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**ACTORS IN SHARING ADAPTABLE RESULTS OF GENETICS AND MANAGEMENT  
 FOR DEVELOPING SUSTAINABLE LIVESTOCK**

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**Abstract:** Maintaining biological diversity in animal husbandry is a task that has serious economic and management implications as well. African and Asian countries facing food-supply challenges will only be able to provide food to their growing populations in the future if they ensure diversity in livestock production, thereby including climate, disease and other-resistant – in several cases: indigenous – breeds in breeding. However, this objective imposes a serious tasks on the agri-administration of the states concerned and on the representative bodies of agriculture (chambers and other institutions), as they must explain to livestock breeders the occasionally unique management methods related to the keeping and inclusion of diverse breeds in the supply chain. These efforts can be facilitated by the collection of existing best practices and the application of their adaptable elements under certain conditions. In this area, the activities of administrations and interest representatives of European countries (e.g. agribusiness chambers) can serve as a good model. Thus the researchers of genetics and management should develop a broader cooperation in order to define the scientific results which can be applied in everyday agri-management and present them to the governmental institutions and agri-business organizations concerned, who can hand these best practices to the community of breeders. The present work aims to describe the activities of the European chambers of agriculture and their experience in improving agricultural production and management in order to glean lessons that could be used by the African and Asian governments to improve agricultural and livestock sectors in their region in parallel with performing phenotypic and genetic characterization of some unstudied indigenous animal species to assess their adaptation and production potential, information needed to establish future breeding and management strategies.

• **Introduction**

The practical implementation of new scientific results in agricultural production (and animal husbandry within that) has never been a very fast process, as there were no established channels for such knowledge transfer. At a time when global warming is making itself felt at an ever faster pace, there is an increasing need to disseminate new genetic knowledge and management practices aimed at reducing these negatives as quickly and effectively as possible, so that breeders can make their activities sustainable while adapting to the market environment successfully. However, the rapid transfer of scientific innovations to the production sector can not be ensured by R+D programmes alone, as there are many companies that can not join such initiatives due to their farm size or other parameters. For this reason, there is a need for other actors who can facilitate the fastest possible knowledge transfer. This is particularly true for African and Asian countries, which, on the one hand, are suffering many negative effects of climate change, on the other hand, feeding their growing populations has put increasing pressure on their agriculture and, thirdly, have relatively little experience in such knowledge transfer. Therefore it is worth taking stock of European practices that have involved new actors in these processes, because these best practices can serve as good models for African and Asian countries as well.

• **Discussions**

In addition to the R+D projects already mentioned, efforts are made to promote knowledge transfer between research and agricultural production actors in Europe by involving professional administration and various agricultural interest representatives (mainly chambers, but occasionally other professional organisations). The participation of chambers of agriculture and other professional organisations in this process is useful because, on the one hand, they have closer links with agricultural enterprises than administration and the research sector, and, on the other hand, their acceptance is higher because of this close relationship. As a result, they can disseminate e.g. new genetic findings and management practices more effectively. However, professional administration and chambers should not interfere between research and business in the process of truly effective knowledge transfer, but act as mediators to facilitate the flow of knowledge between the two endpoints. (See Figure 1) In this case, they can make the best use of their capabilities. (See Table 1)

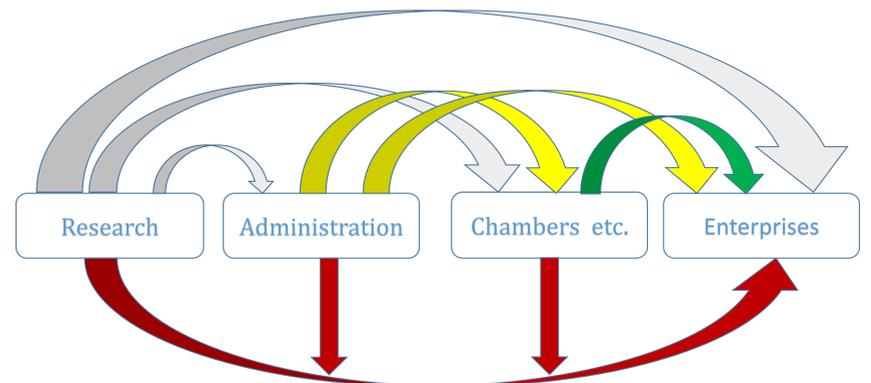


Figure 1. Ineffective (above) and effective (below) ways of knowledge transfer

Actors	Knowledge	Budget	Close link to enterprises	Acceptance by enterprises
Research	Yes	Limited	Limited	Limited
Administration	No	Yes	Limited	Limited
Chambers etc.	No	Limited	Yes	Yes/Limited

Table 1. Actors' capabilities in the process of knowledge transfer

• **Conclusions**

Sustainable agricultural production, which is becoming increasingly important due to global warming, requires new scientific advances in fields such as genetics and management science. The early application of knowledge generated in the research sphere in practice plays a particularly important role in African and Asian countries directly and heavily affected by climate change. Knowledge transfer channels in these regions are much less developed than in Europe. The first step towards applying European practices, which could also be improved, is to create or enable such organisations, which could participate in these processes. This is particularly valid for farmers' organisations, chambers and other institutions. Above all, however, there must be a recognition in the countries concerned that professional administration will not be able to solve this problem on their own.

Reference

Csedő, Zoltán, Zavarkó, Máté, The role of inter-organizational innovation networks as change drivers in commercialization of disruptive technologies: the case of power-to-gas. International Journal of Sustainable energy planning and management, 2020 28, 53-70. <https://doi.org/10.5278/ijsep.3388>

Stocker, Miklós, Várkonyi, Lídia, Impact of market orientation on competitiveness: Analysis of internationalized medium-sized and large enterprises. Entrepreneurial Business and Economics Review, 2022, 10(1), 81-95. <https://doi.org/10.15678/EBER.2022.100106>

Zachar, Péter Krisztián, Transition, Participation and Self-Governance: The Institutional Change of Hungarian Chambers, 2023, Budapest, Ludovika University Press, 216 p.

Zachar, Péter Krisztián, Management Skills and Vocational Training as Tools for Economic Development in the Hungarian Economic Chamber Movement: Conference lecture, Legal History of Guilds/Companies/Family Firms in East-Central Europe Conference, Cluj-Napoca, Romania, 7.10.2022

Zachar, Péter Krisztián, Strausz, Péter, Bewegungsraum und aktuelle Managementfragen für die Kammern im Gesellschafts- und Wirtschaftsleben in Ungarn. In: Jahrbuch des Kammer- und Berufsrechts 2011. ed.: Winfried, Kluth, 2012, Halle, Peter Junkermann Verlag, 227-253.