Innovation and opportunity in Romanian agricultural policies: from the agrarian reform in the 19th century to the digital era

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Abstract. *In the current global context, agriculture should develop both interdisciplinary and intradisciplinary. Digitalization and innovation represent the key drivers of evolution. Agriculture must become more flexible and adaptable to the current challenges, integrating eco-friendly solutions that can maintain production at optimal capacity for a longer period. This paper aims to review the Romanian agricultural policies from the 19th century to the present, bringing perspective on the international practices and focusing on the technological innovations that occurred in the past years. The research follows the evolution of agriculture on the European agenda. There are now new challenges imposed by the need for modernization and reconfiguration of farming into an integrated system with performance parameters and development routes. Romania has followed the trends and implemented several policies which aim to help farmers integrate the new technologies into their day-to-day work.*

Keywords: agricultural policy, reforms, CAP, digital transformation, innovation.

Introduction

Romania started its modernization process in the middle of the 19th century. More than a significant help for the industries, it represented a change of perspective. The old individual, a fragmented economic vision has been replaced with an integrated, predictable horizon that laid the groundwork for prosperous developments.

In this context, the agricultural sector has been through different stages in order to meet and overcome the social and economic rigors. Each stage came with both improvements and new challenges. Studying the historical chain of upgrades is relevant as they all came with a strong economic impact, both for small farmers and for the industry.

The early stages

Agriculture was integrated for the first time into the national economic system during the agrarian reform in 1864 by the government led by Mihail Kogălniceanu. Back then, the peasants received 30% ownership of the country's agricultural land, and the landowners lost their working capacity on the fields. This moment has been decisive for the future agriculture policies as it marked the end of the feudal system.

The Great Union from 1918 set off new visionary projects who materialized through the next agrarian reform in 1921. Modernization started by lowering the polarity between agricultural landowners.

During the post-war period, there were some powerful and brutal interventions of the state in social, political, economic, and religious fields. Agriculture was influenced by the statist character adopted through national policies. Thus, the process started with Law no. 187, implementing the agrarian reform published in the Official Monitor no. 68 from 23 March 1945. It led to the restructuring of agricultural holdings through successive expropriations and collectivization.

After 1989, the national agrarian policy has been through two distinct stages: in the first years, the emphasis was on dismantling the old forms of agrarian organization and re-ownership of agricultural landholders, while the second period consisted of Romania's pre-accession and accession to the European Union, a political approach that has created new opportunities and development perspectives, but also a more responsible vision of the entire technological process generating agricultural products.

European influence on the agricultural policies

As a consequence of the accession, Romania is part of the Common Agricultural Policy, initiated in 1962 by the 6 founding states, aiming at sustainable economic growth by exponentiating intensive agricultural production by taking technical progress, innovation, professionalization of labor and technology, but having as an essential component the protection of the environment.

The shift from the conceptual part of this pan-European program to a visible and concrete expression was achieved through the two Pillars of support: Pillar I-direct payments; Pillar II - rural development, which materialized in a subsidy program at the European level, offered by the European Union and the State party to the Common Agricultural Policy, meant to stimulate agricultural holdings in order to use sustainable production methods, at costs that not to destabilize the purchasing power of consumers.

Thus, a European institution had to manage the subsidies for farmers. In our country, the institution empowered with these prerogatives is the Agency for Payments and Interventions for Agriculture (A.P.I.A.), which has the role of receiving applications for support submitted by farmers, to verify their validity and eligibility based on an annual sample, and to facilitate the provision of these subsidies.

For the administration and control of single payment requests, Romania has established and used, as provided by the Regulation (EU) no. 1306/2013, an Integrated Administration and Control System (IACS), with the component elements stipulated by art. 68 of the mentioned regulation, respectively: an electronic database, an identification system of agricultural plots (LPIS-GIS), applications for aid, an integrated control system, a unique system for registering each beneficiary who submits an aid application.

If the aforementioned applications are used exclusively by A.P.I.A. officials, the I.P.A. Online can also be accessed by farmers. Another advantage of this application is the provision of payments for Agri-environmental measures, respectively disadvantaged areas, of visual instruments, generated by satellite images, to verify whether the plot can be framed for such additional measures (Bold, 2001).

IPA-Online is an application made available for farmers by the Agency for Payments and Intervention for Agriculture through which EU direct payment applicants can carry out the operation of digitization of plots online, thus establishing their area declaration (Giurcă et al., 2012). The application also provides farmers with the necessary tools to be able to check whether the requested plot is located in one of the areas for which it can apply for Agri-environmental measures, respectively disadvantaged areas.

The European Union, through its competitiveness policy, has set itself the objective of creating optimal conditions, by accelerating the adaptation of industries to structural changes and fostering better exploitation of agricultural potential through policies of innovation, technological development, policies of crucial importance in the context of global competition.

Therefore, we can mention some concrete arguments for which the IPA-ONLINE application creates an organic system between data presented by farmers and the reality on the

ground, verifiable and significantly reducing errors on misidentifying certain areas of land requested for payment:

- simplify the methodology by which the farmer can apply and draft the request for support application addressed to the A.P.I.A.;
- avoid over-reporting due to surface measurement errors through the real-time measurement function provided by the application;
- the adequacy of the support application submitted by the farmer with the reality on the ground leads to the low probability of a sanction that the control bodies within the A.P.I.A. can apply them;
- farmers can submit the application for support to the A.P.I.A, conditioned by a limited period of time and predetermined based on an invitation that the farmer receives, in order to clarify any inconsistencies or ambiguities and can be accessed from anywhere, the only condition is to have access to Internet connection;
- the farmer can preview in real-time the final form of the support request and can print maps to confront the reality on the field;
- the size of the digitized plots can be exported with the extension “.shp”, there is the possibility of entering this data in GPS programs, and the farmer can observe in real-time the boundaries of his plots;
- the data processed by the farmer remain saved in the account provided to him, and next year the submission of the support application will record a shorter period of time, being necessary to update only the surface or culture change in case they appeared.

Considering the above, which briefly emphasized the relevance and the degree of applicability of the IPA-ONLINE application, makes it an essential and innovative tool, in line with the increasingly necessary trends of digitization that farmers should keep up with. Common Agricultural Pact might focus in the future on these new trends and they will grant subsidies based on the reached performance (Pătărlăgeanu, 2016).

However, there is room for improvement regarding some capabilities for better compliance and use of this application by farmers. In order to use the IPA application, it is considered necessary to support farmers by creating an innovative system composed of specialized consultants, highly qualified IT professionals, and in-depth expertise in rural development measures (Stanef, 2012).

This system might offer many advantages to farmers:

- increasing the number of vacancies in the IT and agricultural sector, due to the lack of suitably qualified staff;
- the need to recognize vocational training between the EU Member States through a single certification;
- promoting the mobility of qualified staff between EU countries, which will also lead to a decrease in unemployment.

Farmers have proven, especially recently, that they have the capacity to bend on the new trends of European level, noticing not only the need for modernization, the reconfiguration of the entire technological process, to rethinking a farm as an integrated system interested in innovation, of new performance parameters, new indices of economic sustainability, but also the benefits of digitization in general and the use of applications made available for a better knowledge of their own development capabilities and identification of new development routes.

Conclusion

The European Union, by making all these adjacent instruments available, comes to meet the farmers' needs. The European incentive must also be supplanted by providing advice by professionals, to supplement the capacity of people applying through the IPA-ONLINE application and also to provide information as concrete and as close as possible to the reality on the ground, as the main goal is to generate an accurate picture.

In the current global context, in which the development of a field takes place both interdisciplinary and intradisciplinary, agriculture needs to remain close to digitalization and innovation. This can make the agricultural field more flexible, more capable of change, more willing to implement alternative solutions, eco-friendly ideas that maintain production capacities for a longer and more predictable time.

Agriculture has become a point of European interest, which built successive regulations to create a different vision of the expectations for the field. Some time ago, the only concern was to increase production capacity regardless of the methods used, the damages to the ecosystems, the unqualified workforce, and the preservation of certain working methods.

All these arguments as well as the natural advantages that Romania has, made our country look like an opportunity for agricultural development, with a remarkable potential that only needs to be mastered in a coherent, sustainable and responsible form, involving innovation and digitalization for better results from an economic point of view.

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