



**FAO-CIHEAM Network on Sheep and Goats  
Sub-Network on Production Systems**



**7th International Seminar**

***Economic, social and environmental sustainability  
in sheep and goat production systems***

Zaragoza, 10 - 12 November 2010



***Organised by:***

International Centre for Advanced Mediterranean Agronomic Studies  
Mediterranean Agronomic Institute of Zaragoza (CIHEAM-IAMZ)

Centro de Investigación y Tecnología Agroalimentaria  
Departamento de Ciencia, Tecnología y Universidad. Gobierno de Aragón



**Second Announcement**  
[www.iamz.ciheam.org/sg2010](http://www.iamz.ciheam.org/sg2010)

## **Background and objectives of the Seminar**

The small ruminants industry in EU countries is facing serious problems that threaten its future and survival. The loss of farm profitability resulting from an increased cost of inputs and declining or stagnant meat and milk prices, the decrease in sheep and goat meat consumption and the aging and shrinking farming population, amongst other factors are leading to a reduction of herds and farms, which may worsen with a decrease in subsidies. This situation may also bring about serious social and environmental consequences as sheep and goats contribute to the conservation of harsh marginal areas and to maintaining rural livelihoods. In countries of southern and eastern Mediterranean regions, small ruminant populations are increasing as a strategy to compensate the low productivity of local production systems, raising some environmental concerns because of overgrazing and consequent soil degradation and deforestation. In these countries systems sustainability is also threatened by the low generational replacement due to the lack of attractiveness of sheep and goat farming for younger people.

It is therefore necessary to critically analyse the sustainability of sheep and goat production systems in the region, covering the economic, social and environmental aspects, including their adaptive capacity to socioeconomic changes. However, little research is reported in this area, and methodologies of analysis that would enable a good understanding of the nature and complexity of the underlying factors are not readily available and the strategies to be adopted for the improvement of these systems are not fully developed.

The Mediterranean Agronomic Institute of Zaragoza, Spain, will host the 7th Seminar of the FAO-CIHEAM Sub-Network on Production Systems on "Economic, social and environmental sustainability in sheep and goat production systems" from 10 to 12 November 2010. The objective of the Seminar is to encourage participation and interaction between scientists and technicians involved in small ruminant production systems, with a view to introduce the methodologies for sustainability analysis in livestock, present case studies of small ruminant system sustainability in economic, social and environmental terms and to propose strategies for the improvement of these systems in order to ensure their future.

## **Organisation**

The Seminar is organised by the Mediterranean Agronomic Institute of Zaragoza from the International Centre for Advanced Mediterranean Agronomic Studies (IAMZ-CIHEAM) and the Agrifood Research and Technology Centre of Aragón (CITA-DGA) with the collaboration of the Food and Agriculture Organization of the United Nations (FAO). The Seminar will last two days providing a forum for scientific and technical exchanges and a one-day field trip. The scientific and technical exchanges will be structured in three sessions and a round table, with keynote guest speakers, oral contributions and posters.

The Seminar will be held at the Mediterranean Agronomic Institute of Zaragoza, Spain.

Mediterranean Agronomic Institute of Zaragoza  
Avenida de Montaña 1005, 50059 Zaragoza. Spain  
Tel: 34 976 716000 - Fax: 34 976 716001 - E-mail: iamz@iamz.ciheam.org

## **Organisation Committee**

D. Gabiña, IAMZ-CIHEAM, Spain  
A. López-Francos, IAMZ-CIHEAM, Spain  
A. Bernués, CITA-DGA, Spain

I. Casasús, CITA-DGA, Spain  
M. Bengoumi, FAO-RNE, Egypt  
P. Morand-Fehr, AgroParisTech, France

## Scientific Committee

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J. M. Castel, EUITA Sevilla, Spain  
M. Chentouf, INRA, Morocco  
N. Darcan, Çukurova University, Turkey  
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A. Nefzaoui, ICARDA, Tunisia  
F. Pacheco, DRAP-Norte, Portugal  
R. Ruiz, Neiker, Spain  
G. Zervas, AUA, Greece

## Provisional Programme

### 10 November

- 08.30 - 09.30 Registration  
09.30 - 10.00 Opening ceremony  
10.00 - 10.15 Presentation of the agenda and objectives of the Seminar
- 10.15 - 12.45 Session 1. Methods and tools for livestock sustainability analysis**
- Chair:** A. Bernués, CITA, Zaragoza, Spain
- Invited papers:**
- 10.15 - 10.45 The use of Life Cycle Assessment methodology in livestock. T. Vellinga, WUR, The Netherlands  
10.45 - 11.15 Coffee break and poster viewing  
11.15 - 11.45 Social and environmental indicators: incorporation to technical and economic management programmes in livestock. L. Nafarrate, SERGAL, Vitoria-Gasteiz, Spain
- Oral presentations:**
- 11.45 - 12.00 Méthodologie d'analyse et d'évaluation technico-économique des systèmes de production ovine et caprine, indicateurs complémentaires pour l'utilisation des surfaces fourragères et des parcours dans l'alimentation des ovins et des caprins. J.M. Castel-Genis, Réseau FAO-CIHEAM sur les Ovins et les Caprins, Spain  
12.00 - 12.15 Development of a decision support system for sheep and goats in the arid area of the North Coastal Zone of Egypt. A. Aboul-Naga, APRI, Dokki, Cairo, Egypt  
12.15 - 12.30 An assessment of livestock production sustainability in the Maghreb irrigated schemes. M.T. Sräiri, IAV Hassan II, Rabat, Morocco  
12.30 - 12.45 Discussion  
12.45 - 14.00 Lunch
- 14.00 - 17.30 Session 2. Case studies of analysis of sheep and goat production systems sustainability**
- Chair:** F. Pacheco, DRAP-Norte, Braga, Portugal
- Invited papers:**
- 14.00 - 14.30 Evaluation of small ruminant farming systems sustainability. M. Marie, ENSAIA, Nancy, France  
14.30 - 15.00 Sustainability of small ruminants systems in Maghreb. A. Nefzaoui, ICARDA, Tunis, Tunisia  
15.00 - 15.30 Environmental benefits of extensive breeding: wildfire prevention and beyond. J. Ruiz-Mirazo, CSIC, Granada, Spain
- Oral presentations:**
- 15.30 - 15.45 Sustainability evaluation of sheep farming systems in the "Sierra y Cañones de Guara Natural Park" (Spain). F. Ameen, Assuit University, Egypt  
15.45 - 16.00 Lecture diachronique de l'évolution des systèmes de production et des stratégies de firmes, en élevage caprins laitier. Quelle analyse de la durabilité? J.P. Boutonnet, INRA, Montpellier, France  
16.00 - 16.15 Performances de production et qualité des produits de deux systèmes de production caprine du Nord du Maroc. M. Chentouf, INRAM, Tanger, Morocco

- 16.15 - 16.30 Milk sheep production systems in Europe, diversity and main trends. *M. de Rancourt, Ecole d'Ingenieurs de Purpan, Toulouse, France*
- 16.30 - 16.45 L'implication de l'élevage dans les dispositifs de gestion de la biodiversité contribue-t-il à conforter sa durabilité ? L'exemple du Luberon (Provence-Alpes-Côte d'Azur, France). *L. Garde, CERPAM, Manosque, France*
- 16.45 - 17.00 Sustainability analysis of small ruminant farms involved in natural resource management. *Y. Mena, Univ. Sevilla, Spain*
- 17.00 - 17.15 Evaluation of resource use, greenhouse gas emission and ecosystem services from a life cycle perspective in Spanish sheep production systems. *R. Ripoll-Bosch, CITA, Zaragoza, Spain*
- 17.15 - 17.45 Discussion

## **11 November**

- 09.00 - 12.45 Session 3. Strategies for the improvement of sheep and goat production systems**
- Chair:** *P. Morand-Fehr, INRA-AgroParisTech, Paris, France*
- Invited papers:**
- 09.00 - 09.30 Strategies for improving meat sheep competitiveness. *M. Benoit. INRA-Clermont, France*
- 09.30 - 10.00 Is cheese making and marketing by farmers determining sustainability in dairy sheep? *R. Ruiz, Neiker, Vitoria-Gasteiz, Spain*
- Oral presentations:**
- 10.00 - 10.15 Des systèmes d'élevage de petits ruminants basés sur le pâturages des parcours embroussaillés. *D. Gautier, Institut de l'Elevage, France*
- 10.15 - 10.30 Improving the technical, economic and environmental performance of an extensive sheep farming system by re-arranging herd and grazing management. *M. Jouven, SupAgro, UMR ERRC, Montpellier, France*
- 10.30 - 10.45 Evaluation of the "INRA 180" new breed ewes at farme level in the Atlantic agricultural breeding system in Morocco. *M. El Fadili, INRA, Rabat, Morocco*
- 10.45 - 11.15 Coffee break and poster viewing
- 11.15 - 11.30 Valorisation des produits ovins : quelles stratégies d'élevage ? *M.O Nozières, INRA Montpellier, France*
- 11.30 - 11.45 Le diagnostic technico économique, une méthode d'analyse pour améliorer les résultats de gestion des systèmes de production ovines et caprines. *G. Toussaint, Société des Economistes du Conservatoire National des Arts et Métiers, Paris, France*
- 11.45 - 12.15 Discussion
- 12.15 - 12.45 Future programme of the Subnetwork. Proposals for topic and venue of the next Seminar**
- 12.45 - 14.00 Lunch
- 14.00 - 16.30 **Round table. Labour in sheep and goat industries: availability, education, productivity, multifunctionality**
- Chair:** *D. Gabiña, IAMZ-CIHEAM, Zaragoza, Spain*
- Guest speakers:**
- E. Fantova, Oviaragón, Zaragoza, Spain*
- F.A. Ruiz Morales, IFAPA, Granada, Spain*
- M. Chentouf, INRAM, Tanger, Morocco*
- B. Dedieu, INRA-Clermont, France*
- G. Ramos Truchero, Univ. Valladolid, Spain*
- 16.30 **Conclusions and close of the Seminar**
- 12 November**
- |         |            |
|---------|------------|
| All day | Field trip |
|---------|------------|

## **Languages**

The working languages of the Seminar will be English, French and Spanish. Simultaneous interpretation of the theatre presentations and conferences will be provided.

## **Seminar Proceedings**

The Seminar Proceedings, including the text of the keynote lectures, theatre presentations and posters accepted by the Scientific Committee will be published in the CIHEAM journal Options Méditerranéennes. Proceedings will be in English and French.

## **Registration. Deadline: 3 November 2010**

Registrations received after the deadline may not be accepted. Before **24 September 2010** registration fees for the two days of seminar and the technical visit will be 250 euro, after which fees will be 300 euro. Fees include attendance to the Seminar, coffees and lunches, shuttle service from Zaragoza to the seminar venue, the social dinner, the technical visit and a copy of the Proceedings.

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and return it, preferably by e-mail, before 3 November 2010, to:

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## **Accommodation. Deadline: 3 November 2010**

Pre-booking at special low rates has been arranged with some hotels in the centre of Zaragoza with a shuttle service to the Seminar venue by Seminar buses. For hotel reservation see Hotel Reservation form (available in MS-Word format at: [www.iamz.ciheam.org/sg2010](http://www.iamz.ciheam.org/sg2010)).

Deadline for sending the Hotel Reservation form is 3 November 2010. Hotel reservations received after the deadline are not guaranteed.

## List of posters

### Session 1

Goat systems of Eastern Andalucía (Spain): Characterisation and classification. *Ruiz Morales, F.A., Sayadi, S., Calatrava, J.*

### Session 2

Analysis of the sustainability of the Barbarine meat sheep breed raised under the semi-arid Tunisian production system. *Brahmi, A., Bouallègue, M.A., Bouzaiène, H., Khaldi, G.*

Effect of sheep breed on milk yield and composition in the geographical area of production of Nisa PDO cheese. *Belo, C.C., Marques, M.R., Belo A.T., Martins, A.P.L.*

Evolution of technical-economic indicators of pastoral dairy goat farms of Andalusia (Spain) in the period 2006-2008. *Castel, J.M., Mena, Y., Ruiz, F.A., Moya, J.*

Performances technique et économique des élevages caprins dans le nord du Maroc.. *Chentouf, M., Zantar, S., Doukkali, M.R., Farahat, L.B., Jouamaa, A.*

Milk production characterisation of Sohagi sheep. *Hamdon, H.*

Fragilité des modes de conduite des troupeaux de petits ruminants en zones de montagne: Cas du bassin versant de l'Oued Lakhdar (Maroc). *Ibnelbachyr, M., Mounif, M.*

Goat grazing on pine forest gaps in Doñana Natural Park, its effect on grasslands. *Leiva Morales, M.J., Mancilla Leyton, J.M., Martín Vicente, A.*

El papel de la cabra en la mejora del sustrato herbáceo: germinación y supervivencia de dos especies herbáceas forrajeras mediterráneas tras su ingestión. *Mancilla Leytón, J.M., Franco Barrera, A., Martin Vicente, A.*

Silvicultura preventiva de incendios forestales en Doñana por el ganado caprino. *Mancilla Leytón, J.M., Martin Vicente, A.*

Función del pastoreo caprino en el espacio natural de Doñana. *Martín, A., Mancilla Leytón, J.M., Parejo, C., Fernández-Alez, R., y Leiva, M.J.*

SWOT analysis of goat rearing toward its sustainability. Case study with Bravia goat breed. *Marta Costa, A., Costa, H.*

Economic sustainability of goat production under different production systems in Egypt. *Metawi, H.*

Performance économiques des exploitations d'ovins laitiers de races Assaf et Awassi dans Castilla-León. *Frendi, F., Milán, M.J., Caja, G., González, R.*

Goat production systems in a mountainous community of the Middle Atlas in Morocco. *Nassif, F., El Amiri, B.*

Characterization of Majorera goat production systems in the Canary Islands. *Navarro Ríos, M.J., Fernández, G.*

Characterization of Segureña sheep production systems in the area of "Sierra del Segura y la Sagra", Spain. *Navarro Ríos, M.J., Marín Bernal, A.M. Martí, A. Fernández, C.*

The sheep and the sustainability of the production systems in Nossa Senhora de Glória, semiarid of Sergipe, Brazil. *Otto de Sá, C., de Sá, J.L., Albuquerque Rangel, J.H., Neves Muniz, E.*

Analysis of the sheep population trend in Extremadura following the intermediate CAP reform. *López Gallego, F.*

Biological and economic assessment of intensive Barki sheep production system in Matrouh Governorate, Egypt. *Alsheikh, S. M.*

Dynamique ovine dans les Alpes-de-Haute-Provence. *C. Aubron, J.-P. Boutonnet, C.-H. Moulin*

### **Session 3**

Factors related to cooperative adoption for goat milk trading among Spanish goat breeders. *Sayadi, S., Calatrava, J., Ruiz, F.A.*

Goat breeding systems in the South of Tunisia (Tatouine). *Ammar, H., López, S., Ben Younes, M.*

Intake of nutrients in lambs fed with different levels of old man saltbush hay and concentrate. *Bezerra Moreno, G.M., Borba, J. Garcia Leal de Araújo, G., Santos, K.H.N., Araújo Souza, R.*

Digestibility of nutrients by lambs fed with different levels of old man saltbush hay and concentrate. *Bezerra Moreno, G.M., Borba, J. Garcia Leal de Araújo, G., Belem, K.V.J., Vinhas Voltolini, T.*

Productive performance of Ossimi ewes subjected to yeast culture "saccharomuces cerviace" and thyroxin supplementation. *El-Barody, M.A.A., Sallam, M.T., Marzouk, K.M., Ibrahim, A.I.Z.*

Effect of the number of grazings in a barley pasture on the biomass production and on the maximum stocking rate in the Roja mallorquina sheep in Mediterranean conditions. *Joy, S., Moya, J., Jaume, J., Joy, Cifre, J., M., Rovira, J.*

How feeding strategy can affect the fatty acid composition of animal products in the autumn lambing flock. *Joy, M., Sanz, A., Ripoll, R., Estopañan, G., Ripoll, I., Blasco, J., Alvarez Rodriguez*

Oil cake supplementation on dairy sheep. (1) Effect on milk yield and composition.

*Mandaluniz, N., Larronde, E., Amores, G., Virto, M., Arranz, J., Barrón, L.J.R., Ruiz de Gordoa, J.C., Ruiz, R., Al Nájera, Albisu, M., Pérez-Elortondo, F.J., Renobales, M.*

Oil cake supplementation on dairy sheep. (2) Effect on milk fatty acid content.

*Amores, G., Virto, M., Arranz, J., Barrón, LJR, Abilleira, E., Ruiz de Gordoa, J.C., Al Nájera, Ruiz, R., Albisu, M., Pérez-Elortondo, F.J., Larronde, E., Mandaluniz, N., Renobales, M.*

Nutritional studies on male goat fed rations containing Jatropha curcas meal as non traditional feed ingredient. *Mohamed, A.*

Promoting multidisciplinary research to improve goat production systems in Morocco. *Nassif, F., El Amiri, B.*

La filière laitière caprine dans la zone oasiennne du Sud Marocain. *Noutfia, Y., Ibnelbachyr, M., Zantar, S.*

Genetic improvement study on preweaning body weight of Egyptian Rahmani lambs under pure breeding production system. *El-Awady, H.G., Oudah, E.Z.M., Shalaby, N.A., El-Arian, M.N., Metawi, H.R.*

Environmental factors affecting body weights and growth rates of Finnish Landrace x local Rahmani lambs under crossbreeding production systems in Egypt. *Oudah, E.Z.M.*  
European payment scheme for small ruminant livestock: an analysis of breeders' attitudes and perception in Southeastern Spain. *Calatrava, J., Sayadi, S., Ruiz, F.A.*  
Rangelands management and animal production sustainability under arid and semiarid conditions: Egypt overview. *Taha, E.A., Khidr, R.E.*

The effect of lactation number, sex and birth type on suckling and nursing behaviour of Karayaka lambs. *Teke, B., Akdag, F.*

Certified quality meat and guarantee marks: empirical review and reflections on its potential of consumption in Spain. *Ouhibi, R., Sayadi, S.*

Etude de l'utilisation rationnelle des chaumes dans les exploitations pratiquant le semis direct en Tunisie : le semis direct et l'alimentation des ovins. *Ben Saïd, S., Layeb, H., Mehouachi, M.*

The segmentation of the handmade goat cheese market in Andalusian metropolitan areas. The case of the city of Seville. *Navarro, L.; Pantoja, V.; Ruiz, F.A.; Castel, J.M.; Mena Y. Sayadi, S.*



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## Registration form

**Deadline: 3 November 2010**

(Registrations received after the deadline may not be accepted)

Name	
Family Name	
Institution	
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Telephone	
Fax	
E-mail	

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Prices are per room, breakfast and taxes included, in euros. Please tick box(es) as appropriate:

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Date of arrival..... Date of departure..... Number of nights:.....

No deposit for booking is required. Full payment is to be made directly to the hotel upon checking out.

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