfield frame score			
CHE	yes	3 247	scale from 1 to 9 (2, 5 or 8)	yes	3 247	scale from 1 to 9 (2, 5 or 8)	yes	3 247	scale from 1 to 9 (2, 5 or 8)
CZE	yes	1 990	scoring 1-10	yes	1 990	scoring 1-10	yes	1 990	scoring 1-10
DEU	yes	10 663	1 (poor) - 9 (very good)	yes	10 663	1 (poor) - 9 (very good)			
ESP AVI	yes	2 852	scale from 1 to 20						
ESP MRU	yes	1 816	1-2-3-4-5-6-7-8-9	yes	1 846	1-2-3-4-5-6-7-8-9	yes	1 816	1-2-3-4-5-6-7-8-9
FRA	yes	305 931	Score per location from 1 to 10 total from 10 to 100	yes	305 931	Score per location from 1 to 10 total from 10 to 100	yes	305 931	Score per location from 1 to 10 total from 10 to 100
HUN	yes	296		yes	296		yes	296	
IRL	yes	10 729		yes	10 729		yes	10 729	
ITA	yes	48 848	linear scores with scale from 1 to 9						
SVN	yes	240	scores: 1-9	yes	240	scores: 1-9	yes	240	scores: 1-9

From birth to weaning on farm, other traits

Reference	Trait 1			Trait 2			Trait 3		
	Name	Number	Description	Name	Number	Description	Name	Number	Description
AUS	*Gestation length*	12 624	days from AI	*Dac to calving*		days from bull in day to calving date			
BEL	*vitality*	30 000	1 à 3	*ability to drink*	30 000	1 à 3	*death rate*	30 000	Reason recorded
CAN CHL	*horn status*	60 537	horned polled scurred dehorned	*color*	60 537	white through cream or darker	*scrotal circumference*	5 500	cm
CAN LMS	*docility*	1 915	1 - docile to 6 - wild/attack behaviour						
CZE	*error of exterior*	1 990	kg	*weight 120 days*	14 322				
DEN	*200 days weight*	4 600		*365 days weight*	2 800				
ESP AVI	*tongue*	7 673	“N” for normal, “S” for abnormal	*no. of calves born*	435	calves	*handling*		
ESP RTT	*N° of calve born*	15	Calves	*Hnadling*					
FRA	*120 days weight*	332 335	kg						
ITA	*Non linear scoring*	3 455	scores from 1 to 9	*calf length*	40 769	scores from 1 to 9	*calf vitality*	40 797	scores from 1 to 9
SVN	*90 days weight*	250	kg						
USA	*Docility*	10 282	Score						
ZAF	*Pre-wean weight*	6 174	kg	*Cow weight at calving*	14 761	kg	*Cow weight at weaning*	24 280	kg

Part D

On live, after weaning on farm or feedlot

(p 5 of the original questionnaire)

From weaning to slaughter on farm or feed lot

	Number of animals				Number of breeds				ICAR methods		
Reference	Total	males	femelles	steers	Total	males	femelles	steers	A	B	C
AUS	64 431								yes	yes	
AUT	1 445	591	854		24	24	24		yes		yes
BEL	35 000	6 500	28 500		1	1	1		yes		
CAN CHL	296		150	146	1	12					yes
CAN SIM	13 897	6 996	6 848	53							
CAN HEF	38 331	3 460	4 448	2						yes	
CAN LMS	3 148	1 359	1 700	89						yes	
CHE	1 359	345	1 014		13	13	13		yes		
CZE	9 558								yes		
DEN	18 200									yes	
ESP RTT	620	620							yes		
FRA	77 000	34 000	43 000		9	9	9		yes		
GBR	60 000				20					yes	yes
HUN	943	246								yes	
IRL	261			261							
ITA	45 758	17 538	28 220		8	8	8		yes		
NOR	1 670	683	987		8	8	7			yes	
NZL	32 850	16 856	15 131	251	9	9	9	9		yes	
SVK	3 701	1 362	2 339								yes
SVN	65				2				yes		
USA	246 443	120 326	121 321	4 796	7	7	7	7		yes	
ZAF	23 492				30	30	30			yes	yes

From weaning to slaughter on farm or feed lot, weights

	Weight trait 1						Weight trait 2					
Reference	**Name**	**Total**	**males**	**females**	**steers**	**Description**	**Name**	**Total**	**males**	**females**	**steers**	**Description**
AUS	400-days	64 431				kg	600-days	45 908				kg
AUT	365-day-weight	1 445	591	854								
BEL	périmètre thoracique longueur corporelle	18 000	5 000	13 000		weight calculated in kg from both measures						
CAN CHL	on test weight	296		150	146	lbs	off test wt	285		145	142	lbs
CAN SIM	yearling wt	13 897	6 996	6 848	53	pounds						
CAN HEF	yearling wt	7 910	3 460	4 448	2	pounds at 365 days						
CAN LMS	yearling wt	3 148	1 359	1 700	89	pounds						
CHE	at linear scoring	1 468	345	1 014		kg						
CZE	365 days	9 558				kg						
DEN	200 days weight	4 600					365 days	2 800				
FRA	12 months	77 000	34 000	43 000		kg	18 months	20 000	6 000	14 000		kg
GBR	400 day	12 000				kg						
HUN		236	116	120								
IRL	End	261			261							
ITA	weight	37 959	16 754	21 205		kg						
NOR	adjusted 365-days	1 274	631	643		kg	adjusted 550-days	396	52	344		kg
NZL	400 days	23 545	12 413	10 511	621	kg	600 days	16 329	8 347	7 959	23	kg
USA	yearling	246 443	120 326	121 321	4 796		Scan	2 931	2 023	905	3	
ZAF	12 months	14 572				kg	18 months	12 566				kg

From weaning to slaughter on farm or feed lot, linear scoring

	Muscular developement					Skeletal developement					Functional abilities				
Reference	**Total**	**males**	**females**	**steers**	**Description**	**Total**	**males**	**females**	**steers**	**Description**	**Total**	**males**	**females**	**steers**	**Description**
AUS															record not yet in system
BEL	10 000	1 500	8 500		1 à 50	10 000	1 500	8 500		1à 50	10 000	1 500	8 500		1 à 50
CHE	1 468	345	1 014		scale from 1 to 9	1 468	345	1 014		scale from 1 to 9	1 468	345	1 014		scale from 1 to 9
FRA	60 000	4 500	55 500		Score per location from 1 to 10 total from 10 to 100	60 000	4 500	55 500		Score per location from 1 to 10 total from 10 to 100	60 000	4 500	55 500		Score per location from 1 to 10 total from 10 to 100
GBR	2 500				scale 1 to 15 except BBL scale 1 to 17										
HUN	236	116	120			236	116	120			236	116	120		
ITA	7 799	784	7 015		scale from 1 to 9	7 799	784	7 015			7 799	784	7 015		
SVN			65		scores: 1-9			65		scores: 1-9			65		scores: 1-9
USA						49 040	26 459	22 019	562						
ZAF	1 290				Score 1 to 5	1 290				Score 1 to 5	1 290				Score 1 to 5

From weaning to slaughter on farm or feed lot, other traits

	Trait 1					Trait 2						Trait 3					
Reference	**Name**	**Total**	**males**	**fem.**	**Descr.**	**Name**	**Total**	**males**	**fem.**	**steers**	**Descr.**	**Name**	**Total**	**males**	**fem.**	**steers**	**Descr.**
AUS	*Scan EMA*	35 640			cm²	*Scan Fat*	35 868				mm	*Scan IMF*	32 120				%
BEL	*height*	35 000	6 500	28 500	cm												
CAN SIM	*scrotal*	176	176		cm												
CAN HEF	*scrotal*	439	439		cm												
CAN LMS	*scrotal*	817	817		cm												
CHE	*breed characteristic*	216	78	138	5 grad.												
FRA	*24 months*	8 500	500	8 000	kg												
GBR	*backfat scan average of 8 meas.*	2 500			mm	*muscle depth scan at 3rd lum.*	2 500				mm						
NZL	*scrotal size*				cm	*Rib fat (utrasonic meas.)*					mm	*Rump fat (utrasonic meas.)*					mm
USA	*Scrotal Circum.*	6 412	6 412			*Ultrasound Ribeye Area*	108 602	68 059	40 034	509		*Ultrasound Intra-musc. Fat*	105 481	67 484	37 502	495	
ZAF	*Start test weight*	10 213	10 213		kg	*End test weight*	10 213	10 213			kg	*Intermediate test weight*	10 213	10 213			kg

Part E

On live, after weaning on performance test station

(p 6 of the original questionnaire)

From weaning to slaughter or sale at performance test station

	Number of animals				Number of breeds				ICAR methods		
Reference	Total	males	femelles	steers	Total	males	femelles	steers	A	B	C
AUT	195	195			5	5			yes		
BEL	400	400			1				yes		
CAN LMS										yes	
CZE	676	676			10	10			yes		
DEU	1 456	1 456			15	15			yes		
ESP AVI	89	89			1	1			yes		
ESP MRU	14	14			1				yes		
ESP RTT	83	83			1				yes		
FRA	2 802	2 802			10	10			yes		
IRL	219	219			7				yes		
ITA	3 895	3 895			8				yes		
NOR	59	59			4	4			yes		
SVN	230	230			5	5			yes		
ZAF	1 290	1 260	30		22	22	1		yes		

From weaning to slaughter or sale at performance test station, weights

	Weight trait 1					Weight trait 2				
Reference	**Name**	**Total**	**males**	**females**	**Description**	**Name**	**Total**	**males**	**females**	**Description**
AUT	420-day-weight	174	174							
BEL	7 months	400	400		kg	13 months	400	400		kg
CZE	365 days	676	676		kg adjusted	end of test	676	676		kg (in testing 120 days)
DEU	Live weight	1 456	1 456		kg, begin of test	Live weight	1 456	1 456		kg, end of test
ESP AVI	initial weight	89	89		kg	final weight	86	86		kg
ESP MRU	365 days	14	14		kg	ADG	14	14		g/day
ESP RTT	initial weight	83	83		KG	final weight				KG
FRA	end of test	2 802	2 802		kg					
IRL	Growth	219	219							
ITA	weight	3 895	3 895		kg					
NOR	adjusted 365-days	50	50							
SVN	begin of test	232	232		165-day for dual purose breeds, 240-day for beef breeds	end of test	230	230		365-day weihgt for all breeds
ZAF	Start test	1 290	1 260	30	kg	End test	1 290	1 260	30	kg

From weaning to slaughter or sale at performance test station, linear scoring

	Muscular developement				Skeletal developement				Functional abilities			
Reference	Total	males	females	Description	Total	males	females	Description	Total	males	females	Description
AUT	195	195										
BEL	400	400		1 à 50	400	400		1 à 50	400	400		1 à 50
CZE	676	676		scale 1-10	676	676		scale 1-10	676	676		scale 1-10
DEU	1 241	1 241		1 (poor) - 9 (very good)	1 241	1 241		1 (poor) - 9 (very good)	1 241	1 241		1 (poor) - 9 (very good)
ESP AVI	86	86		scale from 1 to 100	86	86		scale from 1 to 100	86	86		scale from 1 to 100
FRA	1 944	1 944		Score per location from 1 to 10 total from 10 to 100	1 944	1 944		Score per location from 1 to 10 total from 10 to 100	1 944	1 944		Score per location from 1 to 10 total from 10 to 100
ITA	1 523	1 523			551	551			551	551		
SVN	230	230		1-9, score	230	230		1-9, score	230	230		1-9, score
ZAF	1 290	1 260	30	Score 1 to 5	1 290	1 260	30	Score 1 to 5	1 290	1 260	30	Score 1 to 5

From weaning to slaughter or sale at performance test station, other traits

	Trait 1					Trait 2					Trait 3				
Reference	**Name**	**Total**	**males**	**fem.**	**Description**	**Name**	**Total**	**males**	**fem.**	**Description**	**Name**	**Total**	**males**	**fem.**	**Description**
AUT	*120day-performance-test-gain*	21	21												
BEL	*weight at birth*	320	320		kg	*height at 7 m and 13 m*	400	400		cm	*feed efficiency*	400	400		kg/kg
CZE	*height 12 months*	676	676		cm	*finishing height*	676	676		cm					
DEU	*Feed consumption*	423	423												
ESP AVI	*Zoometry*	86	86		cm										
ESP MRU	*Type*	14	14		0-100 pt										
ESP PIR															
ESP RTT	*Zoometry*	83	83		cm										
FRA	*ultrasound measurement*	1 200	1 200		VOS system (velocity of sound)	*feed efficiency*	282	282		opposite of residual feed intake					
IRL	*fce*	219	219			*Carcass merit*	219	219							
ITA	*size*	204	204			*feet&legs*	204	204		scale from 1 to 9	*Testicles*	1 098	1 098		
SVN	*body measures*	230	230		measures in cm at the end of test										
ZAF	*Feed intake*	1 290	1 260	30	kg	*Intermediate weights*	1 290	1 260	30	kg	*Body measurements*	1 290	1 260	30	mm

Part F

On live, after weaning on progeny test

(p 7 of the original questionnaire)

Performances recorded from weaning to slaughter or sale, at progeny test station, after weaning

Reference	Number of animals				Number of breeds				ICAR methods		
	Total	males	femelles	steers	Total	males	femelles	steers	A	B	C
CAN LMS										yes	
DEU	728	728			8	8			yes		
FRA	2 960	2 100	860		4	4	3		yes		
IRL	261			261					yes		
SVN	374	374			2	2			yes		

Performances recorded from weaning to slaughter or sale, at progeny test station, after weaning

Weights

	Weight trait 1						Weight trait 2					
Reference	**Name**	**Total**	**males**	**females**	**steers**	**Description**	**Name**	**Total**	**males**	**females**	**steers**	**Description**
DEU	*Weight*	728	728			kg, begin of test	*Weight*	728	728			kg, end of test
FRA	*18 months*	860		860		kg	*End of fatening*	2 100	2 100			kg
IRL		261			261							
SVN	*starting weight*	374	374			150 kg of live weight	*finishing weight*	374	374			kg

Performances recorded from weaning to slaughter or sale, at progeny test station, after weaning scoring

	Muscular developement					Skeletal development					Functional abilities				
Reference	Total	males	females	steers	Description	Total	males	females	steers	Description	Total	males	females	steers	Description
DEU	507	507			1 (poor) - 9 (very good)	507	507								
FRA	2 960	2 100	860		Score per location from 1 to 10 total from 10 to 100	2 960	2 100	860		Score per location from 1 to 10 total from 10 to 100	860		860		Score per location from 1 to 10 total from 10 to 100

Performances recorded from weaning to slaughter or sale, at progeny test station, after weaning

Other traits

	Trait 1					Trait 2				Trait 3			
Reference	Name	Total	males	females	Description	Name	Total	females	Description	Name	Total	males	Description
DEU	Meat %	728	728										
FRA	fertility	860		860	rate of pregnancy on AI at 15 months	calving	550	550	1 : without help, 2 : help; 3 : hard help; 4 ceasarien ; 5 embryotomy	ultrasonic measurement	900	900	VOS system (velocity of sound)

Part G

On live, after weaning at sale

(p 8 of the original questionnaire)

Performances recorded from weaning to slaughter at point of sale

Reference	Number of animals				Number of breeds				ICAR methods		
	Total	males	femelles	steers	Total	males	femelles	steers	A	B	C
AUT	876	876			4	4			yes		
CHE	109	109			3	3			yes		
DEU	5 288	5 288			22	22			yes		

Performances recorded from weaning to slaughter at point of sale, weights

Reference	Weight trait 1 Name	Total	males	females	steers	Description
AUT	weight at auction	876	876			
CHE	weight at auction	109	109			kg
DEU	weight at auction	5 288	5 288			

Performances recorded from weaning to slaughter at point of sale, scoring

	Muscular developement					Skeletal development					Functional abilities				
Reference	Total	males	females	steers	Description	Total	males	females	steers	Description	Total	males	females	steers	Description
AUT	876	876													
CHE	109	109			scale from 1 to 9	109	109			scale from 1 to 9	109	109			scale from 1 to 9
DEU	5 288	5 288				5 288	5 288				5 288	5 288			

Performances recorded from weaning to slaughter at point of sale, other traits

Reference	Name	Trait 1 Total	Trait 1 males	Trait 1 females	Description
AUT	daily gain	876	876		

Part H

At abattoir organized progeny test

(p 10 of the original questionnaire)

Performances from organized progeny test recorded on abattoir

	Number of animals				Number of breeds				ICAR methods		
Reference	Total	males	femelles	steers	Total	males	femelles	steers	A	B	C
AUS	300										
CAN CHL	287		145	142	1						
DEU	2 941	2 941			2	2			yes		
FRA	2 100	2 100							yes		
IRL	261			261							
SVN	374	374			2	2					

Performances from organized progeny test recorded on abattoir, weights

	Carcass weight					Other weight					
Reference	**Total**	**males**	**females**	**steers**	**Description**	**Name**	**Total**	**males**	**females**	**steers**	**Description**
AUS	300										
CAN CHL	285		145	142	lbs						
DEU	2 941	2 941			kg	Live weight	627	627			kg
FRA	2 100				kg						
IRL	261			261							
SVN	374	374			kg						

Performances from organized progeny test recorded on abattoir, scoring

	Carcass conformation					Carcass fat grade				
Reference	Total	males	females	steers	Description	Total	males	females	steers	Description
FRA	2100				EUROPA scale	2100				EUROPE scale
IRL	261			261						
CAN CHL	285		145	142	lean yield percentage	285		145	142	Canadian Beef Grading Stds.
DEU	2360	2360			EUROP	2344	2344			1-2-3-4-5
SVN	374	374			EUROP with value (= + -)	374	374			1-5 with value (= + -)

Performances from organized progeny test recorded on abattoir, other traits

	Trait 1						Trait 2						Trait 3			
Reference	**Name**	**Total**	**males**	**fem.**	**steers**	**Descrip.**	**Name**	**Total**	**males**	**fem.**	**steers**	**Descrip.**	**Name**	**Total**	**males**	**Descrip.**
AUS	IMF	300					EMA	300								
CAN CHL	rib eye area	285		145	142	cm²	backfat thickness	285		145	142	mm				
DEU	Meat %	129	129			%	Muscle score	1 955	1 955							
FRA	measurements	2 100					meat color	800								
IRL	Kill out	261			261											
SVN	ribeye area	187	187			cm²	lean meat	187	187			%	meat traits	187	187	pH, colour (L, a, b)

Part I

At abattoir commercial data

(p 11 of the original questionnaire)

Performances recorded on abattoir

	Number of animals				Number of breeds				ICAR methods		
Reference	Total	males	femelles	steers	Total	males	femelles	steers	A	B	C
AUT	87 996	87 996			22	22			yes		
CHE	9 849	5 419	3 757	673	14	14	14	14			
DEU	381 754	288 840	90 273	2 641	9	9	9	7			
ESP AVI	279	201	78		1	1	1		yes		
ESP RTT	620	620			1						
FRA	30 172	21 067	9 105		12	12	12			yes	
NOR	5 959	4 159	1 737	63	10	10	9	2			
USA	12 077	171	1 876	8 560	6	1	5	6		yes	

Performances recorded on abattoir, weights

	Carcass weight					Other weight					
Reference	**Total**	**males**	**females**	**steers**	**Description**	**Name**	**Total**	**males**	**females**	**steers**	**Description**
AUT	87 996	87 996				*Live weight*	50 852	50 852			
CHE	9 849	5 419	3 757	673	kg						
DEU	381 754	288 840	90 273	2 641	kg	*Live weight*	27 499	13 448	13 806	245	kg
ESP AVI	252	179	73		kg						
ESP RTT	620	620			kg						
FRA	30 172	21 067	9 105		kg						
NOR	5 959	4 159	1 737	63	kg						
USA	10 627	171	1 877	8 579							

Performances recorded on abattoir, scoring

	Carcass conformation					Carcass fat grade				
Reference	**Total**	**males**	**females**	**steers**	**Description**	**Total**	**males**	**females**	**steers**	**Description**
AUT	87 996	87 996				87 996	87 996			
CHE	9 849	5 419	3 757	673	score 1 to 7 with value C,H,T+,T,T-,A,X	9 849	5 419	3 757	673	score 1 to 5
DEU	381 754	288 840	90 273	2 641	EUROP	381 754	288 840	90 273	2 641	1-2-3-4-5
ESP AVI	243	173	70		score SEUROP with + and -	243	172	71		score 1 to 5 with + and -
ESP RTT	620	620			SEUROP					
FRA	30 172	21 067	9 105		EUROPA scale	30 172	21 067	9 105		EUROPE scale
USA						11 841	171	1 802	8 399	

Performances recorded on abattoir, other traits

	Trait 1					Trait 2					Trait 3				
Reference	**Name**	**Total**	**males**	**females**	**steers**	**Name**	**Total**	**males**	**females**	**steers**	**Name**	**Total**	**males**	**females**	**steers**
AUT	*Carcass yield*	50 852													
USA	*Fat Thickness*	10 545	169	1 866	8 510	Ribeye Area	12 077	171	1 876	8 560	*Kidney Pelvic Heart Fat*	1 026	171	206	649