

Abstract

The International Programs Office of the College of Agriculture and Life Sciences at Cornell University in partnership with the Universidad Autónoma de Yucatán, the Universidad Veracruzana, and the Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias (INIFAP)-Veracruz propose a demand-driven, integrated and interdisciplinary, systems-oriented program of training and decision support of animal industry in the Gulf region of Mexico. This program will facilitate efforts to boost productivity, profitability, and rural incomes in the region. This partnership addresses the challenges and opportunities arising from the *global livestock revolution*, namely to identify and support agricultural and environmental practices that enhance Mexico's competitiveness in the production of animal-source foods. Our program is tailored so that Mexican institutions, through innovative applications of sustainable and profitable technologies to the ruminant livestock component of agricultural systems, will acquire the additional necessary human capacity to lead animal agricultural development in the Gulf region. This legacy and improved productive efficiencies are expected to enhance competitiveness of ruminant animal-based commodities in a trade-led rural economy and promote investments in animal industry.

The strategic priorities of UADY are to strengthen two graduate degree programs: the Master's degree in Tropical Animal Production and the Master's degree in Management and Conservation of Tropical Natural Resources. Our program integrates multiple learning and knowledge-generating activities on a continuum from problem definition to decision support of producers and the professionals who advise them. The target farmer groups and ecosystems are managers of beef cattle systems that depend on

pastures and managers of sheep and goat systems, many who are smallholders, that exploit landscapes with high biodiversity.

The fulcrum for the partnership comprises 1) a core set of student research projects (including eight scholarships for four Mexican Master's students fully funded by Cornell, 20 UADY graduate students, and other students at both institutions), 2) a core curriculum of four jointly offered courses involving faculty from both institutions and similar enrollments by UADY and Cornell students that is supported by global classroom elements and field laboratories conducted in the Gulf region, 3) undergraduate student exchange where four students each from UADY and Cornell also participate in core courses and projects, and 4) short-term training for four UADY faculty members. Collaborative interdisciplinary research priorities will be initially examined with a series of short courses that will facilitate problem definition as key partnership inputs, followed by joint teaching and fact-finding exercises, student and faculty exchange, and specific research projects.

The core curriculum comprises four Cornell courses involving students and faculty from Mexico and Cornell. Two core courses will also contain "living laboratory" field trips for motivated students selected to participate. Theme groups will share with all participants what they learned from their own projects and the living laboratory in a global classroom setting. An internet and radio broadcast platform will be maintained to document multiple activities and distribute information. Other students and scientists from the partner institutions likely will also contribute to the overall problem-solving agenda, thus forming a substantial team of student and faculty collaborators. Our goal is

to build a partnership that will endure, and evolve, through achievement on the nexus of complex economic, educational, social and development challenges.

Each institution within this partnership has a strong commitment to international education activities. Cost-sharing in excess of one-half million dollars to support a balanced and integrated portfolio of activities clearly demonstrates resolve to initiate, and to continue, this relationship.

A pre-test followed by a sequenced battery of surveys of UADY and Cornell faculty and students, as well as producers, policy makers and other industry professionals, will be conducted to assess the value of each partnership activity. This survey information will be provided to the evaluator prior to each of her two visits to UADY to facilitate interviews and discussions of issues, challenges and program improvements. Other evaluation elements include facilitating farmer exposure, training, and extension contacts (rather than adoption *per se* or impacts on income or production). We will attempt to track key economic indicators based on secondary sources (e.g., livestock numbers, production, intra-regional trade, revenues). Our emphasis is on the creation of a sustainable partnership that can facilitate improvements in the livestock production and marketing system, and to enhance certain outcomes (soil-plant-animal, productivity, profitability) and increase the adaptability of actors in the system to respond to changes in technology, markets, or trade policy.