

THE ROLE OF ESCORENA (EUROPEAN SYSTEM OF COOPERATIVE RESEARCH NETWORKS IN AGRICULTURE) IN AGRICULTURE KNOWLEDGE SHARING AND TECHNOLOGY TRANSFER

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Abstract

ESCORENA system was established in 1974 by FAO and European research institution. The European System of Cooperative Research Networks in Agriculture is an umbrella for cooperation between research institutions focused on food, agriculture and related fields. The ESCORENA is a bridge between FAO and agriculture to e.g. inform about newest FAO priorities elaborated in 2013, namely: supporting farm and production restructuring including agriculture, forestry and fishery; fostering land consolidation process; supporting local development strategies through participatory approach; strengthening capacity for rural stakeholder; integration of smallholders and SMEs into the value chain; providing support on adding value to products and services, activity and income diversification. Joint activity of high ranking specialists and agriculture research centers within ESCORENA under auspices up to now is characterized by e.g. organizing some thousands global consultations, conferences, workshops, seminars, and some knowledge share-fairs etc., which took place not only in Europe but in Near East, Africa, Asia, North and South America. ESCORENA and Networks which belong to ESCORENA publish recognized Journals like: Journal of Natural Fibers (in co-operation with INF&MP), Scientific Bulletin of ESCORENA (in co-operation with Arad University, Romania), EUROFLAX Newsletter, Buffalo, Nuts and allied. The examples of spreading/sharing knowledge and technology transfer e.g. in the scope of bast fibrous plants: starting production of linseed and derived products in Balkans countries (after the FAO/ESCORENA conference in Banja Luka, B&H, 2004), growing interest in production and processing of flax and linen goods in China (after conference in Shenyang, 2001) and renewed interest in flax and linen in Norway, Finland, Sweden (after conference in Tampere, 1998), also in East European and Asian countries after the FAO/ESCORENA congress at famous Vavilov Institute (1998) in St. Petersburg, Russia. Plans for future: elaborate more farmer focused approach, improve efficiency of technology transfer, continuation of publishing and organizing workshops and meetings, apply for funds e.g. through COST Actions and other.

Key words: ESCORENA, knowledge sharing, technology transfer.

INTRODUCTION

ESCORENA - the European System of Cooperative Research Networks in Agriculture, established in 1974 by FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS and European research institutions, was an umbrella for cooperation between research institutions focused on agriculture, food, and related expertise and activities.

The main objectives of the system, was predicted to: promote voluntary exchange of information and experimental data on selected subject matters; support joint applied research on selected subject matters of common interest according to an accepted methodology, agreed division of tasks and timetable; establish close

links between European researchers and institutions working on the same subject and to stimulate interaction; accelerate the transfer of European technology advances to, and cooperation with, developing countries; facilitate voluntary exchange of persons, Germplasm and technologies. (FAO Report, 2002), (Majewska et al., 2008). The European System of Cooperative Research Networks in Agriculture has been supervised, sponsored and promoted, by the FAO Regional Office for Europe, Rome, Italy. Since 2007, the new approach has been realized by Mr. Michal Demeš, Information and Knowledge Management Officer of the FAO Regional Office for Europe and Central Asia (REUT), Budapest, Hungary, namely, to provide the better ESCORENA Networks visibility on the

base of the web communication, provided by FAO. The relevant website of ESCORENA system, created due to FAO initiative, funds and encouragement can be found at the address: <http://www.escorena.net>. It means that ESCORENA recently became modern web-based networking and knowledge sharing platform for people around the world (Majewska et al., 2008).

ESCORENA is the multidisciplinary platform, which joins together twenty (20) thematic Networks namely: Agromarketing Network, Apricot Network, Buffalo Network, CAPNUTRA - Capacity Development Network in Nutrition, CENTAUR Biomedical Technology, Epidemiology and Food Safety Network, Cotton Network, Farm Animal Welfare (FAW) Network, Flax and other Bast Plants Network, Museum Network, Networks of Aquaculture Centres in Central Eastern Europe (NACEE), MAP – Medicinal and Aromatic Plants Network, Network on Nuts, Olives Network, Organic Edunet, Pastures & Fodders Network, Rice Network, Sheep & Goats Network, Sunflower Network in addition to the inter-disciplinary networks namely Sustainable Rural Energy Network (SREN) and Recycling of Agricultural, Municipal and Industrial Residues in Agriculture Network (RAMIRAN) (Demeš, 2011).

The ESCORENA Focal Point and secretariat is run by the Institute of Natural Fibres and Medicinal Plants (INF&MP), Poznan, Poland with Prof. Dr. Ryszard M. Kozłowski, with a help of Eng. Maria Mackiewicz-Talarczyk – the ESCORENA secretary and Dr Jorge Barriga Bedoya ESCORENA web support. The ESCORENA Focal Point is being financed by the management of INF&MP (Kozłowski and Mackiewicz-Talarczyk, 2012)



Figure 1. ESCORENA webpage

SHARING AND TECHNOLOGY TRANSFER

The ESCORENA is a bridge between FAO and agriculture to e.g. inform about newest FAO priorities elaborated in 2013, mentioned in details in the abstract and the ways how to achieve the goals described in the priorities.

The knowledge sharing has been conducted and achieved through joint activity of high ranking specialists of the agriculture research centers within ESCORENA by e.g. organizing some thousands global consultations, conferences, workshops, seminars, and some knowledge share-fairs e.g. at FAO, Rome, Italy in 2009 etc. Those events took place not only in Europe but in on other continents as well. In order to provide some certain examples of spreading/sharing knowledge and technology transfer the authors have chosen the following examples (known due to the authors' expertise):

1. Still growing interest in production and processing of flax and industrial hemp (to obtain high quality textile and non-textile products) in China derived from the achievements of the conference in Shenyang, 2001. The developing co-operation resulted for example in the EU project: FIBRA - Fibre Crops as a sustainable source of Biobased material for Industrial Products in Europe and China (2013-2015) (Spychalski and Władysław – Przybylak, 2013).
2. The results derived from the FAO/ESCORENA conference in Banja Luka, Bosnia and Herzegovina held in 2004 e.g. in the scope of oil proving plants as linseed (oil flax) bast fibrous plants: more and more people are interested in linseed products in this country, excellent linseed oil is produced at the Agricultural Institute of the Republic of Srpska, and a few pressing machines have been installed in private farms. The interest in linseed and flax production is spread to other Balkans countries as well.
3. The renewed interest in flax and linen in Finland, Norway, and Sweden (after conference in Tampere, 1998) is aiming in the renaissance of linen production in those Scandinavian countries, where linen

production was still well developed up to 1970s.

4. The congress devoted to flax at N.I. Vavilov Research Institute of Plant Industry, held on 1998 in St. Petersburg, Russia turned attention to the diverse possibilities of utilization of entire flax plant and derived products and by-products not only in Europe, but also in Asian countries.

The ESCORENA Focal Point coordinator Professor Kozłowski has delivered and published dozens of presentations and elaborations regarding the weakness of technology transfer and the ways to improve its effectiveness. The major indications cited by the authors of the presentation, delivered recently at the 12th ICFPAM 2013 – The International Conference on Frontiers of Polymers and Advanced Materials, Auckland, New Zealand, 8-13 December 2013 were: “For improvement of technology transfer is needed creation of maximum connection between R&D and industry, fighting bureaucracy in agencies which finance and evaluate results of research, reorganization of system of evaluation of R&D and their results, improvement of policy concerning patents, licenses and royalty distribution, further globalization on the field of international collaboration between scientists and industry, create the opportunity to employ in R&D centers high ranking specialists from all over the world, creating new independent non-profit institution, which would act a missing link between R&D centers and industry”. (Kozłowski et al., 2013). The ESCORENA Focal Point Coordinator Prof. Dr. Ryszard M. Kozłowski is involved recently in the organization of the special event devoted to technology transfer, namely the 2-nd Melpin Conference on Technology Transfer for the Development of New Products, 12-13 June 2014, Melpin, Poland.

1. COOPERATION WITH DEVELOPING COUNTRIES AND TRANSFER OF TECHNOLOGY ADVANCES

Cooperation with developing countries within ESCORENA activities was carried out in the form of e.g. distribution of publications to institutions and individual researchers from

developing countries in Latin America and Asia, attendance of some representatives from other regions at network meetings, direct participation of 12 Near East countries in interregional networks (FAO Report, 2002).

2. JOINT APPLIED RESEARCH WITHIN THE NETWORKS

Several joint projects have been developed as a result of the ESCORENA Networks meetings. Some of these projects were financed by European programs. Particular results were obtained in the joint research programs, exchange of germplasm, in collection, conservation and utilization of plant genetic resources, sustainable management of natural resources, diversification of agricultural production (e.g. use of marginal lands for non-food agricultural production, such as flax and industrial hemp in industrially polluted areas) and in the development of sustainable production systems including improvements in quality of typical local products in support of rural employment and improvements in the economic position of rural population. (Kozłowski and Mackiewicz-Talarczyk, 2000). The activities connected with joint research within bast fibres have been conducted e.g. within Round Robin Test; the ESCORENA Flax and other Bast Plants Network committed its activities uniformity of qualification of bast fibrous plant fibres and to the improvement of the quality and homogeneity as well as viz. the experts from 12 countries conducted two steps of the Inter-Laboratory European Round Robin Test, having rich documentation of conducted tests and their statistical assessment at our Coordination Centre. The Network members continue to work in scope of quality assessment of bast plants and fibres within the EU program: COST Action 847 “Textile Quality and Biotechnology”, where one of the Groups is devoted to quality assessment of bast fibres and several scientific sessions have been conducted (Kozłowski et al., 2010).

The outstanding achievements in the scope of joint research and exchange of germplasm and products could be observed and documented by the Institute of Natural Fibres and Medicinal Plants, Poznan, Poland in terms of activities of the Gene Bank of flax, hemp, linseed and a Bank of Natural Fibres at the INF&MP (FAO

Report, 2002; Spychalski and Wladyka – Przybylak, 2013; Kozłowski and Mackiewicz-Talarczyk, 2000).

3. PUBLICATIONS WITHIN ESCORENA FOR KNOWLEDGE SHARING

The ESCORENA system has got the bulletin since June 2009: Scientific Bulletin of ESCORENA, bi-annual journal aiming to provide the research papers of interdisciplinary Networks as well as the information about the activities of the particular Networks within the ESCORENA. The free access to 8 bulletins on the website:

<http://www.uav.ro/en/journals/scientific-bulletin-of-escorena/volumes>. The publisher and sponsor is the “Aurel Vlaicu University” in Arad, Romania, which gained the relevant funds due to the project: Project POS-CCE 210/2010: ACRONIM „BASEURES”: “Bast Plants- Strategic Resources for European Economy” (2010-2013) (Kozłowski and Mackiewicz-Talarczyk, 2012).

ESCORENA and Networks which belong to ESCORENA publish recognized Journals like: Journal of Natural Fibres (in co-operation with Institute of Natural Fibres and Medicinal Plants (INF&MP, Poznan, Poland), Newsletters of Buffalo, Nuts, and Sunflower Networks, EUROFLAX Newsletter of the Flax and other Bast Plants Network and allied. The Handbook of Natural Fibres vol. 1 and vol. 2, edited by ESCORENA Focal Point coordinator prof. R. Kozłowski and written by ESCORENA Networks’ experts (about 40 experts from the whole world), is the new, very important publication in area of natural fibres, which was published by Woodhead Publishing Ltd., Cambridge, UK within the Woodhead Publishing Series in Textiles in October 2012 (Kozłowski and Mackiewicz-Talarczyk, 2012).

CONCLUSIONS

The role of ESCORENA in agriculture knowledge sharing and technology transfer could be concluded in the following inputs:

KNOWLEDGE SHARING

The ESCORENA is a bridge between FAO and agriculture to e.g. inform about newest FAO priorities, their aims, ways to achieve optimal results.

Knowledge sharing conducted and achieved through: joint applied research within the networks activities, joint activity of specialists of the research centers within ESCORENA through global consultations, conferences, workshops, seminars, and some knowledge share-fairs.

Knowledge sharing through publications of individual Networks within ESCORENA system, presented on the ESCORENA website, in the Scientific Bulletin of ESCORENA, in Handbook of Natural Fibres, in the newsletters of particular Networks, and in the proceedings of the conferences.

TECHNOLOGY TRANSFER

The educational role of ESCORENA Focal Point through:

organization of conferences devoted especially for knowledge transfer, delivered and published presentations and elaborations regarding the weakness of technology transfer and the ways to improve its effectiveness,

presentation of the technologies and techniques, having potential of implementation in the industrial practice.

ACKNOWLEDGEMENTS

The activities of ESCORENA were facilitated by the Food and Agriculture Organization of the United Nations umbrella, patronage and support. The running of ESCORENA Focal Point is possible due to the support of the Polish Ministry of Science and Higher Education, and management of the Institute of Natural Fibres and Medicinal Plants, Poznan, Poland.

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