



CIHEAM

International Center for Advanced
Mediterranean Agronomic Studies

Seminar on Nutritional Properties and Environmental Impact of Legumes in Mediterranean Countries

CIHEAM Bari, March 8, 2024

Concluding Remarks of M. Teodoro Miano, Secretary General of the CIHEAM

I would first like to thank the Italian Ministry of Foreign Affairs and International Cooperation for its continuous and growing support to CIHEAM initiatives in the Mediterranean and beyond. I also particularly thank the Plenipotentiary Minister, Mr. Marco Giungi, Delegate of Italy to CIHEAM, for his valuable collaboration and his continued commitment to our Centre.

I express my gratitude to all participating national and international institutions and organisations, including FAO, ICARDA, CIAT-CGIAR, CNR, UfM, PRIMA, International Legumes Society, UNIBA, Coldiretti and Slow Food. I also welcome the important contribution of highly qualified experts and academics as well as companies promoting healthy pulse products.

The project matches very closely the CIHEAM Strategic Plan 2030 on the Sustainable Food Systems Initiative. A multistakeholder virtual platform in which several organisations tend to gather actions, events, outputs in the field of food systems.

For the CIHEAM the sustainable food systems vision brings along the connection between production and consumption of food. Between these two extremes the chain touches several fields of activities, such as natural resources exploitation and management, food characteristics and transformation, storage and deliveries, social and cultural food issues, nutrition (food environment).

As said in the morning, it is a very wide, courageous and ambitious project : a large number of countries, a huge amount of samples, with an even higher number of parameters and indicators.

Data which are very difficult to analyse, very complex, with high variability but it is a real data set which brings numerous information useful for any step forward and as a starting point for future planning all over the Mediterranean.

Quota of doubts and uncertainties arise, of course (selections of farmers, questionnaire, environmental conditions, number of samples and parameters).



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Role and dimensions of farms, impact of legumes in comparison with other local crops, increasing the number of data to be analysed, use of agronomic means (fertilisers, etc.), water use, are only a few of the main issues to be taken into account.

To a certain extent this project carries on innovative aspects, which can be related to the sharing and the transfer of technologies and agronomic practices, the approach to food products in terms of conservation and transformation processes, the biodiversity and the natural resources used, the environmental impacts and consequent adaptation means, the aspect of carbon cycling and sequestration.

Many questions may arise:

Can we always say that legumes improve and ameliorate the soil and the agricultural environment (quality and health) ? We have now available a solid and significant set of data to be offered to the international community as outputs fundamental to orient and drive future scientific projects, cooperation programs, specific training approaches, and action at the local and regional scale.

Are the results generated by this project exhaustive and definitive?

We can never say that the data are extremely clear and able to define the route. It is a challenging road, rich in changing and variable conditions and drivers. The activities should be conducted for more than one year, as obvious for several reasons.

At the same time though, we could start defining the conditions and the parameters we can work and plan activities in the next future.

Is it always clear what the fine nutrition and nutritional impact on human health are ?

We now know how we can approach this, by studying specific parameters taking into account aspects related to the geo-pedological conditions, to the consolidated varieties, to the cooking and storage conditions.

Can we still affirm the positive impact of legumes in a human diet?

The data presented in one of the reports today is very clear in that respect. The combination of factors may lead to solutions which are not so evident to date. The shift towards more proteins versus reducing carbohydrate is not always so obvious.

Do we have to promote approaches for the exploitation of natural resources, the water utilisation, the soil quality, the biodiversity, the cropping systems, the social and



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economic aspects? The use of agricultural means (pesticides, fertilisers, etc.) can be serious issues which affect several of the results of this project.

We have some interesting aspects to be noticed:

A good look at the complexity of the system

The large variability of the information is a richness even though sometimes doubts on the quality of the data arise: methodological variability, data treatment diversity, representativeness of samples....

Very interesting aspect on nutritional, nutraceutical and anti-nutraceutical parameters, leading to the identification of specific genus and/or varieties to be further studied.

Extremely interesting aspect of **territoriality**, local identities of the legume qualities, based on real chemical data. Linear indexes as suggested again in both the Mediet reports in the morning.

This brings to selection of legume variety according to the possible use and cropping approach.

Important risk of biodiversity loss, mainly due to a lack of specific knowledge from different points of view.

Final proposal of a participatory approach to the work for future actions.

A potentiated network of institutions (mainly national authorities), in order to produce detailed information at the local scale, starting from the data produced by the project.

Engagement of the national authorities in order to specifically address these issues and invest at various levels into the given topic.

Main issue to focus on and main activity to propose

- common approach to start with according to the actual partnership
- analytical deepening of individual samples
- collection also of environmental data
- ring test among laboratories of the involved countries
- connection between the proposed network with the private sectors and specific companies.



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- youth and company oriented initiatives (green transition and circular economy).
- stronger communication on relevant information with decisional entities, mainly focuses on confrontation with decision makers to propose rural development policies.

At last, Mediet has generated a partnership, a network of organisations which have intensely participated in the project. Several voices raised to highlight the need to continue with the partnership and continue on the main outputs of the project. Among those, I would like to highlight the role of other CIHEAM Institutes, as shown today by the colleagues of the CIHEAM Zaragoza.

CIHEAM proposes the establishment of a Meta Network which takes off from the project but develops towards higher and ambitious goals. The Network should be articulated as follows:

