RURAL AND AGRICULTURAL EXTENSION DEVELOPMENT THROUGH AGRICULTURAL SCIENCES & VETERINARY MEDICINE UNIVERSITIES IN ROMANIA

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1. Introduction

As Romania strives to develop the rural and agricultural economy to sustain national strength and active participation in the European Union, the infrastructure and organization of agricultural education in the country continues to be a challenge. The regional agricultural sciences and veterinary medicine universities (USAVMs) realize that directly serving their district of the country is vital to their credible reputation as centers of excellence in agricultural and animal health information and technologies. The leadership of three regional agricultural sciences and veterinary medicine universities have committed resources to establishing connections with local agricultural communities. National and county Romanian government leaders have established extension education as priorities needed to advance rural and agricultural economic efficiencies. It is the intent of this paper to discuss the emerging role of the USAVMs in Iași, Cluj-Napoca, and in Timișoara, Romania.

2. Background

Until 1989 Romanian rural and agricultural development was centrally coordinated and little education was directly accessible to the leaders and people in rural agricultural villages and towns of Romania. Many families were given access to their ancestors' agricultural land without any economic, agricultural, and educational resources. The universities have been re-structured since 1989 but has a long-standing international reputation for this outstanding research and didactic programs. These agricultural sciences and veterinary medicine universities are directly related to the Minister of Education structure and funding channels.

The Agenția Națională De Consultanta Agricola (ANCA) was formed by the Minister of Agriculture to educate and assist landowners in rural villages in an effort to increase their quality of life, sustain rural livelihoods, and strengthen village population growth in the future. Today the public extension system (ANCA) provides the framework for the County Offices for Agricultural Consulting (OJCAs) in county capitals and 600 Local Centers for Agricultural Consulting (CLCA) in about 25% of the local communities. ANCA, the OJCAs, and the CLCA's (2006) employed a total of 1100 people. Of this staff, the majority of the consultants and administrators (85%) have a technical agricultural background with most of the field staff hold university degrees from their regional USAVM.

Beginning in the late 1990's, faculty members from Purdue University School of Veterinary Medicine and College of Agriculture began collaborative efforts to address emerging agricultural situations in Romania. This began with researchers studying and serving on joint PhD committees addressing challenges including the spread of corn root worm and other soil and agronomic scientific disciplines.
As faculty collaborated on research and spoke at the academic days of each university the following picture became more and more apparent: 1) Many landowners are not knowledgeable farmers or are unfamiliar with production-enhancing technologies because they are aging and many are relocated workers to the land; 2) Many small property holders subsistence only and need to move to a market-oriented production system; 3) Local ANCA educators are challenged to help agricultural producers and private sector development; 4) OJCA Educators need educational resources and extension delivery skills; and 5) many ANCA and OJCA staff educators and administrators are USAVM graduates and good relationships exist, and 6) innovative farmers and community leaders are coming directly to the USAVM seeking production and marketing advice. These discussions led to discussions of the Land Grant system and the universities' role in discovery, learning, and engagement in the United States.

The United States' Land Grant University system is the result of federal legislation from 1862 through 1914 which established a relationship between the federal government and the states to coordinate teaching, research and extension that reaches into every county in America. The funding stream for the agricultural, consumer and family sciences and veterinary medicine come through the United States Department of Agriculture and compliment the funding of the Department of Education. As an example of one of 67 Land Grant Universities in the U.S., the Purdue University system today is a vital educational, research, and outreach enterprise. More than 39,000 students from all 50 states and the District of Columbia, three territories, residents abroad, and 131 foreign nations study at the West Lafayette Campus, and more than 29,000 are enrolled at other campuses and locations. The University attracts more international students than any other public research university in America. Involving postgraduate students in applied research and Extension education programs helps strengthen the relationship between the university and stakeholders in America and in the graduate's home countries.

Purdue touches lives in all 92 Indiana counties through its unique Cooperative Extension Service offices and eight agricultural research centers that span the state. An increasing amount of applied research is being conducted by Purdue University Extension staff and faculty in Purdue Agricultural Centers throughout the state and these trials serve as the basis of Extension educational programs. Across Indiana, Agriculture Research Programs operates eight Purdue Agricultural Centers (PACs) in areas representative of the state's varied soil types and microclimates, where more site-specific research is conducted and research results are conveyed to local farmers and other residents. ARP also works closely with Purdue Extension to transfer the research-based knowledge generated by Purdue faculty and staff to citizens in all of Indiana's 92 counties.

3. Methods

The USAVMs in Iasi, Cluj-Napoca, and Timisoara have independently developed extension and outreach services to become more market driven and responsive to emerging agricultural industries in their regions. These efforts and centers have evolved from longstanding relationships between willing faculty members and their graduates and industry collaborators. Examples that will be presented include research and demonstration farms, educational materials and resource personnel, and an educational project and Consulting Center with outside funding. It should be noted that these projects all derive their origin with willing faculty members and the support and finding of visionary university leaders. The structure of each within their university is different and dependant on the host USAVM.

4. Examples

The USAVM "Ion Ionescu de la Brad" at Iasi is developing a dairy training and education center (DANCU Research Farm) to serve the producers and farmers in Moldova region. This is a large (milking herd of 300 cows) dairy farm that has been transferred from the Romanian Research Institute the university to serve as a research.
demonstration, and teaching centre. Multiple European Union and Minister of Agriculture grants have stimulated this development and educational resource. Other extension outreach programs are available in the faculties of agriculture, animal sciences, and veterinary medicine. This is being supported by a team of dairy Extension faculty from multiple United States universities and private dairy industry leaders.

The USAVM at Timisoara has been committed to serving the western Romanian Banat region for many years. They initiated an Extension Education and Leadership unit for graduating students and now have a very well structured Counseling Center which is structurally situated in the Faculty of Veterinary Medicine. The mission of this kind of academic activity is to help people improve their lives and that of their community with the help of science. This centre resulted from external funding grant and initially specialized areas of dairy and milk quality and production. As pork production dramatically increased with a joint venture company in the Timis region, the university began collaborative research and education to directly assist and contribute to the economic and environmental success of this venture.

At the USAVM in Cluj-Napoca, faculties are working directly with sheep and cattle producers to improve production and have initiated a collaborative agreement to implement the U.S. Sheep Production Handbook into their curriculum and services in Transylvania. The university has now committed resources and set as a priority the establishment of an Extension Center with the use of their new dairy and horse facilities and strong faculty leadership in agriculture, animal sciences, and veterinary medicine. The Cluj county government leadership have now established Extension education as a priority in their strategic planning.

All of these efforts have raised the educational level and relationship between local producers and decision makers in Romania. Parallel with this, is the interaction and support of the existing ANCA which support Minister of Agriculture staff in each of the regions of the country. The USAVMs are not only serving their resident agricultural producers and agribusiness decision makers, but also provide scientific expertise to the OJCA staff in their region. These experiences of collaboration create an infrastructure dilemma in the Romanian extension delivery as the country adjusts to new member EU standards. Many long-standing agricultural practices and recommendations for efficiencies need to be re-framed to become compliant with emerging standards.

5. Potential Private-Sector Partnerships

The evolving private agribusiness expansion has created more potential for partnering in educational and demonstration methods. Contract research grants and educational efforts have long been the method of funding projects to benefit individual farmers and landholders in other countries. As producers become more aware of the need for adopting technologies of efficiency and market access, there will be more for-payment services and resources, including demonstration farms, workshops and village marketing and entrepreneurial projects. By capitalizing on linkages between faculty members and their university alumni who are now the farm and agribusiness managers, more collaborative educational partnerships can benefit people in the region. Engaging the leadership of higher education in agricultural and environmental education has been effective in improving economic stability in rural America for 100 years. Directly linking the USAVM faculty members as resources and partners of the local landholders and ANCA staff can increase agricultural business competitiveness through educational assistance to small and medium sized enterprises will improve the quality of life and sustainability of villages. The collaboration of the institution leadership is seen as the primary challenge in this partnership development.

As the agricultural businesses become economically stronger and self-sustaining, they often conduct their own research and hire university graduates to lead their research and development programs. This in turn leads to less direct dependence on the traditional extension educational systems and more collaborations and partnerships. This is the result of the success of our graduates in developing and leading businesses and production systems in
agriculture. We now have more and more educational programs provided for individuals and business clientele that demand higher level programs and are willing to pay for the service.

6. Conclusions

Romania is a new European Union member state and as such has many challenges and opportunities ahead. The USAXM universities at Cluj-Napoca, Iasi, and Timisoara have taken the lead to help landholders and agribusinesses in their respective region of Romania advance. These are excellent and commendable efforts but are independent and self-funding initiatives. If the country is to move forward in rural and agricultural development it must have a coordinated conduit between the universities and the educational institutions on the country.

Issues include rural agricultural business & marketing, contractual work systems in agriculture, sustainable crop production, forage & grazing systems to preserve environment, and animal production & milk quality assurance. The long-term outcome of this cooperative arrangement could be to establish a Center of Extension Education at each USAVM with an active advisory board of agribusiness leaders, employers, landholders, and ANCA representatives which conduct their own regular continuing educational programs.

We are confident that it will position the USAVMs to support educational outreach that will contribute to the sustained economic growth of rural villages through education of both the public and private sectors.