

## ENGAGING HISPANIC STUDENTS IN AGRICULTURAL EDUCATION AND THE FFA: A 3-YEAR CASE STUDY

**T. Grady Roberts, Associate Professor**  
University of Florida

**Johnathan L. Hall, Graduate Assistant**  
**Gary E. Briers, Professor**  
Texas A&M University

**Ernie Gill, LPS Specialist**  
National FFA Organization

**Glen C. Shinn, Professor**  
**Alvin Larke, Jr., Professor**  
Texas A&M University

**Paul Jaure, Consultant**  
Beeville, Texas

### Abstract

*This article describes the outcomes of field-based efforts to increase diversity in agricultural education programs and the FFA. This study focused on three schools in San Antonio, Texas. Guided by Rogers' (2003) theories of diffusion of innovations, a series of six intervention strategies was implemented: (a) provide specific FFA or agricultural education experiences for student opinion leaders; (b) provide specific experiences for parents, alumni, boosters, and school administrators (champions and opinion leaders); (c) provide professional development for teachers (ensure compatibility); (d) introduce new curricula to allow for an expansion of the agricultural education program (trialability); (e) provide access to an on-site project advisor (change agent); and (f) provide project leadership and oversight through a partnership among university faculty members and National FFA staff. Evidence indicated that all three schools increased Hispanic enrollment in their agricultural education program and membership in the FFA. Each school experienced an increase in the number of Hispanic students participating in local, state, and national FFA activities. Additionally, each school increased the total number of local, state, and national FFA activities in which they participated. The three schools established FFA alumni chapters with parents and/or boosters engaged in activities to support students.*

### Introduction

Founded in 1928, the National FFA is the largest intra-curricular youth organization in public secondary schools in the United States with 490,017 members in 7,210 chapters (National FFA Organization, 2007). However, the current demographics of FFA and agricultural education do not align with the 21st century ethnicity of many public schools. Agricultural educators concur that the FFA makes a positive difference in the lives of students—but only for those

students who enroll in agricultural education and engage in FFA activities. A great opportunity exists to increase enrollment of students of color in agricultural education and, subsequently, FFA membership and engagement in FFA activities. The face of America is changing rapidly. To sustain leadership for a viable agricultural industry, the face of agricultural education should mirror diversity from the national level to local communities and schools.

The ethnic and racial composition of the population in the United States is changing.

In 2005, the U.S. population was 69% Caucasian and 14% Hispanic. The projected population for 2020 is about 61% Caucasian and 18% Hispanic (U.S. Census Bureau, 2004). The nation will continue to diversify; the Hispanic population is projected to have population growth at a rate of 39% from 2000 to 2010 and 45% from 2010 to 2030 (U.S. Census Bureau, n.d.). This national trend of an increasing Hispanic population is even greater in some states; California, Texas, and Florida are three of the four most populated states and are experiencing the most significant growth rates in Hispanic residents. A 2005 article by Petersen and Assanie supported findings of the rapidly growing Hispanic population. By 2020, Hispanics will represent the majority population in Texas. Further, trends forecast that by 2040, Hispanics will account for more than 50% of all Texans, whereas just one-third of the population will be Caucasian. The National FFA Organization (2007) reported in 2004–05 FFA membership was 77% Caucasian and 17% Hispanic. On a national level FFA membership appears congruent with U.S. population statistics. However, on a school-by-school basis, especially in Texas, the Hispanic population is underrepresented in FFA membership and likely in agricultural education enrollment.

Nationally, only a small portion of students are engaged in agricultural education. The National Council for Agricultural Education (2000), in *Reinventing Agricultural Education for the Year 2020*, found that only 6% of the overall high school population successfully completed coursework in agriculture. This stands in contrast to the assertion made by the National Research Council (1988) that agriculture is a topic too important to be taught to only a relatively small percentage of students. Millions of students each year, from all ethnicities, are missing the numerous benefits provided through agricultural education and the FFA. The most recent long-range plan for agricultural education, "10 x 15," stated that by the year 2015 there will be 10,000 quality agricultural education programs with all students being members of the FFA (National Council for Agricultural Education, 2007). For agricultural education

to grow and enhance the quality of programs, the student body must resemble the diversity of this country, of local communities, and of individual schools. But what can be done to attract students of color to agricultural education and the FFA?

### Theoretical Framework

The underlying question addressed in this study is: When a group of students is exposed to a new educational idea or practice (agricultural education and the FFA) why do they decide to participate or not participate? Another way to examine this question is using Rogers' (2003) Diffusion of Innovation theory. Rogers defined an innovation as, "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (p. 12). In the current situation, the *idea or practice* is agricultural education and the FFA; the unit of adoption is the individual student; and adoption is determined by enrolling in an agricultural education class and participation in FFA activities. Rogers (2003) shared that in diffusion research that innovations comprised of some sort of technology (hardware and software) were most often studied and thus provided most of the case studies. However, he asserted that some innovations consist of only ideas or practices (which Rogers calls "software") and have no hardware. Participation in agricultural education and the FFA is such an innovation.

Rogers (2003) hypothesized that adoption of an innovation goes through five stages: knowledge, persuasion, decision, implementation, and confirmation. He further opined that adoption of an innovation is affected by the relative advantage, compatibility, complexity, trialability, and observability of the innovation. Rogers suggested that when introducing an innovation, it is better to first introduce the innovation to identified opinion leaders. If this group adopts the innovation, others in the social system are then more likely to adopt it.

Previous research in agricultural education can serve to guide the current project. Gliem and Gliem (2000) compared Caucasian and non-Caucasian agricultural

education and found that there were significantly fewer Asians, African Americans, and Hispanics that were FFA members. In other words, these groups had only partially adopted the innovation.

Much of the existing research dealt with the relative advantage and compatibility of the innovation. For example, it has been often reported that students of color view agricultural careers as incompatible because they have negative perceptions of agricultural education, the FFA, and agricultural industry in general (Jones & Bowen, 1998; Talbert & Larke, 1995). Gliem and Gliem (2000) identified factors that encouraged, discouraged, and would encourage secondary agricultural education students to join the FFA. The main reason students did not join was the negative image they held of the FFA, while students would join if they felt FFA provided experiences that would eventually lead to good jobs.

Other research has compared students based on their level of adoption. Talbert and Balschweid (2004) determined why students enroll in agricultural education and described enrolled students' levels of involvement or noninvolvement in FFA. The data revealed that adopters (FFA members) viewed agriculture courses as exciting, interesting, and beneficial for future plans, while partial adopters (nonmembers) disagreed. Both groups reported "self" as the top reason for enrolling in agricultural education. In addition, both groups were influenced by the agriculture teacher, parents, and friends. Nonmembers indicated "other" as their second leading reason to enroll. Examining FFA membership showed that the number one reason students joined was the teacher. Nonmembers questioned the importance of joining; their top reason was lack of interest, and amount of time commitment was the greatest barrier. The authors suggested that greater FFA participation among members would encourage nonmembers to join.

On the basis of their study, Gleim and Gleim (2000) recommended that more students of color be recruited that could then demonstrate the benefits FFA can provide for its members in personal development and career opportunities. In other words, identify and recruit opinion leaders.

Although many recruitment efforts have been attempted, Myers, Breja, and Dyer (2004) found that recruitment efforts are often narrowly focused on populations already engaged in agricultural education. They suggested that recruitment efforts be targeted at nontraditional audiences. They also asserted that recruiting and retaining students is one of the most pressing issues faced in agricultural education.

Similarly to the research in agricultural education, Brown and Evans (2002) found that Hispanic American students participated in fewer extracurricular activities than their Caucasian peers and, consequently, were less connected to their schools. Johnson, Crosnoe, and Elder (2001) reported that students who attended a school (social system) with a higher proportion of students of their own race-ethnicity are more attached to their school, but that characteristic did not affect student engagement. Faircloth and Hamm (2005) reported that participation in extracurricular activities for Hispanic students was affected by their peers (opinion leaders). In contrast, African American and Asian American students were not as affected by their peers. Faircloth and Hamm also reported that Hispanic engagement was impacted by the teacher-student relationship, which is consistent with the work of Talbert and Balschweid (2004). Conchas (2001) found that Hispanic student engagement can vary for specific academic programs within a school. He concluded that the differences in engagement were attributed to cultural and institutional processes (compatibility) within each program. Jones (1998) documented that underrepresented populations of high school students could be attracted to agriculture through a series of interventions. Collectively, the research studies discussed above would support that Hispanic student engagement was impacted by the social system, opinion leadership, and compatibility of the activity.

### **Purpose**

One research question guided this inquiry: Will implementing a series of interventions lead to an increase in Hispanic student involvement in agricultural

education and the FFA? This question was operationalized through four objectives: (a) Describe changes in Hispanic student enrollment and FFA membership, (b) Describe changes in Hispanic student involvement in FFA activities, (c) Describe changes in total FFA chapter activities, and (d) Describe changes in parent/alumni activities.

### Methods and Procedures

This project used a descriptive, quantitative methodology to examine how a series of interventions influenced Hispanic student involvement in FFA and agricultural education (Gall, Gall, & Borg, 2003). Data were collected face-to-face by the project team during routinely scheduled visits to the schools and through electronic correspondence. Programmatic data were provided by the agricultural education teachers, Career and Technical Education (CTE) directors, and the National FFA Organization. Baseline data from the year preceding the project (2003–04) were difficult to collect; some data were missing. Data were analyzed with descriptive statistics; changes were determined by differences in descriptive statistics.

Activities for this project were funded by a corporate sponsor grant administered through the National FFA Foundation. Three schools in San Antonio, Texas, were selected for participation based on three primary criteria: (a) enroll a predominantly Hispanic student population, (b) have existing FFA chapters with underrepresented Hispanic participation, and (c) employ teachers who were willing to explore new engagement strategies. The project began in the fall of the 2004–05 school year. Observations, data, and reflections presented in this paper represent the first three years of a 4-year project.

School 1 was an intercity school with a Hispanic enrollment of 98% with 85% of the student population identified as economically disadvantaged by qualifying for free or reduced lunch programs. At the beginning of the project, School 1 had one agricultural education teacher and a teachers' aide. Because of an increase in enrollment, a second teacher was hired at the

beginning of the third year. School 2 was on the perimeter of San Antonio and enrolled students from urban, suburban, and rural settings. Seventy-nine percent of the students in School 2 were Hispanic, and 66% were identified as economically disadvantaged. School 2 had one agricultural education teacher. Because of teacher resignations, a new teacher was involved during each of the 3 years. School 3 enrolled students from suburban and rural settings. Eighty-six percent of the students were Hispanic, and 75% were identified as economically disadvantaged. School 3 had one full-time agricultural education teacher plus a second teacher with a partial teaching assignment in agricultural education. The portion of the second teacher's time devoted to teaching agricultural education increased each year of the project from one-fourth, to one-half, to three-fourths. Background data revealed that the Hispanic populations at all three schools were nonmigratory.

To achieve the purpose of the project, a series of six interventions were designed and implemented with the goal to encourage an increase in participation. Using Rogers (2003) theory as a guide, the project team developed interventions targeted at opinion leaders with the larger goal of wider adoption. This project is ongoing, so the long-term changes remain to be seen. The interventions were: (a) provide specific FFA or agricultural education experiences for student opinion leaders; (b) provide specific experiences for parents, alumni, boosters, and school administrators (opinion leaders); (c) provide professional development for the agricultural education teachers (ensure compatibility); (d) supply curricula and educational materials to encourage an expansion of the agricultural education program (trialability); (e) provide access to an on-site project advisor (change agent); and (f) provide project leadership and oversight through a partnership between university faculty and National FFA staff.

#### *Specific FFA or Agricultural Education Experiences for Student Opinion Leaders*

The key goal of this portion of the intervention was to identify and engage key Hispanic students, those identified as

opinion leaders. It was believed that providing positive agricultural education and FFA experiences to this group of influential students would create an environment in which non-engaged Hispanic students would be able to observe the benefits their peers received for participation, thus providing an immediate increase in participation and that should lead to sustainable participation. These activities included the State FFA Convention; National FFA Convention; Made for Excellence (MFE) leadership development program; Washington Leadership Conference; career development events (CDEs); and livestock shows and fairs.

*Experiences for Parents, Alumni,  
Boosters, and School Administrators  
(Opinion Leaders)*

Beyond student participation, it was deemed important to garner support of key stakeholder groups to ensure the long-term viability of an agricultural education program. The goal of this portion of the intervention was to identify and engage key stakeholders. These activities provide an opportunity for parents, relatives, alumni members, boosters, and school administrators to experience the value of agricultural education programs and FFA chapters for students. The support of this influential group of people was thought to be critical for the sustainability of project. The project assisted with activities such as attending local and area FFA banquets; State FFA Convention; Alumni State Leaders Conferences; National FFA Conventions; and establishing and/or expanding FFA Alumni chapters or booster club groups.

*Professional Development for Teachers  
(Ensure Compatibility)*

The project team believed that the agricultural education teachers at each school were the single most important key to making sustainable changes in their respective programs. Accordingly the goal of this portion of the intervention was to better equip each teacher with the skills to deliver an agricultural education program that engages students, particularly Hispanic students. Teachers were provided professional development through

LifeKnowledge curriculum training, attending Texas agricultural science teachers professional development conferences, Washington Leadership Conference advisor's programs, and National FFA conventions.

*Curricula and Educational Materials  
(Triability)*

An important part of increasing participation in agricultural education and FFA was to update and expand the courses offered in the agricultural education program to appeal to a more diverse student population. The goal of this portion of the intervention was to provide teachers with the materials needed to make program adjustments. This part of the intervention was important for immediate and long-term increases in participation. The project provided LifeKnowledge curriculum, specific technical instructional materials identified by the teacher and new FFA instructional materials and manuals.

*On-site Advisor (Change Agent)*

The teachers at each school were engaged daily in increasing Hispanic participation by providing a comprehensive agricultural education program that appeals to a more diverse student population. To do so, the teachers must overcome a variety of challenges. To provide a source for guidance and a single point of contact in facing these challenges, the project provided a change agent who served as the day-to-day project manager and as a liaison between the agricultural education teachers, the corporate partner, and the university/National FFA staff. On average, the advisor visited each of the three schools on a weekly basis. Some key attributes of this project advisor-change agent was a recently retired, successful agricultural education teacher from Texas; a former national NAAE officer, and a Hispanic-American who possessed a passion for increasing participation and leadership opportunities for Hispanic youth.

*University and National FFA Leadership  
and Oversight*

Oversight and leadership of the project was provided by university faculty members

and National FFA Organization staff. This partnership provided a wealth of Texas and national experience in developing agricultural education teachers and programs. Specific personnel involved in the project changed over the span of the project, but two things remained constant: all involved possessed skills necessary to conduct the project, and all involved possessed a passion for increasing Hispanic participation in agricultural education and FFA activities.

### Results

#### *Objective One: Describe Changes in Hispanic Student Enrollment and FFA Membership*

Hispanic student enrollment increased at all three schools (Table 1). School 1 increased the number of Hispanic students by 52 (33%), School 2 by 65 students (722%), and School 3 by 68 students (94%). As mentioned in the Methods and Procedures section of this article, increases in enrollment led to the addition of a second agricultural education teacher at School 1, as well as a substantial renovation of the facilities and an increased portion of a second teacher at School 3. The number of Hispanic FFA members also increased at all three schools (Table 1). The schools gained 54 (35%), 14 (350%), and 58 (157%) Hispanic FFA members, respectively.

Table 1  
*Changes in Hispanic Student Enrollment and FFA Membership*

School		2003–04 <sup>a</sup>	2004–05	2005–06	2006–07	Change	
		<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	%
1	Hispanic enrollment	158	167	190	210	+52	33
	Hispanic FFA membership	19	40	50	73	+54	35
2	Hispanic enrollment	*	9	18	74	+65	722
	Hispanic FFA membership	*	4	13	18	+14	350
3	Hispanic enrollment	*	72	95	140	+68	94
	Hispanic FFA membership	37	62	65	95	+58	157

\*Data missing.

<sup>a</sup>Baseline data from the year preceding project implementation.

#### *Objective Two: Describe Change in Hispanic Student Involvement in FFA Activities*

All three schools experienced increased Hispanic student involvement in FFA activities (Table 2). At School 1, the entire officer team was composed of Hispanic students for the three years of the project. Hispanic students attending State FFA Conventions increased from 0 the year prior to the project to 15 during the third year. Similarly, the number of Hispanic students attending National FFA Conventions

increased from 0 to 5 during the period. School 2 had a net increase of one Hispanic FFA officer, but the number of Hispanic members attending State FFA Convention increased from 0 to 12, and the school had one Hispanic member attend the National FFA Convention each of the 3 years. School 3 had an increase of two Hispanic FFA officers, attendance at State FFA Conventions by Hispanic members increased from 1 to 15, and the school had two Hispanic members attend National FFA Conventions each year.

Table 2  
*Changes in Hispanic Student Involvement in FFA Activities*

School	FFA activity	2003–04 <sup>a</sup>	2004–05	2005–06	2006–07	Change
		<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
1	Hispanic FFA officers	6	6	6	6	0
	Hispanic members at state FFA convention	0	8	12	15	+15
	Hispanic members at national FFA convention	0	2	3	5	+5
2	Hispanic FFA officers	*	*	1	2	+1
	Hispanic members at state FFA convention	0	4	3	12	+12
	Hispanic members at national FFA convention	0	1	1	1	+1
3	Hispanic FFA officers	2	0	1	4	+2
	Hispanic members at state FFA convention	1	1	6	15	+14
	Hispanic members at national FFA convention	0	2	2	2	+2

\*Data missing.

<sup>a</sup>Baseline data from the year preceding project implementation.

*Objective Three: Describe Changes in Total FFA Chapter Activities*

All three schools experienced increases in the FFA activities conducted by their respective FFA chapters (Table 3). At School 1, the number of Leadership Development Event (LDE) teams increased from zero to two and the number of Career Development Event (CDE) teams increased from zero to eight. The number of service projects increased from 0 to 12. School 1 went from sending no members to MFE to sending 15 members. Finally, the school that had not had an FFA banquet in recent memory had a banquet with 160 people in attendance. At School 2, teacher turnover caused collecting accurate data early in the project to be problematic. Consequently, the exact number of FFA LDE and CDE teams

from the school prior to the project and during the first year of the project is unknown. Data did show that in year three, the school had three LDE teams and nine CDE teams. The school went from conducting no local service projects to 12 during the third year. School 2 also went from sending no FFA members to MFE to sending nine members. Prior to the project, School 2 did not have an FFA banquet. During year three, 150 people attended the FFA banquet. For School 3, the number of LDE teams increased by two and the number of CDE teams increased by five. The number of service projects conducted remained constant at five. Prior to the project, School 3 did not send any students to MFE, but in year 3, they sent 15. Unlike the others schools, School 3 had an FFA

banquet prior to the start of this project. However, during the course of the project,

banquet attendance increased by 150 people—from 200 to 350 attendees.

Table 3  
*Changes in Total FFA Chapter Activities*

School	FFA activity	2003–04 <sup>a</sup>	2004–05	2005–06	2006–07	Change
		<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
1	Lead. dev. event teams	0	1	1	2	+2
	Career dev. event teams	0	1	2	8	+8
	MFE attendance	0	0	0	15	+15
	Service projects	0	1	4	12	+12
	FFA banquet attendance	0	80	120	160	+160
2	Lead. dev. event teams	*	*	4	3	–1
	Career dev. event teams	*	*	3	9	+6
	MFE attendance	0	9	12	9	+9
	Service projects	0	1	3	12	+12
	FFA banquet attendance	0	60	85	150	+150
3	Lead. dev. event teams	3	5	5	5	+2
	Career dev. event teams	4	5	6	9	+5
	MFE attendance	0	15	16	15	+15
	Service projects	5	5	5	5	0
	FFA banquet attendance	200	250	300	350	+150

*Note.* Texas differentiates between competitive events that address leadership skills and those that address career skills.

\*Data missing.

<sup>a</sup>Baseline data from the year preceding project implementation.

*Objective Four: Describe Changes in Parent/Alumni Activities*

All three schools increased the number of parents or alumni engaged in activities to support chapter activities (Table 4). At School 1, since the project began, an FFA alumni group was formed that had 16 Hispanic members by the end of the third year. From this group, the school went from

zero to four members that participated in the Alumni State Leaders Conference. School 2 also formed an alumni chapter that had 20 members by the end of the third year, seven of whom were Hispanic. This school also went from zero to four members attending the Alumni State Leaders Conference. School 3 saw similar growth, by forming an Alumni Chapter that had 20 members at the



end of year three, half of whom were Hispanic. This school also went from

zero to four members attending the Alumni State Leaders Conference.

Table 4  
Changes in Parent/Alumni Involvement in FFA Activities

School	Activity	2003–04 <sup>a</sup>	2004–05	2005–06	2006–07	Change
		<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
1	Alumni (Booster) membership					
	Hispanic	0	8	12	16	+16
	Non-Hispanic	0	0	0	0	0
	Attendance at Alumni State Leaders Conference	0	1	2	4	+4
2	Alumni (Booster) membership					
	Hispanic	0	2	2	7	+7
	Non-Hispanic	0	6	11	13	+13
	Attendance at Alumni State Leaders Conference	0	1	2	4	+4
3	Alumni (Booster) membership					
	Hispanic	0	0	2	10	+10
	Non-Hispanic	0	0	8	10	+10
	Attendance at Alumni State Leaders Conference	0	1	2	4	+4

<sup>a</sup>Baseline data from the year preceding project implementation.

**Conclusions**

Based on the findings of this study, the following conclusions are made: (a) All three schools experienced increases in Hispanic enrollment in the agricultural education program and Hispanic membership in the FFA; (b) All three schools also experienced an increase in the number of Hispanic students participating in FFA activities; (c) Each of the schools increased the total number of FFA activities in which they participated; and (d) Each of the schools established FFA alumni chapters

with parents and/or boosters engaged in activities to support students. The data also support that student participation in agricultural education and FFA membership are positively influenced by meaningful engagement, peer opinion, personal aspirations, high expectations, and recognition. Teacher participation in FFA activities increased with positive feedback from others, focused professional development activities, and administrative support. Continuity of teacher–advisor increases student engagement. Thus, it would appear that a series of interventions

designed using Rogers' (2003) diffusion of innovations theory can affect FFA involvement.

### Recommendations and Implications

Agricultural education and the National FFA Organization can be appealing to Hispanic students, which is consistent with the work of Jones (1998). The analysis of this experience demonstrated that when provided with encouragement, recognition, and resources, agricultural education teachers can enroll Hispanic students and engage them in meaningful FFA activities. Additionally, the parents of these students can be engaged through development of an alumni affiliate. These accomplishments can be made through designing and implementing a series of interventions based on Rogers' (2003) theories of diffusion of innovation by identifying key opinion leaders and providing targeted experiences to engage these individuals. This experience validated findings of Talbert and Balschweid (2004) about the differences between FFA members and non-FFA members.

Throughout the project, substantial resources were made available for the three schools. Consequently, the extent that these same interventions could be replicated with fewer resources is unknown. It is recommended that similar studies be conducted to see if similar outcomes could be obtained with fewer resources. If so, these interventions could be transformational for agricultural education.

The results of this experience suggest that similar intervention strategies have potential for other programs. The National FFA Organization and interested corporate partners are exploring similar projects in other locations. Lessons learned from this experience are being shared with agricultural education teachers. With each of these intervention strategies, relevant data should be collected to examine the suitability in a new context.

Because of the demographics of the communities, this project focused primarily on engaging Hispanic students. Although the Hispanic population is expected to increase, other ethnic groups are underrepresented in

agricultural education, particularly African-Americans, Asian-Americans, and Native Americans. The extent to which these intervention strategies are appropriate for other populations is yet to be determined. It is recommended that further research be conducted in communities with other ethnic groups.

The project team spent a considerable amount of time working on the project over its initial three years and offers the following recommendations to researchers who may conduct similar projects:

1. Establish open communication channels in the very beginning of the project. Early dialogue was critical in the clarification of goals, identification of partner schools, matching needs with opportunities, and getting the right people involved.
2. Use a public forum to get all involved to make a commitment to the project. Key school leaders, teachers, students, parents, and partners made a public commitment to the goals of the project.
3. Secure a committed corporate sponsor. The commitment to a 4-year project by the corporate sponsor was critical for organizational change.
4. Document successes with multiple forms of data.
5. Communicate with all partners regularly throughout the project. The success of any diffusion of innovation hinges on communication, communication channels, communication networks, and communication proximity.
6. Expend considerable effort in selecting the change agent. The importance of the change agent, his credibility and his role as a linker in incremental change is critical.
7. Look inside an organization for assistance. Often, challenges to diffusion of innovation come from within the culture rather than from external resistance.
8. Identify champions. Having a champion helps an innovation diffuse. These champions provided

public testimonies, quiet  
encouragement, and timely  
community support.

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T. GRADY ROBERTS is an Associate Professor in the Department of Agricultural Education and Communication at the University of Florida, P.O. Box 110540, Gainesville, FL 32611-0540. E-mail: [groberts@ufl.edu](mailto:groberts@ufl.edu).

JOHNATHAN L. HALL is a Graduate Assistant in the Department of Agricultural Leadership, Education, and Communications at Texas A&M University, MS 2116, College Station, TX 77843-2116. E-mail: [jlhall@tamu.edu](mailto:jlhall@tamu.edu).

GARY E. BRIERS is Professor in the Department of Agricultural Leadership, Education, and Communications at Texas A&M University, MS 2116, College Station, TX 77843-2116. E-mail: [g-briers@tamu.edu](mailto:g-briers@tamu.edu).

ERNIE GILL is an LPS Specialist for the National FFA Organization, P.O. Box 68960, 6060 FFA Drive, Indianapolis, IN 46268-0960. E-mail: [EGill@ffa.org](mailto:EGill@ffa.org).

GLEN C. SHINN is a Professor in the Department of Agricultural Leadership, Education, and Communications at Texas A&M University, MS 2116, College Station, TX 77843-2116. E-mail: [g-shinn@tamu.edu](mailto:g-shinn@tamu.edu).

ALVIN LARKE, JR. is a Professor in the Department of Agricultural Leadership, Education, and Communications at Texas A&M University, MS 2116, College Station, TX 77843-2116. E-mail: [a-larke@tamu.edu](mailto:a-larke@tamu.edu).

PAUL JAURE is a Consultant, 3674 FM 799, Beeville, TX 78102. E-mail: [pjaure@ffa.org](mailto:pjaure@ffa.org).