

Preparing Agriculture Students to Work with a Spanish-Speaking Workforce



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Abstract

The number of Spanish-speaking workers continues to grow as they become a critical part of the workforce in many segments of the agricultural industries and agribusiness in the state of Pennsylvania. In fact, in some states Hispanics are viewed as the backbone of the agricultural workforce. These workers bring foreign language and cultural differences to the workplace. Colleges of Agricultural Sciences are challenged to prepare their graduates for successful management roles in the agricultural industries. Increasingly, success in these positions includes the ability to relate to and communicate with Spanish-speaking workers. This paper describes a Spanish immersion program in the College of Agricultural Sciences. The Spanish for Agricultural Industries Program (SAIP) was created due to the initiative of agricultural professors who responded to the requests and needs of the agricultural industries they work with in Pennsylvania. The program was designed within the context of the agricultural industries to teach students Spanish language skills and provide an understanding of the varied Spanish-speaking cultures. Benefits of the program were assessed by Spanish language examinations conducted by Spanish teachers in Mexico and by responses to a questionnaire administered to student participants. Recommendations are offered for strengthening this program.

Introduction

The rise of Spanish-speaking workers in agricultural industries such as mushroom production, landscaping, dairy, poultry, horticulture, food science, and animal husbandry has created a critical need for professionals who can work with native speakers of Spanish (Martinez-Espinoza, Fonseca, and Chance, 2003). In 2001, nearly 46% of hired farm workers were Hispanic (Runyan, 2002). The ability to speak and understand Spanish is becoming an important employment skill, providing a competitive edge in the workplace. Thus, in response to the needs of the agricultural industries and to provide the agricultural students with more valuable prospects in their job searches, the College of Ag Sciences developed the Spanish in Agricultural Industries Program (SAIP). According to the U.S. Bureau of Labor Statistics, the growth of the Hispanic labor force is

exploding with a projection of nearly 23.8 million workers by 2012 (Miltra, 2004). While it is imperative that Spanish-speaking workers learn the English language, this is no easy task that workers can accomplish overnight. Learning the workers language can have important benefits for employers and their Spanish-speaking employees. The ability to communicate clearly and effectively with workers can reduce the number of serious accidents that may occur in potentially hazardous working conditions. The National Institute for Occupational Safety and Health reported 101 fatal injuries to foreign-born workers in the agriculture industry in the U.S. in 2000 (Sokas, 2002).

Additionally, making the effort to learn to communicate in the workers' language shows that management cares about the worker as well as respects the worker's culture. The ability to speak an employee's language helps workers and managers to build more effective relationships which leads to improved morale and a more productive workforce (Berta, 2005; Maloney, 2001).

Spanish language programs customized for specific jobs are being used by a growing number of companies who want to help their employers communicate with Spanish-speaking customers, suppliers, and employees (Employers, 2007). Given the high turnover rate in some industries, programs to teach English to Spanish-speaking employees can be costly. Some companies are finding it more economical to support programs to teach their managers Spanish (Berta, 2005). Community colleges are taking the lead in providing Spanish language classes tailored to specific fields of work (Employers, 2007). Although more costly than other methods, immersion courses where students are immersed into the language and culture of the country are an effective method of learning Spanish (Smith and Ramos, 2001).

Purpose and Objectives

The purpose of this paper was to assess the pilot Spanish for Agricultural Industries Program for undergraduate students of agriculture. The following objectives were addressed:

1. To describe the Spanish for Agricultural Industries Program.
2. To identify the strengths, weaknesses, and benefits of the program to students.

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Preparing Agriculture

3. To make recommendations for improvements to strengthen future program offerings.

Methods and Procedures

Description of the Program

The pilot program was carried out from the spring semester of 2006 through the spring semester of 2007 in the College of Agricultural Sciences at The Pennsylvania State University. The program consisted of a three-course sequence of basic Spanish language courses ending with a three-week immersion experience in Mexico. This program was designed and coordinated by a faculty member from the Spanish Department of the College of Liberal Arts who was hired by the College of Agricultural Sciences to work in-house to create and develop this program. This SAIP sequence was designed in a similar manner to most basic language programs. However, the course content had an entirely agricultural focus in terms of the entire language learning experience.

Preparatory Courses. Spanish 105, the first course of the three-course sequence, was intended for students who had had little or no experience in learning to communicate in Spanish. It was designed to develop basic oral and written communication skills using specialized (agricultural) vocabulary. In addition, the course was the initial step toward developing the student's awareness of cultural differences as well as developing an understanding of the Spanish-speaking laborer as an individual and a human being. Language content focused on the learning and understanding of some of the major grammatical concepts, the development of accurate pronunciation, and the acquisition of work-related vocabulary.

Spanish 106, sequence to Spanish 105, was designed to further the development of language skills practiced and gained in Spanish 105. Spanish 197B, the nine-credit culminating course, began during the spring semester. Two credits were completed on campus during the regular semester. This part of the class helped students gain a greater understanding of the history and culture of the people of Spanish-speaking countries. Additionally, a portion of this class was devoted to helping students plan fundraising activities, as well as, prepare for their travel experience. The remaining seven credits were completed through the three-week immersion experience which took place in Cuernavaca and Buenavista de Cuéllar in Mexico.

The Immersion Experience. Eleven students, accompanied by four faculty and staff from the College of Agricultural Sciences, participated in the immersion experience. The students included five females and six males. All participating students were from various majors in the College of Agricultural Sciences. Their majors included agricultural and extension education (3), turf grass (3), horticulture (3), and animal science (2). Additionally,

several students had minors in animal science. Of the eleven students, six were graduating seniors. Students had completed both Spanish 105 and Spanish 106, or had acquired an intermediate level of Spanish speaking ability and were matriculating into Spanish 197B.

During their stay in Mexico, all students lived with host families and attended intensive Spanish classes five days a week for four hours a day. Only Spanish was used in the classroom and all classes were taught by native Spanish speakers employed by the Cemanahuac Language Institute in both Cuernavaca and Buenavista de Cuéllar. While the maximum class ratio was 1:5, most of the classes contained only three or four students. In some cases the ratio was 1:1. Agricultural vocabulary was emphasized during the immersion courses. Afternoons were filled with visits to historical and cultural sites, as well as major agricultural industries and small family operated agricultural businesses.

Students experienced Mexico from two different perspectives. While in Cuernavaca (pop. 1,000,000) the students experienced living in a major Mexican city. In Buenavista (pop. 9,000), a rural agrarian community, the students were able to experience a daily lifestyle similar to many of the immigrant workers with whom they might work in the future. Visiting agricultural sites while residing in Cuernavaca required a lot of preplanning with regard to scheduling, and transportation. Buenavista was so small that afternoon excursions to the local family agricultural businesses involved nothing more than a five to 15 minute walk. During the rural experience local residents gave students classes in leather making, embroidery, cooking, horseback riding, guitar lessons, Mexican folk songs and dance.

Special presentations by governmental dignitaries such as the Secretary of Agriculture of the State of Morelos, and visits to the Center for Research and Development for Agriculture and Livestock Production at the Universidad Autónoma de Estado de Morelos were a part of the educational agenda. Opportunities to learn about the culture and the history of the peoples of Mexico were provided through field trips to historical sites in Mexico City as well as in the local communities. Additionally, students were required to complete a project, either as an individual or as a group. The project required students to reflect on their immersion experience and create a visual presentation that captured the essence of the experience. Topics were based on their daily life experiences, urban versus rural experiences, agricultural site visits, cultural and historical site visits and academic experiences.

This program was well designed to provide a cultural learning experience as well as maximize the Spanish language experience for each student. In Mexico, each Friday during the last hour of classes, students were given an examination to evaluate their level of Spanish proficiency. The results of the

Table 1. Schedule of Events/Activities during 3-Week Summer Immersion Program

Day/Date	Morning Activities	Afternoon Activities
Friday May 18, 2007	Professor Borys and one Ag Sci faculty arrive in Mexico.	A third Ag Science faculty arrives. All three travel from Mexico City airport to Cuernavaca, Mexico.
Saturday May 19, 2007	Prof. Borys provides other faculty a "bird's eye" tour of downtown Cuernavaca.	All three visit the Cemanahuac Educational Community and Borys finalizes details for the language program.
Sunday May 20, 2007	Borys and one faculty go to Mexico City to meet the students at the airport.	Faculty escort students back to Cuernavaca where host families meet students at the Cemanahuac Educational Community.
Monday May 21, 2007	Students arrive by 8:15am at Cemanahuac for an oral placement exam. By 9am all students are assigned to appropriate classrooms and begin formal Spanish classes.	Students receive mandatory safety orientation by Cemanahuac staff. <i>What to do and what not to do; where to go and not to go while in Cuernavaca and traveling in Mexico.</i>
Tuesday May 22, 2007	Classes 9am – 1pm	Visit to Nuestro Pequeños Hermanos (Our Little Brothers and Sisters), an orphanage. The orphanage is nearly self-sufficient in food production. It raises its own livestock and poultry, and has its own fish farm and water purification system. Sugarcane and corn are produced to feed its animals. Plans are underway to develop greenhouses to cultivate vegetables.
Wednesday May 23, 2007	Classes 9am – 1pm	Walking tour of downtown Cuernavaca. Included were visits to the Zocalo, the Borda Gardens, and the Cortes Palace.
Thursday May 24, 2007	Classes 9am – 1pm	Free afternoon
Friday May 25, 2007	Classes 9am – 1pm; Weekly language placement exam.	Free afternoon
Saturday May 26, 2007	One faculty returns to U.S and another faculty arrives in Mexico City. All day field trip to Mexico City.	Guided tours of Mexico City's Historic Center: the Templo Mayor, the National Palace, Bellas Artes, and the Zocalo. Students learn about the great Mixteca civilization of Mesoamerica as well as contemporary history and politics portrayed in the murals of Diego Rivera and David Alfaro Siqueiros.
Sunday May 27, 2007	Day-long field trip to Cuicuilco and Teotihuacan.	Students learn about the ancient civilizations that occupied Mesoamerica.
Monday May 28, 2007	Classes 9am – 1pm	Free Afternoon
Tuesday May 29, 2007	Classes 9am – 1pm	Field trip to Avigrupo, Mexico's third largest company in poultry production. The group was accompanied by two veterinarians who are staff members of the Secretary of Agriculture in Morelos. Additionally, students visit the University Center for Research and Development for Agricultural and Livestock Production at the Universidad Autonoma del Estado de Morelos - one of Mexico's major centers for research and development.
Wednesday May 30, 2007	Classes 9am – 1pm	Field trip to the ancient ruins and observatory of Xochicalco where students explore caves and learn more about the pre-Columbian indigenous people, how they lived in harmony with nature.
Thursday May 31, 2007	Classes 9am – 1pm	Field trip to Floraplant Greenhouses where cuttings are produced for exportation to Canada, the U.S. and Europe as well as finished ornaments for the national market. This corporation markets more than 200 varieties of ornamental plants.
Friday June 1, 2007	Classes 9am – 1pm; language placement examination.	Free afternoon
Saturday June 2, 2007	One faculty returns to U.S. Field trip to Mexico City. Another PSU team member arrives to join the group.	Visit to the Museum of Anthropology with an opportunity to see world renowned archeological findings of the great Mesoamerican civilizations. Overnight stay in the Historical District of Mexico City.
Sunday June 3, 2007	Free time. <i>Ballet Floclorico at Bellas Artes</i> is optional.	Travel to Buenavista de Cuéllar – new home for the final week. Join local families in town park for weekly summer Sunday communal supper.
Monday – Wednesday June 4 – June 6, 2007	Classes 9am – 1pm	Visits to small family run businesses: rabbit farm; gamecock breeder; tannery, 28 cow dairy farm; fish farm; cheese factory; local farmers market; local slaughter house; local green houses; cooperatives and milpas. Afternoon activities at the school include guitar lessons, Mexican folk songs, and dance lessons. Students also have the opportunity to go horseback riding, hiking, spend time with young people at the school, or take classes from local residents in leather making, embroidery and/or cooking.
Thursday June 7, 2007	Classes 9am – 1pm	Field trip to Taxco, an old colonial city made famous for its silver mines.
Friday June 8, 2007	Classes 9am – 1pm	One student and one faculty return to the U.S.
Sat. & Sunday June 9 & 10, 2007	Return to Mexico City for an overnight stay in the Historical District. Everyone returns to the U.S. Sunday.	
Special Evening Activities		
Day/Date	Activity/Event	
Monday May 21, 2007	Presentation by Secretary of Agriculture of the State of Morelos, Dr. Jorge Morales Barud on the agricultural industries in the state of Morelos, Mexico.	
Friday May 25, 2007	Presentation on Corn in Mesoamerica by Sr. Francisco Guerrero on the evolution of corn as a plant, its role and importance in Mexican culture, and its uses in preparing traditional Mexican cuisine. Students have opportunity to grind corn to make tortillas.	
Monday, June 4, 2007	PSU students meet and became acquainted with a group of young people in the community at the school. As a result students meet with them during the week to hang out and talk, or play basketball and/or soccer.	
Thursday, June 7, 2007	The host families have a farewell party for the PSU students. Students feast on their favorite Mexican foods, sing and dance.	

examination were used to place each student in the most appropriate level of Spanish class for the coming week. A schedule of events/activities during the three-week summer immersion program is listed in Table 1.

Measures for Assessment of the Program

To assess the effectiveness of the SAIP, data were collected from two sources. After 60 hours of formal Spanish language instruction, students were given an examination to measure their abilities in four areas of Spanish language skills: oral, comprehension, reading, and writing. Examinations were administered by the Spanish instructors of Cemenahuac during the last day of classes. The scale used to rate student accomplishment was based on a percentage of 100%: 90 to 100% = excellent; 80 to 89% = very good; 70 to 79% = good; 60 to 69% = fair; and 50 to 59% = poor.

Additionally, a 17-item survey, administered at the end of the experience, was constructed by the Program Coordinator to survey the students' perceptions of this pilot program. Nine open-ended questions asked students for advice they would give to others considering this program, what the students and the professor could do to better prepare for the experience, recommendations about the on-campus part of Spanish 197B, opinions regarding the helpfulness of Spanish 105 and 106 in preparing students for the immersion experience, whether or not the experience was a good fit for the College of Agricultural Sciences, how students expected to use what they learned in Mexico, and how their view of Mexico and Mexican culture had changed as a result of the immersion experience. Seven additional

Preparing Agriculture

questions asked students to rate the housing and Spanish classes in Cuernavaca and Buenavista, the field trips, and the pre-experience assigned readings. Finally, students were asked what they did not bring, but wished they had packed for the trip.

Findings

Language Acquisition

Language examination scores ranged from very good to excellent in all areas. Students rated highest in reading and comprehension of Spanish. (See Table 2)

Table 2. Mean percentage and range of scores for Spanish language examination (N = 11)

Language Skill	Range of Scores	Mean % Correct
Lectura	87% - 100%	92.4%
Comprehension	83% - 96%	90.0%
Oral	83% - 94%	87.2%
Writing	81% - 92%	85.6%

Note: Scale: 90 - 100% = Excellent; 80 - 89% = Very Good; 70 - 79% = Good; 60 - 69% = Fair; 50 - 59% = Poor.

Perceptions of the Immersion Experience

Essential Advice to Peers. Students were asked to indicate the most essential advice they would give to one of their peers who was considering participating in this experience. “Practice, practice, practice” speaking Spanish before the experience was echoed by several students (55%). Specific suggestions included spend time with a Spanish speaking conversation partner, read Mexican newspapers, listen to Spanish music, and participate in an intercambio experience on campus. Other advice included “go with the flow, be accepting of the culture,” “keep an open mind,” and try not to get too frustrated the first few days.”

Better Preparation for the Experience. Students were asked to reflect back on the experience and think about what they and their professor could have done better to prepare for the experience. Most respondents (90%) wished they had studied more during the semester. Practice conversing with others, vocabulary and “survival Spanish” phrases were mentioned specifically.

A major goal of the on-campus portion of Spanish 197B was to help students gain a greater understanding of the history of Spanish-speaking countries and culture of the people, and to help students plan travel preparations. However, the majority (81%) of responses regarding what the professor could do better to prepare students recommended that more time during Spanish 197B be devoted to the practice of speaking the Spanish language. Several specific suggestions were mentioned:

Pair students with each other to practice conversing in Spanish.

Arrange opportunities for students to converse with native-Spanish speakers on campus.

More Spanish spoken by the professor during class.

Incorporate more Spanish used in everyday conversation, such as in the store, with taxi drivers, and bartering in the marketplace.

Conduct the last few classes almost totally in Spanish to simulate the Mexico experience.

Appropriate Credit for the On-Campus Portion of Spanish 197B. During this pilot year of the Spanish for Agricultural Industries program, the on-campus portion of Spanish 197B was offered for two credits and met once a week. Students were asked to consider whether or not the campus portion of SP 197B should be a three or four credit course which would meet twice a week for two hours each time. Eight (72%) of students agreed that the course should be offered two times a week and most agreed to 3 to 4 credits.

Interest in the Four Required Readings. As part of the preparation for the immersion experience, students were assigned four readings. These included:

Focus on Mexico: A guide to the people, politics, and culture, by John Ross (2002).

Inside Mexico, by Paula Heusenkveld (1994), provides an historical and cultural understanding of Mexican people.

La Malinche, by Juan Miralles and Juan Miralles Ostos (2005), is a fictional tale of the Mexican Conquest.

Song of the Hummingbird, by Graciela Limon (1996), is the history of the indigenous peoples of Mexico told through the eyes of an old Mexican woman.

Students were asked to rank the four readings in terms of their interest and impact on their development of cultural awareness. The rating scale was 1 = least interest and 4 = most interest. Students rated *Song of the Hummingbird* as of most interest and *La Malinche* as of least interest in terms of helping them develop cultural awareness of the Mexican people.

Helpfulness of Spanish 105 and 106. When asked how helpful Spanish 105 and 106 were in preparing students for the immersion experience, students overwhelmingly (100%) agreed that these courses were very helpful. More specifically, students mentioned that they were able to effectively communicate in Latin America. “I was very pleased with the level of comprehension and communicative ability I possessed.” According to students, the courses did a great job helping with pronunciations. “I know that my maestros (teachers) were impressed when I could take time to make sure that I put emphasis on the correct syllable.” Another student stated, “I feel that I had a solid knowledge of verb conjugations before coming here.” Several students commented that knowing agricultural vocabulary was very helpful

during the many visits and agriculture-related field trips.

Suggestions for Reorganization of Spanish 197B. Creative suggestions for the reorganization of Spanish 197B were requested. In addition to recommendations stated earlier regarding greater emphasis on practicing language and speaking skills, other recommendations were offered. Students suggested that underclassmen in the immersion experience be invited to present their experiences with students in future Spanish 197B classes so that new students could benefit from the experiences and lessons learned from those who had participated in the program. It should be stressed that the experience is a class and not a vacation “by any means.” Another suggestion was to allow students to begin their projects before coming to Mexico. One student felt that a review of tenses would be helpful. Finally, due to concerns regarding maturity, it was suggested that participation in the immersion experience be limited to students who have attained at least sophomore standing in college.

Was the experience a “good fit” for the College of AgSci? Students overwhelmingly (100%) agreed that this experience was a good fit for the College of Agricultural Sciences. Students used the following words to express their feelings: “a very good fit,” “100%,” “Absolutely,” “A perfect fit,” “Awesome opportunity.” Reasons for these responses included: recognition that the agricultural industry is changing and there is a need to be able to communicate in Spanish; the importance of gaining multi-cultural perspectives; and the ability to see first-hand the culture that a lot of workers come from. An additional benefit was the opportunity to meet and work with students from other agriculture majors that they would not have gotten to know otherwise.

Plans for Use of New Learning. When asked how the students will use the learning gained from this experience, six students specifically say they expect to use their Spanish speaking skills in future agriculture industry careers. They also mention the importance of understanding the Mexican culture in building relationships with Mexican agriculture workers. Additionally, one student plans to use his skills to help ESL high school students make a smooth transition to the general agricultural science classroom, and another plans to teach a modified agricultural Spanish course in high school.

Changes in View of Mexico and Mexican Culture. Most students (90%) ended the experience

with a different view of Mexico and the Mexican culture than when they began the program. Some of the gains included a better understanding of the indigenous roots of the Mexican people; recognition that the differences between Mexicans and Americans are fewer than previously believed; a greater appreciation for the network of Mexican families; and a better understanding of why Mexicans chose to immigrate to the United States. Several students mentioned the noticeable distinction between social classes.

Rating of Housing and Spanish Classes in Cuernavaca and Buenavista. While students rated the accommodations in both locations as “very good to excellent”, several comments suggested that the small rural setting of Buenavista provided a greater opportunity to speak Spanish and learn about the Mexican culture. Very little English was spoken in Buenavista, forcing students to learn and speak Spanish. Scores for accommodations ranged from 4.45 to 4.72 on a 5 point scale. (See Tables 3 and 4)

The Spanish classes were rated “very good to excellent” in both locations. However, the rating was slightly higher for classes in Buenavista. Scores ranged from 3.72 to 4.90 on a 5 point scale. Respondents specifically mentioned the benefit of having small classes. *“I was one-on-one this week and had a great experience. Smaller classes are best!! They provide great opportunities for conversation.”* Distractions due to the open outdoor setting were a concern voiced by a few students.

Table 3. Student rating of housing and accommodations in Cuernavaca and Buenavista (N=11)

Accommodation	Cuernavaca		Buenavista	
	Mean	Standard Deviation	Mean	Standard Deviation
Distance to the school	4.54	.52	4.63	.50
Sleeping arrangements	4.72	.46	4.54	.52
Meals	4.63	.50	4.45	1.21

Note: Scale 1= Poor; 5 = Excellent

Table 4. Student rating of Spanish classes in Cuernavaca and Buenavista (N=11)

Evaluation Criteria	Cuernavaca		Buenavista	
	Mean	Standard Deviation	Mean	Standard Deviation
Teacher Quality	4.54	.52	4.90	.30
Amount Learned	4.27	.64	4.54	.68
Learning Environment	4.18	.60	4.27	.64
Testing/Evaluation	3.72	1.01	4.10	.73

Note: Scale 1= Poor; 5 = Excellent

Value of Agricultural and Cultural Visits, Field Trips, and Presentations. Students were asked to rate the value of the agricultural and cultural visits, field trips, and presentations they experienced as a part of the immersion program using the scale: 1 = poor and 5 = excellent. Scores ranged from 2.50 to 5.00, with 18 of the 24 activities (75%) rated 4.00 or above. Table 5 lists the site visits selected to provide students with cultural information and an historical background of Mexico. Table 6

Preparing Agriculture

lists the examples of small family owned agricultural businesses that students had an opportunity to visit. Many of these were operated out of garages and backyard pastures. Table 7 lists the recreational and cultural activities that students chose to participate in based in their level of curiosity and interests.

Experience/Site	Mean	Standard Deviation
Teotihuacan (an ancient city)	4.63	.67
Corn in Mesamerica (presentation and workshop)	4.63	.50
Floraplanta (greenhouses)	4.54	.68
Xochicalco (an ancient city)	4.45	.68
Presentation by Secretary of Agriculture of the State of Morelos	4.27	.90
Avigrupo (poultry experience)	4.18	.98
Nuestros Pequeños Hermanos (Orphanage)	4.00	1.00
Visit to Mexico City (Templo Mayor, National Palace, zocalo of Mexico City)	3.63	1.02
Museo de Antropología (Museum of Anthropology)	3.09	.83

Note: Scale 1= Poor; 5 = Excellent

Experience/Site	Mean	Standard Deviation
Visita al Rastro (track)	4.80	.44
Visita a un Rancho Para Ordenar (dairy farm)	4.50	.92
Taxco (silver mining city)	4.42	.53
Visita a la Huerta De Jitomates, Sembrar Maiz (corn)	4.11	.78
Gallos De Pelea (chickens)	3.45	.93
Visita a San Fe- Arboles Frutales (orchards)	3.37	.74
Queso (cheese)	3.14	1.46
Conejos (rabbits)	2.50	.83

Talleres (Workshops)	Mean	Standard Deviation
Guitarra (guitar)	5.00	.00
Caballos (horses)	4.85	.37
Piel (leatherwork)	4.70	.48
Clase de Baile (dancing)	4.66	.51
Bordado (embroidery)	4.50	1.00
Cocina (cooking)	4.33	.57
Canciones Populares Con Nacho (singing folk songs)	4.00	1.41

Note: Scale 1= Poor; 5 = Excellent

Finally, when students were asked what items they wished they had brought with them, the most frequently mentioned items were a laptop computer, walkie-talkies, hand sanitizer, bug spray, and anti-itch cream.

The following are representative of overall reflections that participating students shared about the Agricultural Industries program:

"I learned more Spanish and culture than I could learn in a classroom in three years."

"The improvements made in my Spanish-speaking abilities, as well as my exposure to another culture, were truly priceless."

"It was probably the best decision I have made so far in college."

"Any student who has a passion for people and helping others in the United States through agricul-

ture would benefit from these classes and the immersion experience."

"I would suggest that Spanish proficiency be required for all students in the Ag College."

"Traveling to Mexico was an eye-opening experience and I would recommend this course (or set of courses) to anyone in the College of Agricultural Sciences."

Conclusions/ Recommendations

Students were generally well-prepared for the immersion experience, as evidenced by their ability to communicate with their host families; score very good to excellent on Spanish language examinations; manage day-to-day activities such as using taxi cabs, ordering in restaurants, and shopping in the marketplace; and relate to the educational field trips to agricultural, cultural, and historical settings. Responses to questionnaire items, including rating scales and open-ended questions, confirm that students believed they benefited from this program. Responses indicate that students increased their Spanish language skills and increased their understanding of the Mexican culture and the kinds of workers they may work with, and likely supervise, in future agricultural industry careers.

Additionally, students increased appreciation and respect for differences across cultures and peoples. Initially, the instructor had been concerned that three weeks may not be enough time to accomplish the goals of the course, given his own experience with study abroad programs. However, due to the intensity of the experience, the instructor concluded that three weeks was adequate to meet the goals and objectives of the program.

As the diversity of the United States population continues to increase, appreciation of other cultures will become even more important. *"Study abroad programs have been considered one of the more effective strategies for preparing our future citizens to interact effectively in an increasingly global environment"* (Nassar, 2004, p. 10). This program should be

adjusted according to the recommendations below and expanded.

Based on student responses, the following recommendations for the Spanish in Agricultural Industries program are offered:

Limit participation in the immersion experience to students who have attained at least sophomore standing in college.

Make the on-campus portion of Spanish 197B a 3 to 4 credit course that meets twice a week.

Include opportunities for students in Spanish 197B to converse with native Spanish speakers on campus during the semester (e.g. meet with Spanish student organizations)

Incorporate more conversational Spanish in 197B.

Implications

The goal of agricultural education is to prepare future workers with the skills and abilities to be successful in the field. As the labor force in agricultural industries becomes increasingly Hispanic, it is incumbent upon the field of agricultural education to incorporate educational objectives and goals that prepare future managers to work most effectively with an increasingly Hispanic workforce. According to Morales (2005), the fundamental goal of the manager is to establish an environment that promotes and facilitates communication. As noted by Smith and Ramos (2001, p. 3), *"The ability of managers to speak to their Hispanic workers is critical to the success of these employees and ultimately the success of the farm."* Maloney (2001) further suggests that managers who learn Spanish will gain the respect of employees for making the attempt to learn their language. Additionally, learning about the culture helps managers use supervisory techniques that are most acceptable to employees from another culture. While this was a pilot program and the findings cannot be generalized to other settings, this program has potential for further expansion and use in other universities. It provides a model that can be adapted to other colleges, universities, and industries that employ significant numbers of Spanish workers.

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