

Please identify your country:	URUGUAY
How is Sheep Welfare regulated in your country – please give an overview of the system.	<p>Uruguay's economy is highly dependent on agriculture. Agricultural production, combined with the industrial sector based on the transformation of agricultural products, makes up more than half of the country's exports. For Uruguay, as an ethical exporter country, is compulsory not only to provide good intrinsic quality and safe products, but also to project a welfare friendly and responsible image in order to maximize marketing advantages to satisfy and respond to consumer requirements (del Campo et al., 2014). In that sense, animal welfare regulations and recommendations exist and are increasing. The Ministry of Livestock, Agriculture and Fisheries (MGAP) is responsible for stock raising and breeding, control of animal diseases and welfare, and improvement of existing grassland and arable resources.</p> <p>The climate in Uruguay is mild, temperate, with moderate rainfall throughout the year amounting to an average of 1,250 mm, and its topography is undulating, with no major variations in climate and landforms. For its latitude, between 30 degrees S and 35 degrees S, it has four clearly distinct seasons based on temperature. The average temperature in June, the coolest month, is about 15°C (59°F), and the average for January, the warmest month, is 25°C (77° F). There are from 120 to 180 sunny days a year and snow is unknown. That is why livestock is the basis of the economy and the country is especially suited to the raising of sheep and cattle outdoor all around the year. In 2013, Uruguay had 8.190.000 sheep and 11.500.000 head of cattle (DICOSE, 2013).</p> <p>Meat and wool production systems are extensive and outdoor systems, mainly based on native pastures. There are a total of 47.771 livestock's farms in Uruguay, being only 1400 farms engaged exclusively in sheep production (DIEA, 2014) and approximately 19.765 mixed (CGA, 2011), running both British breeds of beef cattle (Hereford, Angus and their crossbreeds) and sheep. However, in most of those mixed livestock production systems, the income from sheep is only a minor proportion of the total income. The average size of those mixed farms in Uruguay is around 535 has, with approximately 400 head of sheep (CGA, 2011).</p> <p>Most popular sheep breeds are Corriedale, Merino and Polwarth. These breeds can be defined as dual-purpose generating incomes from the sale of wool and sheep meat (fat lambs, surplus offspring and cast for age animals). Sheep breeds determine the diameter distribution of the wool produced in Uruguay The majority (65 %) of the wool produced can be defined as mid-micron wool, between 25-32 microns, while the rest (35 %) corresponds to wool below 24.5 microns. A generalized interest in the production of fine and superfine Merino wool (with less than 19.5 microns) being observed during the last years and production increased of this type of wool. With that micron profile it is possible to manufacture a wide range of end-products (apparel and interior textiles).</p>

Wool is produced under the best available animal husbandry practices. Sheep graze mainly on native grasslands, most breeding ewes lamb in spring, season when the feed availability is highest, due to seasonality of pastures production. In addition, pregnancy diagnosis is performed at the farm level, in order to predict lambing dates and prioritize their proper nutrition and attention. Wool produced in Uruguay is mulesing-free as it is an unnecessary husbandry practice to do. Adequate stockmanship and animal handling is also guaranteed by competent and trained people in charge of the animals. Although the semi-extensive production systems, owners and workers of the farm ensure sheep are inspected regularly (at least twice a week) to ensure they are healthy and in good conditions, and with a sanitary plan monitored by a professional.

Main characteristics of the sheep industry in Uruguay are presented in the web “Wools of Uruguay” ([www.wool.com.uy](http://www.wool.com.uy)). Most of the clip is exported in the form of wool tops: in the period from July 2014 to June 2015, 52,5 % of the total as combed wools, 21,0 % as scoured wool and 26,5 % was greasy wool (SUL, 2015). Uruguay has a real commitment with the care of the environment in the wool production, not only on farm but also in the early stage processing. Topmakers companies are at the forefront in the use of clean and renewable energy sources (such as wood, wind and biogas) and the management of effluents. Also, social responsibility is guaranteed along the whole wool chain with respectable labour laws of workers.

Uruguay has an agro-intelligent production and cutting-edge traceability system, being the only country in the world today which guarantees 100% traceability of cattle, a quality which positions it as a reference for the world. Uruguay has been working for over 30 years to improve meat production traceability by law, in order to inform consumers about product origin and certify food quality and safety. The purpose was to respond to the observations made by the European Union in consecutive audits regarding some aspects of the Uruguayan group identification system, and to take the steps they requested toward a system offering greater guarantees. The mandatory system covering all the country cattle since 2006 ([www.parlamento.gub.uy/leyes/ley17997.htm](http://www.parlamento.gub.uy/leyes/ley17997.htm)) and incorporating the individual electronic identification of cattle, has placed Uruguay in a globally prestigious position as regards the guarantees it offers as a food exporting country. There is no doubt that traceability strengthens animal health as well as food quality and safety, but it will also be key to the future development of cattle-breeding in Uruguay. The institutional model developed to trace meat throughout the production and supply chain was made possible thanks to the actions of the public sector and its domestic regulations, as well as to the successful innovations made by the productive sector in international markets. Due to its long experience in product traceability, Uruguay has been recognized as a reference in this process (IICA, 2009). Group traceability already exists in sheep: each farmer that carries sheep has an individual identification number (DICOSE) and an exclusive ear mark that identifies the ownership of the flock.

	<p>Uruguay's goal is to consolidate the production of healthy, high quality food and farming products. Sustainable production must use innovation and new technologies to protect the environment and the animals, and the treatment of our production is constantly adapting to the challenges of climate change. All this is possible thanks to a policy of public-private coordination and the use of scientific information and communication platforms. The smart agriculture production is based on the following fundamental pillars: natural food, health, adaptation to climate change, ethics, conservation of natural resources, rural development policies, strong institutions and international integration.</p>
<p>If animal welfare is regulated by statutory/compulsory means, please state name of legislation, regulation, code of practice etc. See NOTE 1:</p>	<p>Animal welfare has been relevant for Uruguay since the last century. For instance, shows and entertainments that imply cruelty to animals and humans are forbidden by law (bull fighting, cock fighting). Bullfighting is forbidden since 1890 and all other shows or spectacles implying cruelty to animals were forbidden in 1918. Moreover, in the last 15 years, ethical concerns have been gaining real importance in Uruguay and we have been incorporating different aspects of animal welfare into our regulations and practices, along the whole meat and wool chain and also in research and educational activities.</p> <p>The use of hormones, animal proteins and antibiotics as growth promoters are forbidden by law since 1978 and 1996 respectively (<a href="http://www.mgap.gub.uy">www.mgap.gub.uy</a>).</p> <p>Humanitarian slaughter is compulsory since 1983. This slaughter regulation (Decreto N° 369/983) is continuously updated. Stunning of animals to render them insensible prior to slaughter and several other pre mortem conditions regarding animal welfare, are compulsory. This regulation also include loading and unloading facilities requirements, space availability during transportation and lairage, transportation conditions, trucks requirements for animal transportation, drivers education and training and lairage conditions at the slaughterhouses (water availability and roof in sheep lairage pens). More than ten abattoirs are allowed to slaughter sheep in their plants.</p> <p>Responsible pet ownership is regulated by law since 2009 (Law 18.471; <a href="http://www.parlamento.gub.uy/leyes/ley18471.htm">www.parlamento.gub.uy/leyes/ley18471.htm</a>) for the ethical treatment of companion animals. This law is controlled by a special organism created for this purpose (CONAHOBA). The CONAHOBA committee is directed by the Ministry of Education and Culture and is integrated by representatives of the government, of the University and NGOs.</p> <p>Ethical treatment of animals for research and teaching purposes is regulated by law since 2009 (Law 18611; <a href="http://www.parlamento.gub.uy/leyes/ley18611.htm">www.parlamento.gub.uy/leyes/ley18611.htm</a>) to prevent and minimize suffering and pain. This law is controlled by a special organism created in 2010 for this purpose (CNEA). The CNEA committee is directed by the Education and Culture Ministry and is integrated by representatives of several organizations: Ministeries, the University of Veterinary and NGOs. All experiments or teaching procedures have to be approved by each Institution Ethical Committee, for the care and use of animals for teaching and scientific purposes.</p>

<p>If animal welfare is regulated by voluntary means, please give the name of initiative such as code of practice, general binding rules, memorandum of understanding etc. See NOTE 1:</p>	<p>In the Uruguayan sheep and wool production, several voluntary codes of practices are applied by farmers and also along the whole wool and meat chain.</p> <p>Regarding shearing and clip preparation, most wool is harvested under the Tally-Hi method following the “Acondicionamiento de lanas” guide. The Secretariado Uruguayo de la Lana (SUL) has been involved in this long term program to improve shearing methods and clip preparation standards in the shed with local wool industry support. This code of practice describes the recommended practices to prepare the Uruguayan clip: the main objectives are to prepare uniform lines of wool, free of contamination and correctly documented in order to provide wool exporters with a product they can handle confidently and achieve the highest standards required for processing into quality products. Tally Hi is a shearing technique that allows getting annually the whole fleece to be skirted, avoiding sheep stress, pain and suffering. Shearing commences as early as June (mainly pre-lambing shearing of breeding ewes, mostly with winter combs) and the bulk of the shearing is in October-November. If necessary, nylon coats are provided. Almost a hundred of accredited shearing contractors -trained and supervised by SUL- are responsible of this “green label” clip quality control at the shearing shed. These contractors take responsibility for higher clip preparation standards and have relevant knowledge, experience and skills to perform the shearing activity, including a gentle treatment of animals shorn. Each of them have an individual accreditation number that appear in each of the wool bales together with the label, so local processors are able to know in which farm the wool was produced and by whom it was shorn. Also, written documentation with information of the farmer and the wool lot is recorded. All new shearers learn the TallyHi shearing system in SUL’s training courses.</p> <p>Most of fat lambs are sold under the “Cordero Pesado Tipo SUL” protocol. Lambs should be 13 months old (or less), without the eruption of two-tooth permanent incisors, a minimum condition score of 3.5 and their liveweight must be between 34 and 50 kg., at the farm. This program includes training of farmers and drivers, in agreement with local slaughterhouses that process them. SUL do the inspection of lambs on farms and check if they achieve the standards required. Written documentation with details of the lot are recorded and lambs are painted with a mark. The European Union is one of the most important markets for lamb meat, together with Brazil and China.</p> <p>Compartimento Ovino. According to OIE (World Organisation for Animal Health) Uruguay is free of foot and mouth disease with vaccination. However, sheep meat still has some restrictions to high-value markets. In a private-public collaborative approach, in SUL’s station of Cerro Colorado (Florida), SUL together with MGAP, INIA and INAC and a private slaughterhouse are producing lamb meat in accordance to OIE specifications in order to access to markets of NAFTA and European Union. Weaned lambs are introduced to this “compartimento” to graze improved pastures and they are not in contact with beef cattle). Strict biosecurity and animal welfare protocols are applied and documented. Members of the Ministry of Agriculture, Livestock and Fisheries are responsible of the inspections and bleeding of lambs.</p>
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	<p>Animal Welfare certification of INAC. Since 2015, INAC (<a href="http://www.inac.gub.uy">www.inac.gub.uy</a>) is developing and implementing an animal welfare certification of farms, drivers and slaughterhouses, including environmental aspects, working facilities and husbandry procedures and practices. This program is now focused in beef cattle but is believed to include sheep in the future. Written documentation is needed and INAC is responsible of its control.</p>
<p>Who is the competent authority(ies) to oversee implementation and compliance of animal welfare regulation in your country?</p>	<p>The Government through its different Ministries and Committees created:</p> <ol style="list-style-type: none"> <li>1) The Ministry of Agriculture and Fisheries MGAP is in charge of regulation and control of norms in relationship to animal welfare of productive species, according to national and international norms (Ley 18.834 of November, 2011).</li> <li>2) The Ministry of Education and Culture: MEC (<a href="http://www.mec.gub.uy">www.mec.gub.uy</a>)</li> </ol>
<p>Are you aware of any barriers to animal welfare transparency along the supply chain? For example the mixing of bales during dumping, scouring or topmaking - any means that could prevent the communication of animal welfare compliance documentation throughout the supply chain?</p>	<p>No</p>
<p>Any other information you can provide</p>	<p>Enhanced welfare of farmed animals can be achieved through improvements in one of three on-farm aspects: animal, environment and management procedures, stock person attitudes or adaptability of animals in their production environments. Many different sorts of measurements on animal welfare, including health, behaviour, physiology and production might have to be made and integrated in order to assess animal welfare status and to answer all the questions related to precise definitions of the particular problems and challenges that animals are facing in different situations and production systems (del Campo, 2010). Simple extrapolation of scientific information and methodologies developed for intensive systems to extensive conditions is incorrect and probably biased, and special attention has to be considered by the scientific community in this regard. That is why Uruguay as an extensive, green and ethical exporter country, is applying science to efficiently provide high quality wool and meat, as well as to provide strategic education and training plans for all the wool and meat chain stakeholders (del Campo et al., 2014).</p>

#### Research, education and training

The research must be conducted independently of industry and of animal-protection societies (Phillips, Wojciechowska, Meng, & Cross, 2009). One way to address the need for independent scientific review is to appoint a national animal-welfare committee made up of an impartial group of scientists, who can provide unbiased information. Such committees can have a role in guiding legislation, educating and training and in checking on codes of practice.

In Europe for instance, the European Food Safety Authority (EFSA) is doing that job and in Uruguay there is an advisory Animal Welfare Working Group lead by the Ministry of Agriculture, Livestock and Fisheries, which involves the participation and contributions of research and extension institutes, universities and meat marketing institutions, private sector, among others (del Campo et al, 2014). This group advice the Minister in all aspects relative to Animal Welfare, in order to improve it at the national level, as well as to evaluate all international requirements.

Animal welfare research and technology transfer activities in Uruguay are developed by several institutions in a multidisciplinary approach and in collaboration between public and private organizations. INIA (National Institute of Agricultural Research) is the main research institution in the country and its budget comes from farmers and government, having the responsibility to work with all other Institutions and stakeholders of the meat chain, to answer all kind of questions and challenges in the short, medium and long term and also to build ethical and scientific strategies considering old and new technologies applied along the meat/wool chain to increase farmer incomes and meat sector and the country competitiveness. SUL (Uruguayan Wool Secretariat) is a private, non-profit organization, of public interest, managed and financed by the Uruguayan woolgrowers. SUL's mission is to promote a sustainable development of sheep production in Uruguay and to get the maximum economic results of its exploitation. SUL's work is concentrated in research and extension activities addressed to woolgrowers and related industries, participating in integrated projects along the pipeline. In order to get better results in the net income of sheep production systems, work has to be done on technical aspects like sheep selection and husbandry, nutrition and health; wool harvesting and product marketing, processing and promotion.

Regarding animal welfare in sheep meat and wool production, INIA and SUL are working together with local processors in order to continuously generate and communicate objective scientific information about extensive systems' comparative advantages in relation to animal welfare. Their objective is to improve both their knowledge on animal welfare and values along the whole meat and wool chains, in order to gain the trust of society and improve the country's ethical image worldwide. The double challenge is to generate and also to communicate objective scientific information about extensive systems comparative advantages in relation to animal welfare, but not less important, to improve those practices associated to these systems that could compromise animal welfare (del Campo, 2012), even if those threatens are not directly perceived by consumers (Montossi et al., 2013).

Considering all previous aspects, many experiments have been conducted in Uruguay since 2001 in order to assess animal welfare and meat quality related to productive systems and diets, painful procedures and pre slaughter handling; and technological tools are available for farmers, in order to rise or improve all those potential limitations associated to the extensive systems. All experiments procedures are approved by the Ethical Committee of the INIA for the care and use of animals for scientific purposes.

In brief, both INIA and SUL are playing an active role leading several research projects, partnerships accompanied by education, training and communication plans. Now (2015) they are working together with other institutions like Instituto Plan Agropecuario ([www.planagro.com.uy](http://www.planagro.com.uy)), Instituto Nacional de Carnes ([www.inac.org.uy](http://www.inac.org.uy)) and the University of Veterinary and Agronomy, to develop a Reference Manual of Good Practices in order to put together all the guidelines that are necessary to carry a sustainable and ethic production for sheep farming.

Attracting, training and retaining the next generation of rural labour force is a priority issue for the Uruguayan livestock sector. It is important to highlight that perception differences about the importance of different management practices related to animal welfare, could be find along the meat and wool quality chain. Therefore, balancing of short term (pain related) welfare issues and long term issues of greater economic impact, is a communication challenge for different actors involved in meat consumption, including scientists (Phillips, Wojciechowska, Meng, & Cross, 2009).

Animal welfare topics are included in the Animal Science high-degree curricula of University (both in Veterinary and Agronomy).

A working group in the Faculty of Veterinary of Uruguay ([www.bienestaranimal.org.uy](http://www.bienestaranimal.org.uy)) is one of OIE's collaborative centre in terms of animal welfare. OIE Collaborating Centres are centres of expertise in a specific designated sphere of competence relating to the management of general questions on animal health issues (e.g., epidemiology, animal welfare, risk analysis etc.). In its designated specialty, they must provide their expertise internationally.

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INAC (Instituto Nacional de Carnes; National Institute of Meat; [www.inac.gub.uy](http://www.inac.gub.uy))

INIA (Instituto Nacional de Investigación Agropecuaria; National Institute of Agricultural Research; [www.inia.uy](http://www.inia.uy))

MGAP (Ministerio de Ganadería, Agricultura y Pesca; Ministry of Livestock, Agriculture and Fisheries; [www.mgap.gub.uy](http://www.mgap.gub.uy))

SUL (Secretariado Uruguayo de la Lana; Uruguayan Wool Secretariat; [www.sul.org.uy](http://www.sul.org.uy))

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