AFTER ACTION REPORT

Wisconsin/Nicaragua Partners, Wisconsin National Guard and UNA Collaboration
Strengthening Agriculture and Rural Development
22 – 30 July 30, 2005

Major Activities, Observations, and Recommendations by:

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PHASE I (PREPARATION)

ISSUES:

Although the opportunity to take part in this mission allowed minimal preparation time, I did receive word that our counterparts would like me to present information on making, preserving, and feeding high quality silage from tropical forages.

DISCUSSION:

Being invited to assist the Wisconsin National Guard with an agricultural development project was a terrific opportunity. Even though there wasn't much time to prepare, having guidance ahead of time about the desired objectives of my assignment allowed me to be able to do some background research on silage from tropical forages before I left, which was very helpful to me.

RECOMMENDATION:

If more projects like this will be possible in the future, I suggest that we work on improving communication among and between all cooperators in advance of the mission. There is a great deal of synergy we can gain from discussing the objectives and logistics among and between everybody involved.

PHASE II (EXECUTION)

ISSUES:

1. Abundant production of forages during the winter (rainy season) months with inadequate production in dry season.
2. Limited capital, materials, and harvesting ability necessary to conserve forage by conventional means.

3. No forage quality testing resources available in Central America .

DISCUSSION:

We were able to achieve several objectives. With the help and coordination of our Nicaraguan counterparts I was able to complete three significant activities in Nicaragua:

1. Consulting with and advising the manager of the diversified agricultural enterprises at the Selva Negra coffee estate.
2. Lectures on using silage to conserve forages for livestock feed (presented to 18 undergraduate students and faculty at the UNA satellite campus in Camoapa and 20 animal science faculty at the Managua campus).
3. Discussions with UNA animal science faculty regarding ongoing research into integrated livestock forage production, conservation, and feeding systems.

RECOMMENDATIONS:

1. The Selva Negra farm is a model of sustainable agricultural production for Nicaragua. The owners have embraced environmental protection, agricultural profitability, renewable energy, and social justice and lead by example in all these areas, offering their experience to other farmers by way of organized workshops. I have only a few suggestions for improving the management of the agricultural enterprise. These include using plastic covers over the ash piles that are saved for use as fertilizer to keep the soluble potassium from being lost; fine-tuning the grazing management system to incorporate stockpiled forages toward the end of the rainy season; and experimenting with using silage as a way of conserving forages produced on-site to minimize the amount of hay that needs to be shipped in.
2. The faculty in the animal science department at UNA are doing some very worthwhile research on forage quality, management, and feeding using native and introduces species. They use silage as a means of conserving forage for the livestock on the campus. My suggestion is that they focus next on researching innovative ways for the ordinary farmers in the central and northern livestock producing regions to make silage. This will require some thought on addressing the labor, machinery, facilities, and climate constraints present in those areas.
3. Along with addressing the problem of lopsided seasonal forage dry matter production, there needs to be a means of assessing forage quality from the wide variety of herbaceous and woody forages that are commonly fed. Near infrared reflectance (NIR) forage testing ability would be a huge asset in achieving this goal. Dr. Gerald Nolte has been working with counterparts in Nicaragua and the United States to make this happen, and all cooperating agencies should support this project in any way possible.
4. There has been much progress made in Nicaragua on using controlled grazing systems to improve forage management. This effort needs to continue so that the practice becomes standard procedure for dairy and beef livestock operations. Just like at Selva Negra, the concepts of conserving the excess winter forage production through stockpiling, ensilage, or other innovative means needs to be explored. Dr. Nolte has suggested also looking into the possibility of using hay ricks to dry stored forage near the end of the rainy season. No method should be automatically ignored—with ingenuity, there are many possible ways to conserve forage.

5. The director of UNA, Fco. Telemaco Talavera, has wisely embarked on an initiative to improve communication and coordination among and between university departments and other entities affected by the university's programs. To this end, it would be helpful if there were easier means of communication between the animal science department and the other areas of the UNA campus. Increasing communication, contact, and cooperation with the main campus will help to synergize the effectiveness of the faculty, students, and the research being done.
6. There is much interest in organic and sustainable production systems. While we were in Nicaragua, we were fortunate enough to have been able to attend the nation's first organic agriculture symposium. Environmental quality and farm profitability and both important issues to the farmers and researchers in Nicaragua, and it was very encouraging to learn about the progress being made in this area.

SUMMARY:

The mission was successful, in my opinion. Helping the farmers and agricultural specialists in Nicaragua address the challenges of inconsistent forage dry matter production and poor forage quality will make a tremendous impact on the rural economic development of this agrarian nation. Setting up an NIR forage testing facility in Nicaragua could help the whole Central American region to improve its diary and livestock production system and would ultimately improve the whole region's economic development. Organic and sustainable production methods have substantial potential for improving both environmental quality and farm profitability, which will both lead to a higher quality of life for the Nicaraguan people.

In my opinion, this initiative by the Wisconsin National Guard can accomplish a great deal by means of improving peoples' lives and fostering good relations between the United States and Nicaragua. I hope projects like this will continue in the future.