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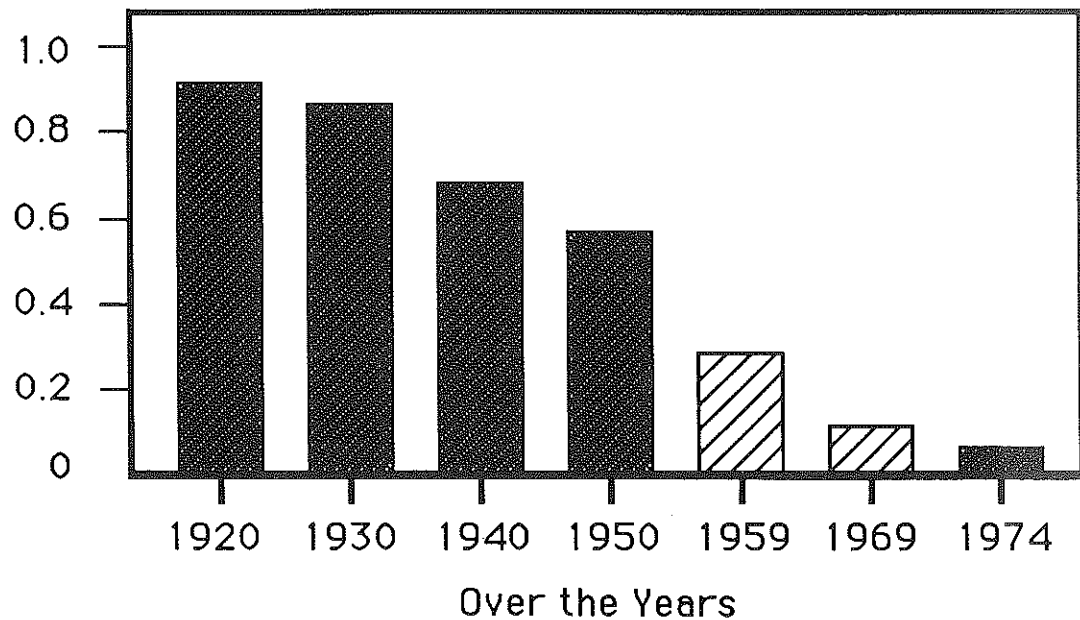
# Agricultural Education

December, 1987  
Volume 60  
Number 6

**Magazine**

## Black Farmers in America

Million Farmers



**THEME: Serving Minority Groups**

# THE AGRICULTURAL EDUCATION MAGAZINE



December, 1987

Volume 60

Number 6

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## ARTICLE SUBMISSION

Articles and photographs should be submitted to the Editor, Regional Editors, or Special Editors. Items to be considered for publication should be submitted at least 90 days prior to the date of issue intended for the article or photograph. All submissions will be acknowledged by the Editor. No items are returned unless accompanied by a written request. Articles should be typed, double-spaced, and include information about the author(s). Two copies of articles should be submitted. A recent photograph should accompany an article unless one is on file with the Editor.

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# A Minority Perspective On Minorities In Agriculture

My family raised tobacco and hogs on a small farm. I studied vocational agriculture, was a state FFA officer, and received the American Farmer degree. Grades 1-11 were completed in an all-black school. My senior year, three high schools consolidated to form a large 10-12 school with a 55% black majority. My B.S. and M.S. degrees were earned at predominately black NC A&T State University. My Ph.D. was earned at Ohio State where about 5% of the students are black. I taught vocational agriculture in two integrated high schools, one about 35% black; the other 65% black.

With this background, I am a prime candidate for questions about there being few minorities in agriculture. Growing-up near the Atlantic, I learned early that ships not changing courses and rocking with the tide are either out of water, on bottom, or anchored. In this vein, my answers about minorities torpedo norms because I see an anchored profession clearly not serving the needs of minorities. Frequently asked questions and honest but blunt answers are presented below.

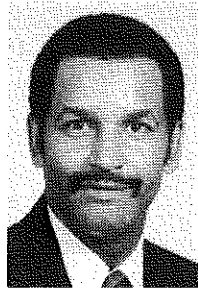
## Questions About Recruiting

### FROM SECONDARY TEACHERS AND SUPERVISORS

— Why don't blacks take vocational agriculture and join the FFA? An interesting question. Let's see, until 1965 the New Farmers of America (NFA) was the national organization for black "boys who are progressing toward the goal of establishment in a farming business" (GUIDE FOR NEW FARMERS OF AMERICA, 1960, p. 7). The GUIDE indicated that the NFA was founded in Virginia in 1927. In 1959, there were 1,039 chapters and 51,205 active members (1960, p. 7). Seven national officers led the NFA. Contests, awards, and activities mirrored those in the FFA. State conventions were usually held at the black land grant institution. There was extensive involvement of black vocational agriculture teachers, professors, university officials, and parents.

When the NFA and FFA merged in 1965, disintegration started. As schools desegregated in the 1960 and 1970s, black participation in agriculture, vocational agriculture, and the FFA declined dramatically. The decline was evident in 1971-72 when I traveled as a state FFA officer. Today, it's more obvious. Few blacks enroll in vocational agriculture and participate in the FFA. Only three black faces have graced national FFA officer teams. Why is the disintegration occurring?

The number of black farmers declined significantly during the 1950s and 1960s (see front cover). Countless rural blacks moved to cities. Somehow, stereotypes many minorities held about farming, slavery, and low farm wages



BY BLANNIE E. BOWEN, EDITOR

*(Dr. Bowen is an Associate Professor in the Department of Agricultural Education at The Ohio State University.)*

are now becoming majority opinions. Mechanized agriculture dictates fewer farm jobs. Where do your students live and what are the career opportunities? Your instructional program must zero-in on educational problems of a contemporary America that includes rapid growing minority groups.

### FROM AGRICULTURAL EDUCATION PROFESSORS

— How can we get more blacks to become teachers, Extension agents, and professors? The traditional model had blacks in the South attending 1890 land grant institutions to become agents or teachers. Blacks who became professors did graduate study at universities in the East or Midwest. Most returned to 1890 institutions. Few were hired even by 1862 land grant institutions granting them degrees.

Today's model also finds few minority faculty members at 1862 land grant institutions. To break the cycle, James D. McComas, former president of Mississippi State University (MSU), said it takes commitment of resources, not rhetoric. During his presidency of the last land grant institution to admit black students, MSU had the highest percentage of both black faculty and students of all 1862 land grant institutions. Other universities try to emulate MSU's success, but with mixed results.

The contemporary model also finds institutions competing for talented minority students. Each year since 1979, 3-5% of the students pursuing B.S. degrees in agriculture have been minorities (NACTA JOURNAL, Vol. 29(1), March, 1985, p. 8). These figures remained constant while enrollments in colleges of agriculture nose-dived. Needless to say, many institutions are perplexed as they try to recruit minority students.

A major problem surfaces if one studies the recruitment process. Let's see how we traditionally recruit students. Most vocational agriculture teachers, supervisors, teacher educators, and Extension professionals are white. So are most FFA and 4-H members. Because many in the profession live in racially identifiable neighborhoods or suburbs,

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## A Minority Perspective On Minorities In Agriculture

(Continued from page 3)

their children tend to attend quasi-integrated public schools or private institutions with low minority populations.

Further, college of agriculture faculty rarely conduct workshops, speak, judge science fairs, or recruit in schools with large minority populations. Vehicles comparable to the FFA, 4-H, and other activities are not used to get minority students on the agriculture campus. Instead we try shallow approaches that cannot build the trust needed to recruit minority students. But, as declining enrollments become major problems, many colleges of agriculture are rethinking their recruitment efforts. Minority recruitment, heretofore missing, is on the agenda.

**FROM A DEAN OF AGRICULTURE** — How do we recruit black students? Ask your basketball coach. He certainly knows how to find black players. Dean Smith, Digger Phelps, John Thompson, and a few others also recruit black players who graduate. How do you explain an all-black starting five in a university with a 2-3% black enrollment? Coaches commit resources, use various avenues, but most importantly, they recruit families. We want to recruit minority students. There is a real difference, Dean.

**FROM A UNIVERSITY VICE PRESIDENT** — What does the research say about minorities in agriculture? Are you kidding? Our research agenda in agriculture rarely includes "social issues." Educational issues involving minorities and women are unfairly labeled "social" issues. Educational issues involving white male farmers are scholarly pursuits. Students preparing to become university professors read the grapevine and won't touch such issues. In addition to traditional animal and plant research, safe topics to study include job satisfaction, teaching methods, young and adult farmer needs, learning benefits of new technologies, and the benefits that SOE and the FFA have for rural students. Sadly, too much of our scholarship is based on a double standard and limited to superficial experiences with minorities.

### The Opportunities

Most states have huge minority population centers but few minorities studying agriculture. For example, 1980 Census figures show the following blacks in major cities (WORLD ALMANAC AND BOOK OF FACTS, 1987, p. 224): Columbus (OH) — 124,000; St. Louis — 206,000; Detroit — 758,000;

Chicago — 1.1 million; and New York City — 1.7 million. Cities with substantial Spanish origin residents include Albuquerque — 112,000; El Paso — 265,000; San Antonio — 421,000; Los Angeles — 815,000; and New York City — 1.4 million.

Many see doom and gloom in the above numbers. I see only opportunities! More importantly, I am not willing to let agricultural education become education's version of the Sahara. But, to grasp the opportunities, several urgent steps must be taken: (1) Agricultural education must embrace the curriculum areas indentified in the 1960s, (2) the vocational mission must be redesigned to reflect contemporary society, (3) instructional programs to educate elementary level as well as college-bound students must be implemented, and (4) urban agriculture must become a reality to serve scores of minority groups and women.

In addition, professors and graduate students must research these and other contemporary problems. Further, this research must not be unfairly branded because petty behavior limits our knowledge base. State supervisors and teacher educators must also promote concepts such as the Chicago High School for Agricultural Sciences to serve a growing urban clientele. Ellen Russell discussed that school in the October issue of this publication.

Finally, agricultural education can no longer allow personal preferences to rule over logic and numbers. Innovative yet philosophically sound instructional programs must become the norm. Clinging excessively to tradition gets the profession closer to a Sahara. Willie Rawls secured authors to share their thoughts in this issue. I trust you will enjoy reading these perspectives on how the profession can better serve minority groups.

### About the Cover

The number of black farmers in the U.S. declined from 925,710 in 1920 to 45,594 in 1974. Similar trends can be expected as blacks and other Americans move from rural areas. This graph is from BLACK FAMILIES, a publication in the excellent USDA People on the Farm Series published in 1980. Copies are available free from the USDA, Office of Governmental and Public Affairs, Washington, D.C. 20250. (Graph reproduced by Gary Straquadine, The Ohio State University.)

Coming in January . . .

## TOMORROW'S TEACHERS

# Black Farmers In America

Our nation has been transformed from a rural, agriculturally based society to one that is urban, industrially based. In the wake of such transformation, we are aware of the mass exodus from the family farm. The disappearance of three million farmers since 1940, the continuing concentration of production capacity in fewer and fewer hands — these and other consequences of the agricultural revolution have been acknowledged so often that they have lost their impact.

Yet, has our complacency toward the change in the Nation's agrarian emphasis spilled over into our attitudes towards the plight of the black farmer? The outmovement has not occurred evenly across the agricultural spectrum. Are we even aware of the dramatic changes black farmers of America have experienced in the last 60 years? It is the purpose of this article to examine the changes in the black farmer population and some current characteristics of black farmers. It is through an awareness of black farmers that we as a profession can begin to develop programs to meet the needs of all agricultural producers.

The number of black farmers in America has declined from nearly one million in 1920 to fewer than 46,000 in 1974, a loss of about 95% (Beale, 1979). In the same time period, the total number of farms in the United States dropped from 6.5 million to 2.3 million. More than one-half of the 925,710 black farmers counted in 1920 were tenant farmers and a good portion of these functioned as farm laborers who were paid with a share of the crop raised. In 1920, one out of every six farmers in the country was black. By 1974, one farmer in every 50 was black. A rapid decline in the number of black farmers occurred in the 1950s and 1960s. Cotton farming was revolutionized by machines and chemicals, and black people flooded to the cities. In 1950 only 8% of the cotton in the United States was picked by machine. Twenty years later, only 2% was not picked by machine (USDA, 1980). From 1945 to 1964, the number of black farmers growing cotton in the South dropped 77%. Combine these changes with the sociological climate of the period from 1930 to 1960. Discrimination against blacks and the existence of a largely segregated society in the South contributed to blacks leaving the farm. Particularly, black farmers experienced problems in obtaining education and information, getting credit, and keeping or proving ownership of land.

Approximately 6% of the total farm population is black, and primarily reside in the South. These black farmers, when compared with other farmers, are generally older, work fewer days off the farm, have smaller farms, and tend to be primarily engaged in crop production (Carlin, 1979). Today's black farmer is much more likely to own all or part of the farm he operates. In 1974, 90% of all black farmers owned part or all of the farm operation, up 10% from just five years earlier. Nearly two-thirds of all black farmers sell

BY GARY S. STRAQUADINE

*(Dr. Straquadine, formerly a state supervisor and vocational agriculture instructor in North Dakota, is a research associate in the Department of Agricultural Education at The Ohio State University, Columbus, Ohio 43210-1099.)*

less than \$2,500 worth of farm goods a year. In fact, the average black farmer is 55 years old, married, and has children that have left the farm for the nearby cities. Black farm operators are less likely to have full time off farm employment when compared to white farm operators. In addition, black farm operators who do work off the farm are less likely to be employed at higher paying white-collar occupations (Carlin and Ghelfi, 1979). Because the average black farmer sells more than \$1,900 worth of farm products a year and manages his own place, he meets the Census Bureau qualifications as a farmer. Minority farm families depend more heavily on farm earnings as a component of their total family income. This accounts in part for their extremely low total family income. About 92% of all black farm families have incomes below the 1977 median nonmetro family income (Carlin and Ghelfi, 1979).

An examination of the number of people on the farm, as opposed to the number of farmers, reveals a more alarming statistic. From 1970 to 1975, the number of blacks on the farm decreased by 40 percent. During this same period, whites experiences an 11 percent decline. Of the 401,000 blacks remaining on the farm in 1975, nearly one-third were hired farm laborers and their families. Ninety-five percent of them lived in the South. Like their white counterparts, blacks live on either cash-grain farms or livestock farms. After livestock and cash-grain farms, blacks are most likely to live on tobacco or cotton farms. Less than one-half of one percent of all persons living on dairy farms are black. In the United States, there are fewer than 800 black operated dairy farms (USDA, 1980).

As one concludes an article such as this, it could be easy to conclude that if black farmers comprise such a small proportion of the total farm population, vocational agriculture has bigger fish to fry. Based upon numbers, this would be true; but based upon the goals for quality education and productivity of agriculture, nothing could be further from the truth. As educators, we must be committed to providing the best education to all. What can our programs do to attract and retain the black farmer and potential farmer at the secondary, post secondary, and adult levels? As agri-

*(Continued on page 6)*



## Black Farmers In America

(Continued from page 5)

culturalists and stewards of the land, we must be concerned with the agricultural resources of the United States. Finally, as members of the world community, we must remain cognizant of the economic problems of black farm families. Change can begin with you.

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## THEME

# Promoting Minority Involvement In Agriculture

Minority participation in agriculture has been stereotypically that of the farm laborer or field hand. Bitter memories of poverty, slavery, and low socioeconomic status currently cloud many minority people's perceptions of agriculture as a profession.

Agriculture itself is experiencing severe problems. Low farm prices and resultant failures of many farming enterprises in wealthy areas contrast with hunger and food shortages in less developed parts of the world. Solutions to this impending crisis are desperately needed, but they are unlikely to be achieved without full utilization of available resources.

### Minorities' Limited Role

Perhaps one of the most important of these resources is the talent of professional agriculturalists who seek to promote agriculture for all people while protecting the earth's environmental integrity. Agricultural enrollment in higher education has been generally declining. In the period from 1978 to 1985, numbers have dropped from over 98,000 to almost 75,000; minority students are particularly under represented at only 3-5% of undergraduate and 5-9% of graduate students.

This disproportion is at least partially attributable to the fact that, based on 1985 population estimates, "Whites represent 78.3 percent of the U.S. population but 80.3 percent of (higher education) enrollment. Minorities, on the other hand, represent 21.3 percent of the population but only 17 percent of the total enrollment in higher education" (HIGHER EDUCATION DAILY, 1986).

### Declining Minority Enrollment

Over the years, particularly heavy losses have been felt by colleges of agriculture. From 1975-76 to 1980-81, the percentage of black males who entered and earned bachelor's degrees at predominately black institutions held steady at 57 percent; at the master's level, the percentage declined significantly from 54 percent to 21 percent. For black females during the same period, a slight increase was seen at the



By ALVIN LARKE, JR. AND TERESA P. BARR

(Dr. Larke is an Assistant Professor and Mrs. Barr is a teaching assistant in the Department of Agricultural Education at Texas A&M University, College Station, Texas 77843-2116.)

bachelor's level (from 54 percent to 57 percent) while a severe decline was seen at the master's level (from 33 percent to 10 percent) (Trent, 1985).

Financial considerations may be one factor in declining minority enrollment in higher education. Over one-third of Pell Grant recipients (Basic Education Opportunity Grants) are black. In 1981, before cuts were made in this program, over 43 percent of black high school graduates entered college; in 1982, following governmental cuts only 36 percent entered college (Center for Budget Policy Priorities, 1986).

### Negative Perceptions

Even when financial limitations are overcome, agricultural programs are still faced with negative perceptions by minorities as noted earlier. It must be emphasized to prospective minority students that fewer than two percent of modern agriculturally oriented occupations relate directly to on-farm activities (Larke, 1987).

Rhetoric is rarely enough to convince already skeptical people that professional success is attainable in agriculture. It is here that proof, in the form of successful minority agriculturalist role models, becomes important.

Such visible evidence can help to break stereotypical images of minority involvement in agriculture. Further, the career paths followed by these individuals serve as patterns and create positive goal reinforcement for aspiring professionals.

### Combating Negative Perceptions

To dispel negative minority attitudes toward agriculture, both faculty and students in higher education should make conscious efforts to conduct themselves in a dignified and unbiased manner. Minority faculty and graduate students might be particularly reminded to maintain high profiles in efforts to overcome prejudicial perceptions of agriculture. Of course, talented undergraduate individuals should be strongly encouraged to pursue further study and achievement. It is noted that after the addition of a professional minority agriculturalist to the faculty of a major Southwestern university, minority enrollment increased significantly in the department in which he was placed.

Additionally, high achieving minority agriculturalists might be surveyed to identify commonalities that might have influenced their success. It would not be unreasonable for agricultural schools and communities to attempt to develop atmospheres supportive of these positive conditions to encourage greater minority participation. For example, outreach programs directed at inner city schools might introduce modern agricultural concepts to students who might otherwise be unfamiliar with the subject. Active "Career Day" promotions would further minority awareness of agriculture as a professional career alternative.

### Summary

If agriculture is to be preserved in a healthy, vigorous form, it will be through the talents of modern and future professional agriculturalists. Declining enrollments indicate that the talent pool is shrinking. Low minority enrollments point to further deficiencies in available professional resources. Alarming downward trends in agriculture necessitate recruitment of superior persons to sustain this most vital of world industries. As a group, minorities are especially under-utilized at a professional level, partially because of negative minority perceptions of agriculture. Positive role modeling would seem one effective means of reversing this trend.

Agriculture can scarcely afford the continued neglect of the talent resources that minorities represent. Few words are more true than those used in the slogan of the United Negro College Fund, "A mind is a terrible thing to waste."

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## LETTERS

Dear Blannie:

I really appreciate having a copy of your editorial "You Can't Go Home to the Farm," (August, 1987).

I have to give a talk to the Agricultural Research Institute and some of your theme and comments are very appropriate.

Your contribution through the editorship is significant.

Fred Hutchinson  
Vice President and Executive Dean  
College of Agriculture  
The Ohio State University

Dear Blannie:

May I say that your October issue of *THE AGRICULTURAL EDUCATION MAGA-*

*ZINE* was absolutely the best that has been published in my career. I take my hat off to you for the fine job that you are doing for the magazine and for this particular issue. Your editorial was poignant and we are coming to expect that for all of your editorials. Bob's (Warmbrod) article was classic as we have come to expect such articles from him to be. I thought John Moore's was the most provocative I have ever seen published in this magazine and it could not have been more timely.

Thanks so much for the fine job that you are doing.

Sincerely,

L.H. Newcomb, Professor and Chair  
Department of Agricultural Education  
The Ohio State University

Dear Mr. Anderson:

(Glenn Anderson, Business Manager)

Please find enclosed payment for two subscriptions to the *AGRICULTURAL EDUCATION MAGAZINE*. Our conference is in July, so I shall be sending on a "bunch" more after that.

Also, I would like to thank you and the staff for such an outstanding magazine. The articles are first class and so useful for us "old ag teachers". Maybe you should consider a letter to the editor section to provide a way we can express our appreciation. Thanks again!

Sincerely,

Kathy Day  
Secretary-Treasurer  
Kentucky Vocational Agricultural  
Teachers Association, Inc.

# Participation of Minority Youth In Urban Horticulture: A New York City High School Project

Today, most Americans live in an urban centered environment. The increased pace of change in residential patterns, coupled with changes in roles of family members, occupations, and lifestyles dictates fresh approaches to problem solving, particularly for minorities. During this year, the Central Diesel School of Brooklyn, New York, sponsored its first urban Vocational Horticulture Project. The project emphasizes practical, "hands-on" experiences, and includes facilities that reflect state of the art equipment and technology. The site for this project is the Gateway Environmental Study Center located at Floyd Bennett Field in Brooklyn, New York.

This project is designed to improve the job readiness and participation level of minority high school youth for entry level jobs in:

- (a) Interior landscaping for firms that provide service to large city buildings.
- (b) Retailing/Horticulture/Businesses
- (c) Grounds and landscaping maintenance for public agencies such as the Park Department, the Housing Authority, and for such institutions as botanical gardens and zoos.
- (d) Commercial garden centers, greenhouses, and nurseries.
- (e) Community gardening
- (f) Wildlife conservation

## The Curriculum

This new program offers minority students the opportunity to acquire job skills and practical experience into two areas of instruction which are chosen by careful scrutiny using surveys made by the school staff and administration, school advisory council, and district personnel. Educational opportunities at Gateway Environmental Center are a direct reflection of the job opportunities in urban horticulture of the surrounding community. Students can also earn three credits toward the high school diploma and satisfy other graduation requirements.

The ornamental horticulture area provides valuable training in plant production, floriculture, greenhouse management, and related activities. Students take advantage of the new classroom/laboratory for their formal instruction. Learning-by-doing then takes place in the adjacent greenhouse.



BY HOWARD R.D. GORDON

*(Dr. Gordon is Coordinator of Vocational Agriculture at Prospect High School, Brooklyn New York 11225.)*

Ecology and wildlife conservation are also important parts of the curriculum. This area of instruction is designed to develop an understanding of the career opportunities and educational needs in forestry and wildlife conservation. Instruction is concerned with plant and soil science, tree anatomy, forest management, ecology, and conservation. Instruction takes place in the classroom, laboratory, and in work settings.

## Cooperating Agencies

The two participating agricultural organizations in this project are the National Park Service and the Cornell Cooperative Extension Service. Minority youth are given the opportunity to participate in various demonstrations and horticultural projects which are conducted by these organizations. About 60% of the students' time is spent working with these two organizations.

The National Park Service assists these youth with nursery and greenhouse cooperative activities such as preparing soil, sowing seeds, transplanting cuttings, and general nursery and greenhouse maintenance. Extension specialists, working in a variety of settings, disseminate research knowledge to help minority groups participate in soil testing, compost making, wildlife conservation, and constructing vegetable garden plots. They promote nutritionally sound family food management by broadcasting a 15-week radio series, "Food Facts," in Spanish, English, Haitian Creole, and Mandarin Chinese.

## Results of the Program

The individual vegetable plots and container gardening have inspired the parents of students not in the program to encourage their children to seriously consider enrolling.



Students keep and carry home 50% of the vegetables/ornamentals they produce. The other 50% is donated to the disadvantaged and to charity organizations. The vegetables provide a savings in the family grocery bill and also provide the students with the enjoyment and pride of growing them.

For most of the students, this is the only supervised occupational experience (SOE) program they are able to have as part of their vocational agriculture experience. Students living in the city as apartment dwellers often have little opportunity to have such experiences at home. Therefore, the school land laboratory affords them this opportunity under the supervision of their horticulture teacher.

Regarding summer employment, minority youth in this project will be employed with the Youth Crop Conservation program, the Brooklyn Botanic Garden, and local retail florists. Placement is made possible by the New York City Board of Education and the Agronomist of the National Park Service.

### Future Expansion

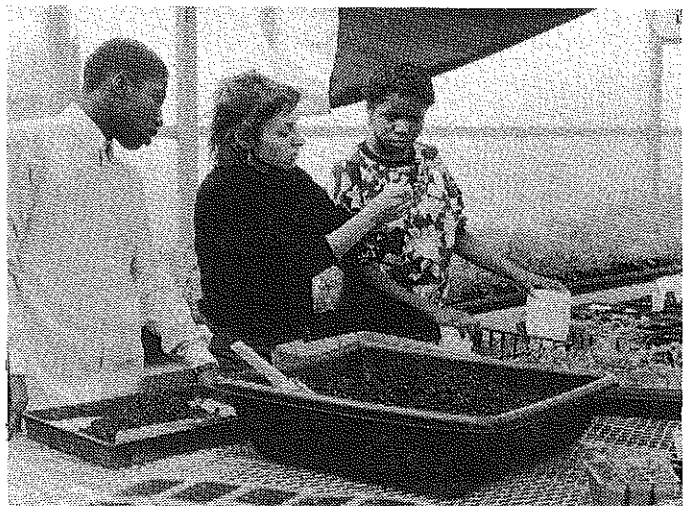
It is expected that more minority students will be enrolled in this project during Spring, 1988. The project now serves 20 students from the Borough of Brooklyn. However, it is expected to attract more minority students from the other four boroughs (Bronx, Queens, Manhattan, and Saten Island). Components such as the FFA and SOEP will be included in the curriculum based on available facilities and according to the needs and interests of minority youth in urban settings.

### A Base for Vocational Preparation

Agribusiness has changed drastically during the last 25 years, and so have the locations where people live. Today's minority population seems to live mostly in cities and suburbs. In New York City, it is felt that to be successful in teaching urban horticulture, a school laboratory is essential. The hands-on experience with horticulture gives minority high school students knowledge that can transfer to the occupations they select. With this acquired knowledge, more minority youth will be able to own their own businesses.



An agronomist of The National Park Service assisting a student with pruning techniques. (Photo courtesy of the author.)



Students observe as an agronomist demonstrates how to prepare seedlings for transplanting. (Photo courtesy of the author.)

## NEW PRODUCT

As adults discover that lifelong learning is the key to coping with and growing in our rapidly changing society, they are returning to the classroom in increasing numbers. Instructors must therefore develop their ability to educate adult learners.

Six new teacher education modules developed by the National Center for Research in Vocational Education are designed to help instructors and trainers create effective learning environments for their adult students. "Category N — Teaching Adults," the

latest materials in the *Performance-Based Teacher Education Series*, covers in-depth these specific areas:

- \* Preparing to work with adult learners
- \* Marketing adult education programs
- \* Determining individual training needs
- \* Planning instruction for adults
- \* Managing the adult instructional process

\* Evaluating the performance of adults

To order "Category N — Teaching Adults," send \$36.50 plus \$3.65 shipping and handling to: American Association for Vocational Instructional Materials (AAVIM), 120 Driftmier Engineering Center, Athens, Georgia 30602; or call 404/542-2586. For more information about performance-based teacher education, call the National Center's Program Information Office at 1-800/848-4815 or 614/486-3655 in Ohio, Alaska, and Hawaii.

# Different Farms — Different Students — Different Challenges!

Recently I had the opportunity to visit two very different farms. One was a 640 acre row crop operation with Class I and II land in the same soil series. The farmer produced one major crop. All equipment was housed in a single structure. I was surprised at the limited number of management practices and inventory of equipment necessary to do an outstanding job.

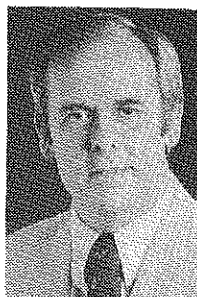
The second farm was also 640 acres but included four soil series with five USDA classes of land. The farmer grew four row crops, two forages, milked 50 cows, and produced softwood and hardwood timber. I was amazed at the diverse management practices and variety of equipment necessary to optimize profits.

Later, I visited two very different vocational agriculture programs. One specialized in a single program area with 60 students who were similar in economic background. The students had uniform test scores, motor abilities, and were in the same grade level in reading. The students also had similar experiences and career goals. I was surprised at the limited number of instructional management practices, educational resources, and equipment necessary to conduct the high quality program.

The second program offered specialized instruction in three program areas for 60 students from very diverse socioeconomic and racial backgrounds. Students also had dissimilar test scores, especially in reading. They had a wide range of motor abilities and attitudes about careers in agriculture. I was amazed at the large number of management practices, resources, and inventory of equipment necessary to optimize learning. Like the second farmer, teachers often find vast individual differences within vocational programs. Students may be regular or gifted, disadvantaged or handicapped, or fit into a variety of groups but each should enjoy the benefits of a high-quality program.

## Who are the "Minority Groups?"

A minority group is more complex than color or national origin. This grouping should be based on a perspective of individual needs in relation to the majority. Students may be clustered using three basic categories. One minority group may have cognitive differences based on ability, aptitude, learning style, or experience. Physical differences based on age, gender, kinetics, hearing, or vision may serve as a basis for a second group. The social/emotional minority group may include socioeconomic status, personality, behavioral, or cultural differences, and race. This complex matrix of individual differences makes it impossible to prescribe one instructional management strategy for everyone and, at the same time, optimize learning.



BY GLEN C. SHINN

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## Diagnosing Cognitive Differences

Many resources are available to assess cognitive differences. Most schools provide routine testing and make the results available for the teacher. Tests such as the California Achievement Test and the Stanford Achievement Test measure reading, comprehension, and other cognitive areas. Use these results as an initial indicator but not as a limitation in expectations of students. Basic concepts, relationships, experiences, and terminology can be estimated using a short writing assignment related to the subject matter. An individual reading test such as the San Diego Quick Assessment Test (Tonjes and Zintz, 1981) requires about five minutes to administer and interpret by the teacher. The Learning Style Identification Scale Handbook (Malcom, et al., 1981) is designed to determine preferred learning styles of students and can assist in matching teaching techniques with minority groups.

## Compensating for Cognitive Differences

Techniques which optimize learning by individuals with cognitive differences include a variety of teaching techniques and presentation methods involving the student. The use of verbal, written, and graphic methods to introduce basic concepts and principles is useful for students with auditory or visual learning styles. Videotapes and slide presentations improve performance of visual learners. The use of teaching aids, models, and realia proves useful for tactile learners.

Enrichment activities should be provided for students who have experience or special interest in the subject without making it seem like extra work. Peer instruction is often useful as a remedial technique for special students. Vary the instructional time to accommodate both gifted and disadvantaged students.

Reading is basic for success in today's agricultural industry. Directions, recommendations, and technical manuals require reading skills. Each textbook should be selected for

the appropriate reading level. In diverse programs, three levels should be available. The level can be easily determined using the Fry Readability Graph (Tonjes and Zintz, 1981).

### Diagnosing Physical Differences

Several resources are available which have a bearing on the selection of instructional materials, teaching techniques, and activities for individual students. Many physical differences are observable. Asking students to read from the board or answer oral questions can be used as a general assessment technique. General health screening by the school nurse or physician can be used to determine the extent of vision or hearing impairments. Diagnostic tools, such as the Armed Services Vocational Aptitude Battery (ASVAB) are available from the Department of Defense (1987). The ASVAB test battery provides useful information and can be scheduled for your school by calling 1-800-323-0513 (in Illinois 312-688-6908). The General Aptitude Test Battery (GATB) is often available through the State Employment Service. It is a useful measure of motor skill development.

### Compensating for Physical Differences

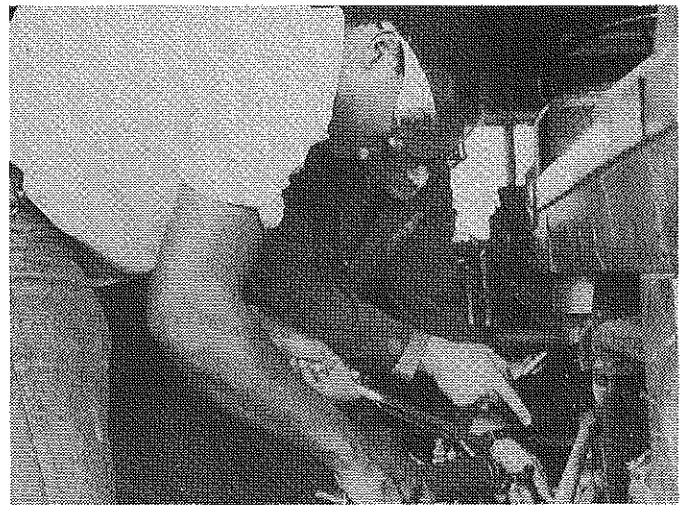
Several techniques are appropriate to match the assignment to the ability of each student. Varying the level of complexity and scope of assigned tasks encourages physical development. Evaluate strength and control of all students and match tools and equipment to their ability. As a simple example, head weight of nail hammers should vary with the strength and coordination of the individual. Small heterogeneous groups with selected students as peer instructors can provide review demonstrations and feedback. Students build confidence in small homogeneous groups with support from peers who have similar concerns.

Provide supervised practice time with corrected feedback throughout every assignment. Consider special equipment such as tables, guides, templates, or other devices to aid physically impaired students. Recently in our program, a student confined to a wheel chair mastered gas cutting skills using a special cutting table and a set of lap leathers. Assigned seating assists students who have hearing or visual impairment and may reduce peer pressure. Use hearing protection devices (HPDs) and special personal equipment such as prescription safety glasses or magnification lens as an aid.

### Diagnosing Social/Emotional Differences

Attitudes are complex expressions of the social and emotional environments of the individual and tend to change over time. Teachers should use care when assessing individual differences. Discussions with the student during a supervised visit can provide insight. The teacher should ask about feelings regarding subject matter, values, goals, and accomplishments. By encouraging confidential discussion and allowing the students to describe goals and personal values, the teacher will better understand their needs. The first visit should occur before or soon after enrollment into the program. An understanding of the attitudes of the parents and student is beneficial for instructional planning.

The sociometric matrix is useful for both instructional planning and behavioral management. This is a simple techni-



Vocational agriculture teachers can be very influential in minority youth developing employable skills. (Photo courtesy of the author.)

que based on peer choice. The technique is described by Hammill and Bartel (1979) and can be administered in class and interpreted by the teacher. A chart of the peer ratings of class members can be developed which provides insight into the complexities of the social/emotional environment. The Meyers-Briggs Type Indicator (1976) is an instrument to assess eight preference factors including extrovert or introvert, sensing or intuitive, thinking, or feeling, and judging or perceptive preference.

### Compensating for Social/Emotional Differences

Krathwohl, Bloom and Masia (1964) outlined an affective hierarchy which begins in a receiving mode. The student observes and becomes aware of the values in the lesson. On the second level, the student becomes willing to respond with positive feedback. Effective teaching techniques for lower order attitudes include group or panel discussions, field trips, and simulation activities. Through positive feedback, the student may move to the third level of accepting and preferring a value. At this point, the teacher should select practical exercises, projects, and simulations, or case studies to optimize the affective learning of the student. A discussion of the use of the hierarchy is included in Good and Brophy (1986).

The social position of each student in the class can be determined by asking all students to list others with whom they would prefer to work on an exercise or project. By plotting the nominations on a sociogram, the teacher can gain a better understanding of the complex social structure of the group. Figure 1 demonstrates three social clusters in a class. Two individuals appear as "stars" while three others are "isolates." Either may be a positive or negative advocate for the instructional goals of the program. Isolation may result from geographic differences or result because of attitudes toward minority group traits. In the latter case, the teacher should focus on group attitudinal and behavioral changes instead of changes within the isolated member. Hammill and Bartel (1979) provide additional information on the use of this technique.

*(Continued on page 12)*

## Different Farms — Different Students — Different Challenges!

(Continued from page 11)

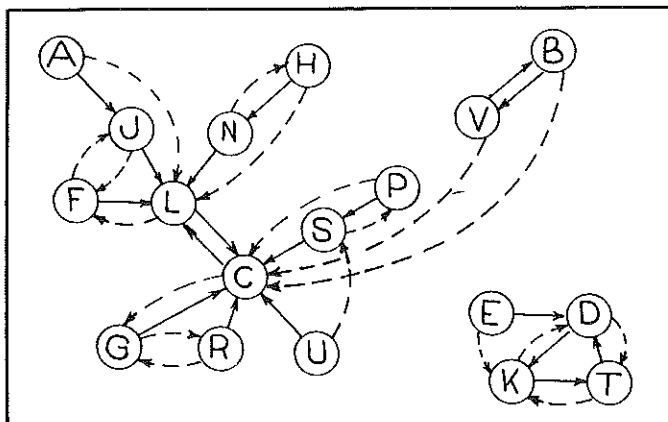


FIGURE 1. The sociograph provides another insight into the complex social/emotional environment of the class. The student's first choice is indicated by a solid line and the second by a dash. The class of 18 identified two "stars," C and L, and three "isolates", A, E, and U. As a result, the teacher may reinforce or redirect the social pattern to accomplish specific instructional goals.

### Prescribed Instruction — Easy to Say!

The primary purposes of vocational agriculture are to prepare individuals for entry employment and re-train or upgrade technical competencies necessary in a dynamic agricultural industry. The challenge for the effective teacher is to organize an educational program, assess a variety of instructional materials, adapt them to individual needs, and develop applications which allow all students to develop their abilities.

Just as the second farm requires a large number of management techniques and a diverse inventory of equipment, effective management of minority groups requires a number of instructional techniques and diverse resources. Researchers have concluded that effective teachers use a variety of teaching techniques. The challenge for the master teacher is to select the most effective techniques for both the instructional objectives and the traits of minority groups. To quote Franklin's grandfather, "Ben, if it was easy anybody could do it!"

What is meant by practice and who are practitioners? What is research and who are researchers? The distinctions between these roles and functions are discussed by Sharon Merriam in *THE RESEARCH-TO-PRACTICE DILEMMA*, available in text and videocassette from the National Center for Research in Vocational Education.

## NEW PRODUCT

Dr. Merriam examines some of the issues facing adult education and suggests realistic steps toward bringing the two activities of research and practice closer together. She addresses problems inherent in the different reward systems under which research and practice are conducted, the newness of adult education research, and the language of research publications.

Order *THE RESEARCH-TO-PRACTICE DILEMMA* (OC123 — \$3.00), 13 pp., 1987, from the National Center for Research in Vocational Education, The Ohio State University, Publications Office, Box N, 1960 Kenny Road, Columbus, Ohio 43210-1090; 614-486-3655 or 1-800-848-4815 (toll free outside Ohio and inside the continental United States).

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Welding is one skill area that is beneficial to all students regardless of income, ethnic, or social status. (Photo courtesy of the author.)



Group projects provide students opportunities to develop social as well as vocational skills. (Photo courtesy of the author.)



# Commitment of 1890 Land Grant Institutions to Teacher Education in Agriculture

This is a propitious time to review the myriad of contributions made by North Carolina Agricultural and Technical State University's Agricultural Education and Extension Department and other 1890 Land Grant Institutions. North Carolina A&T State University and other 1890 institutions enhanced the lives of many youth and young adults. Effective and challenging programs envisioned by leaders and initiated for the betterment of youth and young adults improved the self image and quality of life for many individuals. The involvement and training of a large number of low-income and disadvantaged youth and adults have been great feats of the program. To reach out and serve a large number of youth and adults with specific and general needs is still a desirable and worthy goal of Agricultural Education at North Carolina A&T State University and the other similar institutions.

It is important to link historical facts of the past with present expectations. That is keeping alive the concept of passing along to posterity the significant and valuable work performed by teacher educators and other leaders in agricultural education. Teachers of agriculture, agricultural Extension personnel, teacher educators, supervisors, school and college administrators, business and industry executives, government leaders, and others trained at North Carolina A&T State University and other 1890 Land Grant Institutions stimulated a viable interchange between the general community and the university. The department supplied leadership training, community development programs, student teaching programs, and activities including recruitment of secondary school students for the university. These programs were influential in helping the community to become aware of the offerings in the various disciplines at the university.

## Historical Perspective

The intent of the 1890 Morrill Act was to provide educational opportunity for black American students. It mandated that in the Southern states where separate schools were maintained for blacks that land grant institutions be opened to both white and black students or "separate but equal" facilities be established. Subsequently, separate but not equal facilities were established in 16 Southern states.

The Hatch Act of 1887 provided for agricultural research and the Smith-Lever Act of 1914 established the Cooperative Extension Service. The Hatch Act and Smith-Lever Act completed the land grant triumvirate — teaching, research and extension. Although the land grant triumvirate consisted of

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teaching, research, and extension, significant funding for research and Extension for the 1890 institutions only began with passage of federal legislation in the 1970s and early 1980s.

Traditionally, the 1890 land grant institutions have only had the teaching component of the triumvirate. In most instances such as North Carolina A&T State University, the Agricultural Education Department is the oldest academic unit on campus. The most common purpose of the 1890 institutions by the turn of the century was the training of black teachers. Teacher education in agriculture has served as the curriculum program foundation for many 1890 institutions. It has contributed immensely to the educational, economical, and cultural development of communities and the nation.

## Significance and Purpose

The major role of teacher education in agriculture at the 1890 institution, as well as the other land grant institutions, has been and still is to prepare teachers of agriculture for secondary schools. However, many of the graduates go into other areas of employment. The agricultural education program also prepares students for careers in agricultural Extension, business, trade and professional associations, government and other professional agencies. Presently, about one-fourth of the graduates go directly into teaching.

The role of the agricultural education program is misunderstood by many professional and lay persons and it is believed that the average person is unaware of the unique role of the agricultural education department at the 1890 institutions. Students with degrees in agricultural education are very versatile with respect to career options. They may pursue a wide diversity of careers. The curriculum is academically sound with flexibility to provide for individual needs and interests.

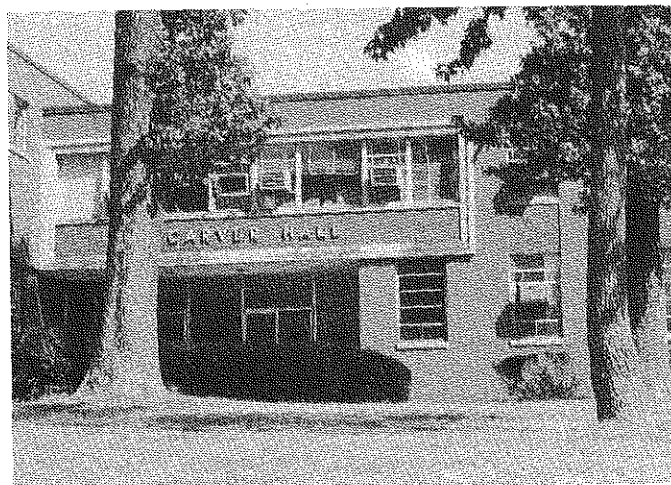
Teaching continues to be a very viable profession for minorities. Minority teachers contribute to the economic vitality of the communities in which they work and serve

*(Continued on page 14)*



## Commitment Of 1890 Land Grant Institutions To Teacher Education In Agriculture

(Continued from page 13)



George Washington Carver Hall is the home of the School of Agriculture at A&T State University. Carver, the noted black agricultural scientist, helped revolutionize Southern agriculture with his research, especially that which focused on peanuts. (Photo courtesy of the editor.)

as role models for youth. They are very viable in the community and usually play an active role in educational leadership and cultural activities of the community. This has long been a major thrust of teacher education in agriculture at the 1890 institutions where emphasis is placed on academic excellence as well as community participation and leadership.

According to Beverly B. Dupree (1986), the number of white school age children is decreasing while the number of black and Hispanic school age children is increasing. Dupree indicates that this is especially significant because the number of black and Hispanic teachers is decreasing. Wright (1980) indicates that approximately 50% of the black teachers come from black colleges. It is conceivable that most minority agriculture teachers come from 1890 teacher education programs. Williams and Williamson (1986) indicate that 1890 teacher education in agriculture departments provide minority students with better odds for retention and attainment. The staff at 1890 institutions are able to identify with minority students thereby keeping the channels of communication open. This creates an atmosphere where student needs and interests are identified and appropriate action taken to help insure their success.

Although the number of minority teachers is declining, the average salary for teachers of agriculture is steadily increasing. According to the NEA TODAY (1987), the national

average for teachers' salaries is \$26,704. This is up 5.9% from 1986. This enables minority teachers to contribute to the economic vitality of their communities. Minority teachers contribute tremendously to local, state, and national economics.

### Resource Unit

Agricultural education departments at 1890 institutions serve as a tremendous educational and cultural resource unit for the university community and other communities of the state. The departments are involved in these communities directly and indirectly. Direct involvement entails developing special programs or projects and providing leadership with respect to social, economic, and educational issues. However, indirect involvement comes through graduates' participation in the community development process. The community development process is emphasized through curriculum and program activities. Contributions in the area of community development and leadership extend far beyond local communities.

Many graduates from the 1890 teacher education in agriculture program have received advanced degrees and hold key leadership positions in government, industry, academics, and business. These individuals make decisions and participate in policy making that affects all Americans and many other people of the world.

### Summary/Conclusion

It is evident that teacher education in agriculture at 1890 institutions is making very significant contributions in the areas of education, socio-economics, and cultural development in the minority and majority sectors. It is also evident that minority participation in education is decreasing at a time when the number of minority school age children is increasing. The financial and human resources of the 1890 program remain inadequate but the quality of the programs is high and the success of the graduates outstanding. The agricultural education graduates from the 1890 institutions are competent, competitive, and hold key positions through the nation and world.

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# A Time To Increase Management Level Minorities

Agriculturalists are perceived by many to be action-oriented, always "ready to jump right in, get their hands dirty, and get the job done." Agricultural educators are included in this category. They recognize the need to remain current, and at the same time, prepare for the future. In a climate of reform and reassessment of vocational education, agricultural educators are attacking the problem and developing solutions. For example, when educational reform became an impending issue in the current decade, agricultural educators nationwide responded by developing curricula which reinforces the "basics" and promotes the role of agricultural education as "applied academics."

Keeping current on a constantly changing agricultural production, processing, and distribution system requires continuous inservice training and participation in professional workshops. Magazines, newspaper articles, journals, and books abound informing agriculturalists about the changing agricultural environment. Radio and television provide teachers of agriculture with up-to-the-minute reports on activities, events, discoveries, and other occurrences affecting agricultural industry.

Agriculture's future is full of transition. When considering the state of transition, agriculturalists must pay heed to the continuing need for a capable work force. The mix of modern technology and societal growth patterns causes many questions to surface, and agriculturalists are not immune from responding to and addressing such questions. Is the agricultural industry of today in need of a well-trained work force for tomorrow? Rhetorical? Yes, but easily an overlooked question.

Agricultural educators play an important role in providing for agriculture's personnel of the future via education at the primary, secondary, and post-secondary levels. Vocational education is preparing young people for the pursuit of careers in agriculture and has a history of producing leaders. And . . . who will be tomorrow's agricultural leaders? Will agriculture in the United States continue to be a prominent industry? Is vocational education in agriculture to remain a significant part of a comprehensive high school? There are too many questions requiring a response and the answers are still being written and acted out, based on agricultural education's current status and goals. However, are we always asking the right questions?

## Ethnicity in the Classroom

Every time a student walks in the door to the classroom, a teacher is observing a representative sample of the coming generation. How does the student of today differ from the student of yesteryear? The immediate reaction usually centers around the environment to which the students are

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subjected — drug and alcohol abuse, nuclear arms proliferation, a permissive society, single parent families, and the list continues. Yet, one observation is readily apparent and it is visual. The color and ethnic background of present day students are also changing. An example of the changing ethnicity facing the United States can best be described by a phenomenon occurring in California. According to the Population Reference Bureau, California, which is approximately 64% non-Hispanic white, will no longer have that ethnic majority in the year 2010. There is an expected shift to a more Hispanic and Asian population breakdown of 22 percent Hispanic, 7 percent Asian, and 7 percent black, in addition to the 64 percent non-Hispanic white. Within thirty years, the state is expected to have a "minority-majority."

A changing ethnicity in the population is inevitable. If the ethnic and cultural background of the student population is shifting, a question arises with respect to the average vocational agriculture classroom. Is it truly representative of the changing student enrollment? What about the enrollment of minority students in post-secondary agricultural schools and colleges? The pattern in California is not unique nor rare. In fact, several of the Southwestern states mirror each other, demographically speaking. Additionally, analogous population shifts are occurring throughout the nation. As the student population in the schools begins to fit the population predictions, the clientele in each and every classroom will either reflect the change or result in an empty classroom.

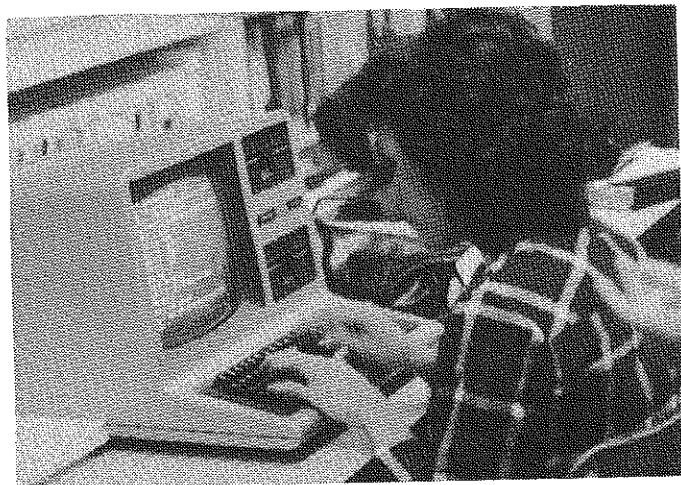
## We Do See Color

Educators are trained to greet all students with open arms and claim that color of skin or ethnic makeup is not a factor. Some educators reject the color and race issue and maintain that they do not see color. The fact remains that those of us blessed with eyesight capable of determining color do see color. When an instructor claims not to see color, what is really being conveyed is the notion that ethnic/racial makeup does not affect the teacher's acceptance of each and every student in the program. This attitude toward students is most admirable, but it doesn't necessarily result in an increasing minority student enrollment and involvement in programs of vocational agriculture.

(Continued on page 16)

## A Time To Increase Management Level Minorities

(Continued from page 15)



Minorities and women will play increasing roles in agricultural education. (Photo courtesy of the editor.)

Students recognize the ethnic and racial makeup of a classroom and program. A black student is unlikely to enroll in a vocational agriculture course if she or he will be one of a kind sitting in the classroom. A Hispanic student won't pursue an agricultural degree at a college if prior Hispanic successes in college and on the job are non-existent, non-visible, or few and far between. The students do see color and will not place themselves in threatening educational settings. "Agriculture" is a dirty word to many black and Hispanic students. Their definition of agriculture is negative and, also, their outlook toward earning a livelihood in agriculture is also indifferent. The attitude of such minority groups toward agriculture is no surprise. Previous generations in their families may have been subjected to low paying, demeaning, farm labor positions. Hispanics have provided the bulk of the farm labor work force for many years and blacks were forced to work for their masters as slaves. Feelings toward agriculture are derived partially from such negative experiences that often are passed from generation to generation. Teachers cannot afford to allow parental influences and biases to remain a solid obstacle in the path of increasing minority student enrollment. Neither can they permit community influences and biases to do likewise.

### The Survival of Agriculture

There are several arguments for promoting the participation of minorities in programs of vocational agriculture, the least of which is to adhere to legislative mandates or attain another source of funding for the program. Our nation's strength relies on several industries — the fundamental industry being agriculture. People with an eye to the future are quickly recognizing the available work force of tomorrow and the technological advances affecting the production, processing, and distribution of agricultural products. Failure to nurture minority involvement in agriculture today will paralyze and severely curtail the United States' agricultural position of prominence in world trade tomorrow.

The population shifts and eventual emergence of the "minority-majority" is certain to influence the legislative process. In a democratic society where the majority rules, negative sentiments toward agriculture will surface. Current legislation affecting agriculture is closely scrutinized by a wary public. Public relations and mass educational efforts by the agricultural commodity and political action groups are vital to influencing voter approval of favorable agricultural legislation or the defeat of deleterious enactments. As the voting majority changes color and/or becomes less knowledgeable about agriculture, it will take more than public relations dollars to prevent agriculture from encountering a political catastrophe. An example of what can happen in the future is already becoming apparent in California. Pesticide regulations have made it virtually impossible for a chemical manufacturer to register a new pesticide in the State. The cost to do so is exorbitant.

### The Right Thing To Do

More importantly, it is imperative that agricultural educators at all levels promote and encourage minority student involvement, participation, and career interest in agriculture because it is the right thing to do. We are all busy people and it becomes difficult to devote time to every student in our classes. Placing emphasis on one student or one group of minority students can be defeating and disastrous. Advocating this type of practice would be foolish. Many individuals may view such attention as a case of reverse discrimination. It is not in the interests of the vocational agriculture teacher to favor any group of students over another group. But careful planning, an open mind, and putting an attitude of concern into action can result in minority successes in vocational agriculture provided action is taken.

Students identify role models; some pattern their educational and career aspirations on role models, either intentionally or subconsciously. Agriculture cannot profess to have an abundance of minority role models at management levels. And agricultural programs in higher education cannot boast a record of achievement in minority student graduates, enrollment numbers, and minority instructors. Minority representation in management positions in the agricultural industry will not climb if enrollments in schools and colleges of agriculture are minimal at best. The American Council on Education reports that higher education is in a period of steady enrollments. However, a paradox exists. Hispanic enrollments increased 12.1 percent between 1980 and 1984 while those of black and American Indian/Alaskan natives declined. In both instances, minority student enrollment in agriculture majors have shown little change. The need for role models of "color" is great.

Agriculture instructors know that fulfilling goals demands hard work and dedication, whether it be student awards in competitive events or the development of a first-rate school farm laboratory and curriculum. A similar doctrine must be applied to increasing minority student involvement in agricultural education programs. Change won't be easy, but once the barrier is broken and a "star" is born, others will follow. Adaptation to change, simply put, requires that the instructor who once did little to encourage and involve a student in the Supervised Occupational Experience Program,

Future Farmers of America organization, and classroom/laboratory activities due to socioeconomic factors must now make an extra effort to cultivate the student's participation. It is too often the case where socioeconomic status is correlated with race. The less fortunate student is not afforded the same opportunity as the affluent student.

### Our Calling

Teachers give of themselves so that each of the students may be inspired to make future life more full and productive. Agricultural educators have a genuine opportunity to shape the future. Yes, there are many obstacles in the path between agriculture and minority involvement. In the words of Bill Cosby, actor, comedian, and author, "If you want to know who really molds our children's future, it's not the politicians, movie stars, or corporate leaders. It's our teachers." The decision to serve youth and agriculture was a choice; it didn't occur by chance. It is time to be futuristic and promote the involvement of minorities in agriculture. They can benefit from active participation in a program of vocational agriculture, which might lead to further train-

ing and eventual placement in management level agricultural occupations.



Horticulture is an instructional area that has been successful in attracting minorities and urban students.

## LETTER

Dear Dr. Bowen:

I have just read your editorial "You Can't Go Home to the Farm," (August, 1987), and consider it one of your most important. All vocational programs must be justified in terms of their contributions to their graduates' success in their chosen field. I would add that while we cannot prepare students for non-existent opportunities in farming, the few who will still become farmers deserve the best preparation possible.

I'm afraid that over the years our profession has swept some important problems under the rug — one of them being the limited opportunities for farm operators. This is documented by early issues of THE AGRICULTURAL EDUCATION MAGAZINE.

As a teacher during the thirties, I read the MAGAZINE because it was considered

on par with motherhood, the flag and apple pie. I was puzzled, however, by the articles which dealt largely with job analysis, project records and the establishment of boys in farming, while as a teacher I was dealing with the problems of the dust bowl, ruinous farm prices and farm foreclosures. Old issues of the MAGAZINE show that World War II food production efforts were barely mentioned, nor were the emerging farm programs. Unfortunately, editorials of those days made no mention of a racially segregated youth organization and an out-of-date high school agricultural curriculum.

Fortunately in recent years, the MAGAZINE has taken on a new vitality in addressing important issues of the day. You are to be commended for the context of the MAGAZINE during your tenure and for the thoughtful, honest

and important editorials you have written. I consider you to be a stand-out among a number of distinguished editors of recent years.

THE AGRICULTURAL EDUCATION MAGAZINE, long an important force in professional improvement, continues its important contribution, and your efforts as editor have added to its impact.

After re-reading this letter, I decided to send copies to the editing-managing board, which I hope meets with your approval. Beyond this you may have my permission to use it in any way you see fit.

Cordially,

Ralph J. Woodin  
Professor Emeritus  
Department of Agricultural Education  
The Ohio State University

Coming in January . . .

# TOMORROW'S TEACHERS

# Developing Entrepreneurship In Agriculture

The U procedure is a model (Glasl, 1983) to analyze organization structures in trade and industry. This model has been developed for trade and industry in general. This model has been used for some years now in courses and seminars for farmers, which were aimed at developing entrepreneurial skills. The model has been adapted to the agricultural situation as much as possible. For three years, it has been used in five-day conferences for extension workers to teach them to work with this model in their work. Two possible uses of this model are: (1) as a teaching strategy for farmers to analyze management problems systematically to increase their capability to solve problems where two things are important; (A) insight in methods of problem solving, and (B) skills in working with problem solving (Insight and theory are complementary and necessary insofar as the practical situation is concerned.); and (2) extension workers can use it as a teaching strategy when they want to help farmers to reach/make independent decisions. The model (Figure 1) presupposes that if one wants to analyze a situation (a business or a farm), it is necessary: (1) to analyze how and what makes the farm what it is, the past; (2) to describe the current situation and indicate on what points things do not function as they should, the present; and (C) project ideas/solutions for the future.

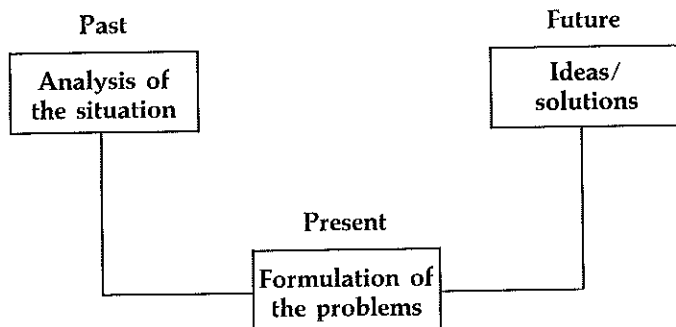


Figure 1. Schematic Representation of the Model

## Using the Model in Teaching

Specifically, in courses the model is used as a means to practice social/organizational skills. Elementary skills like listening, deliberating, judging, and making decisions are practiced with the help of artificial exercises. In a later stage, practical situations are selected from the participants, a visit is made to farms, and then go through the seven steps.

BY GERARD LESSCHER, MAARTEN VAN WOERDEN  
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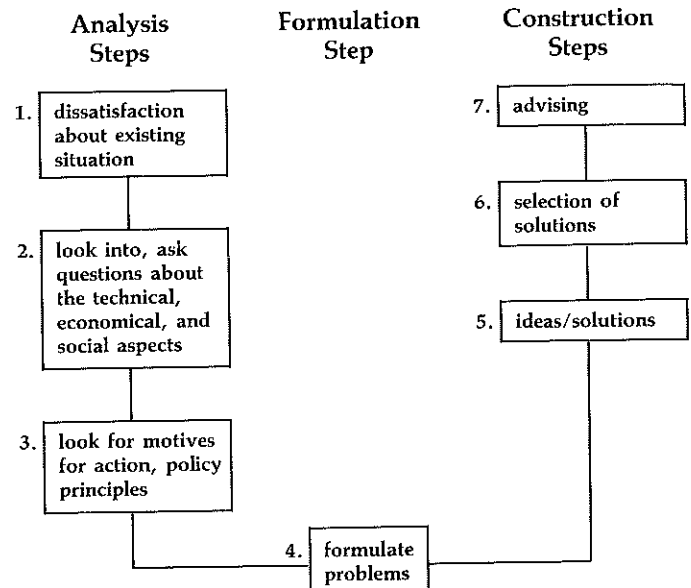


Figure 2. Steps in the Model

### Step 1: Dissatisfaction about the existing situation.

In courses, we usually ask whether there is anyone who has a problem from a practical situation, something that calls for a decision. For example, a participant from the horticultural sector is struggling with the question of whether or not to buy a computer for accounts besides the one he has for climate control, or a stock farmer has doubts about the dedication of a son who has been helping on the farm for two years. In a group of participants some 8 to 10 situations with concrete questions emerge after some preparation. Groups of 5 to 7 participants are formed around the people who brought forward the questions and two days are normally needed to take the six subsequent steps.



## Step 2. Questions the technical, economical, social aspects of the farm.

Each group now visits the farm in question with the assignment: "Make sure you get a complete picture of the farm." When they return, they prepare a description of what has been observed. In practice one sees, and the participants are shocked to see, that most information has been gathered concerning the technical/material side, some information about the economic/financial side, and virtually none about the social-organizational aspects.

This shock effect motivates the participants to work on the following assignment: try to form a complete picture of this situation, i.e., of all three aspects: the technical, economic, and social-organizational. A further round of questions by students is usually needed to form the complete picture.

In this round of questions, the way in which questions are put is scrutinized sharply. Does one ask questions to get information or does one ask questions to confirm a prejudice? Are follow-up, probing questions asked? Does the one who puts the questions direct the stream of information or is this left to the one who gives the information?

This phase is concluded with a discussion about "What actually is involved in getting information?", "How was it done today?", "How does one look at another farm?"

Possibilities for learning evolving are to get insight into your own way of looking at a farm, to learn to see another farm as an entity of several parts, how to ask questions, and to see the difference between open and closed questions and to develop skills in asking open questions.

## Step 3: Motives for action, policy principles.

In the previous stage the situation was determined and considered, so to say, horizontally. In the third step, participants are asked to find out why it is as it is. They are asked to pay special attention to the development of the farm from past to present. What type of policy decisions have been made in the past? What is typical for this farmer/family? They should look into the depth, vertically; in other words, they are asked to get into the skin of the other, to think oneself into the other's place. Participants formulate "maxims" or mottos in such a way that they could have been the farmer. It is striking that this is considered to be very difficult and that the student becomes more and more reluctant to make judgments. Often one starts asking questions anew, now often also "why" questions, much more than the former "shouldn't you do this or that" questions.

At this point, the participants experience the deeper meaning of the saying: "The less hindered by knowledge, the easier it is to judge." In the above example of the horticulturalist, it became clear at this point that the question as to the purchase of a computer really was merely the tip of the iceberg. In this stage of this example, the mottos or policy principles that were formulated appeared to be incompatible with each other.

In the technical/organizational field, mottos evolved such as, "Make sure to be with it", and "Whatever you can do yourself you must not have done by someone else".

In the social/organizational, mottos evolved such as, "As things were in the former day, was best", and "All will turn out all right".

After further consideration, it appeared that the person posing the original problem had never worked out an agreement as to what the responsibilities were between his two sons and a cousin/nephew. Moreover, a father, uncle, and grandfather were working on the farm.

The real question appeared not to be "yes or no to a computer", but "how can we come to a structured deliberation and a division of responsibilities accepted by all so that we can make decisions?"

Possibilities for learning evolving are learning how to learn from each other, learning to look at a farm not only horizontally but also vertically, and learning to realize that policy can be present not only actively and consciously, but also passively when there isn't any policy. Especially the first possibility seems important to us, besides the one mentioned in the previous step, because farmers often say they learn best through practice, by doing it and by looking at others.

## Step 4: Problems.

At this point, the stage has been reached at which the important thing is to get at the heart of the matter. After observing and asking questions, the heart of the problem or the question is formulated. Quite often the original question has disappeared into the background and one is now focusing on the causes. In short sentences, the nucleus of the problem is formulated so that it forms a workable definition so that in the model one can go through the bend to a more creative stage. This is often preceded by a strength-weakness analysis.

Possibilities for learning evolving are formulating the heart of the problem, to become conscious of the necessity of indicating the heart of the matter, and learning to make a strength/weakness analysis.

These first four steps could be characterized as analyzing. Now, the constructive phase of the process begins.

## Step 5: Ideas and solutions.

In this phase, the issue is to develop ideas/solutions. Ideas is plural because it is important to stay out of the atmosphere of phases 1 or 2 in which the most obvious thing is mentioned. Participants are encouraged to get "loose" from the obvious through the brainstorming technique. After a practice session, this technique is applied, not because it is important that farmers should go through life brainstorming, but because it is important that one sees that one can think of several solutions to a problem and how valuable that can be. And even more important is the knowledge to create conditions that several alternate solutions will arise.

Possibilities for learning evolving are seeing that one can think up several solutions/ideas to a problem, provided it is done in a certain way; and gaining insight into the reasons behind the procedures for brainstorming and gaining skill in applying these principles.

## Step 6: Selecting solutions.

We have now arrived at the decision making stage of the process. That is to say that with the help of criteria, decisions are formulated with the aid of what has been learned

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about this particular situation (step 2) and the policy principles (step 3).

With the aid of the criteria thus formulated one can weigh (the ideas, results of step 5) and determine whether they can be considered to be a "solution-idea". In this phase, it is often believed strongly that one analyzes a situation thoroughly one cannot really offer solutions. What is possible is to indicate directions in which one should look for solutions. The farmer in question ought to be the decision maker and transform ideas into actions. As companions, ask participants to indicate what should happen on a short term basis and on a longer term basis.

Possibilities for learning evolving are to see the shortcomings of off-hand advice, acquiring skills in making decisions and choices, considering the consequences of ideas, and learning to think on short and long term bases.

### Step 7: Advising.

At the previous step, a mental process started about the question "What, in fact, is giving advice?" Therefore, this is the right moment to consider how to give advice in two completely different ways. To begin this process, few volunteers to receive advice about something are asked to leave the group. A member of the remaining group is asked to follow Method A and one member to follow Method B in a role playing situation in front of the class. Each person needing advice talks individually with a person following each method.

Method A	Method B
diagnose — recipe model	listen-question model
*not listening to the question	*listening well, putting yourself into the other's shoes
*advise the first thing you think of	*not giving advice
*try to persuade the other with your own arguments	*asking and asking for deeper reasons
*not listening	*asking real questions not suggestive ones
*overbearing	*by listening to the others and helping to think about problems

Figure 3. Role Playing Methods of Directions

Method A is in fact nothing more than the shortest route through the model from 1 to 7 (see Figure 2).

Method B is the model applied in a conversation in which one is really considering the problems of the other.

Possibilities for learning evolving are to get insight in the problems of off-hand advice, learning to listen, and learning to put yourself into the skin of the other.

An agricultural business must be seen as a complete unit with recognizable, interacting subsystems of a technical, economic and social/organizational nature. This implies that an essential change in one of the subsystems asks for an approach that is not only directed to that particular subsystem but to all three. As expansion of the agribusiness into a new branch of the industry is considered, entrepreneurs and their advisors should consider each of the subsystems. The U model as described would be helpful to them.

### Reference Cited

Glasl, F. "Verwaltungsreform durch Organisationsentwicklung," Bern/Stuttgart '83.

## BOOK REVIEW

FARM & RANCH BUSINESS MANAGEMENT, Jim Steward and Raleigh Jobes, Moline, Illinois: Deere & Company, 288 pp., price \$14.95.

Agricultural educators teaching fundamental agribusiness management will find FARM & RANCH BUSINESS MANAGEMENT by Steward and Jobes a valuable addition to their instructional tool box. The text was developed for use by high school and post secondary agriculture students as a basic, introductory text.

The text is well written using easily understood language. The attractiveness and clarity of the text, with its many illustrations and graphics, will promote student understanding. Throughout the text, easy to follow, personalized examples of principles, practices and procedures are offered.

These examples should help students relate the concepts being learned to real life situations.

The text's thirteen chapters provide the reader with a general overview of farm and ranch business management, with sufficient detail to make the book challenging to its intended audience. The text's introduction stresses the importance of setting goals and planning the decision making process. Several chapters discuss the analysis of budgets, costs, cash flow, and investments. Record keeping, marketing, taxes, agricultural law and business organizations are also addressed. Chapter twelve helps the reader probe the advantages and disadvantages of buying a computer, computer selection, and computer utilization in farm and ranch business management. Chapter thirteen summarizes the con-

tents of the text using a whole farm case study that provides realistic examples of the many steps in farm and ranch business management. An eight page glossary of terms allows the user to develop the vocabulary necessary for understanding the many facets of business management.

This text would fit nicely into any teacher's lesson plans. It could also be used as a text or reference book for individualized study. The available slide set and guides for students and teachers, developed for use with the text, would enable the teacher to adopt the text as a stand alone instructional unit. The visual and informational quality of this text would make it a valuable addition to any school's agricultural library.

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# Your Philosophy And The Future Of Vocational Agricultural Education

As soon as I feel confident in knowing what to do, accomplishment or carrying out the task seems somewhat easier. Sound familiar? A potential source of anxiety faced by today's vocational agriculture teachers could be one of two things: (1) not knowing what is important to do, or (2) spending too much time trying to control things that are beyond your control.

As teachers we really have very narrow bonds of power. We possess no legal authority to procure the level of program financing, or the kind or extent of facilities we use, or the many policies under which we operate to fulfill our roles as teachers. In many cases even the school's curriculum is so tightly regulated due to textbooks and reference adoption procedures that the content of vocational agriculture takes a long time to change.

Due to this and other delays in bringing about program change, the most potent thing which teachers take to their jobs which will help them accomplish our professional vocational education goals is a well thought out and developed philosophy. Knowing what is important is the basic ingredient for planning what to do. A clearly defined philosophy, thus clarifies not only what you plan but is the basis for determining the degree to which we meet those goals/objectives when accomplished. If a philosophy is so important, how should we go about its development? Think it through, write it, debate it, rewrite it, and let it be the foundation upon which we build sound vocational agricultural education programs. A local program will be no stronger than its philosophical base. What is it as a profession we believe in?

After 31 years as a teacher, supervisor, and now a teacher educator, my perception suggests local vocational agriculture programs are successful to the degree that:

- Teachers and their program reflect a strong vocational philosophy which focuses on the goal of developing competencies within students which prepare them for jobs in production agriculture or agribusiness.
- Teachers are intimately involved in all aspects of agriculture within the community so that they know and understand agriculture and agribusiness and the needs of people locally.
- Teachers integrate an awareness of career opportunities in agriculture and agribusiness coursework with students.
- Teachers and the curriculum stress educational experiences leading to the development of favorable human and leadership skills.

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- All students are expected to participate in meaningful supervised occupational experience programs which contribute to the students' career goals.

The above statements, of course, express a personal philosophy, yet I feel they are defensible in light of our professional goals and objectives.

More recently teachers have been confronted with difficult if not impossible philosophical questions with which they are expected to deal. Teachers are commonly being asked by administrators and school boards to teach in areas as general shop, science, mathematics, computers, or other subjects outside of their area of preparation and expertise. Philosophically, the question is how can those trained to prepare students for job entry employment switch their emphasis to teach toward general education goals/objectives? I can sincerely question whether it is possible to switch back and forth between these two philosophies without sacrificing some principles on both general and vocational education. Trying to serve two masters results in an inherent loss of teacher energy, enthusiasm, and effectiveness over time. Ultimately, there is a loss in accountability, especially the goals and objectives of vocational education.

At this point in our history when agriculture/agribusiness has been rocked with so many social and economic problems one wonders if alternative assignments for the vocational agriculture teacher is a good long-range investment for the community. One cannot help but wonder if it would not be more accountable and cost effective to the community/state and the nation to allocate the time and talents of the local vocational agriculture teacher toward developing fully the traditional goals of vocational agricultural education whether at the high school, post-secondary, or young and adult farmer education level. In cases where high school programs have diminished because of numbers or demand, planning and developing adult education could be a better and more cost effective alternative than directing the teacher's time into non-vocational education teaching

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(mathematics, science, etc.). A noted agricultural educator, Dr. Milo Peterson (deceased), formerly at the University of Minnesota, once commented that communities and school boards shouldn't try to make rabbit dogs out of damn good coon hounds. Good coon dogs are somewhat similar in purpose; chasing diffused rabbit tracks can be confusing and counter productive to catching or treeing coons. The central thought holds true when teaching vocational agriculture. Unless we hold a relatively similar philosophy and pursue it vigorously, program emphasis waivers by providing lack of central direction, proliferation of effort, and less accountability toward the central goal of vocational education which remains to, (1) prepare owners/operators for their roles in agricultural production/agribusiness, and (2) to

prepare entry-level workers for jobs in the agricultural production/agribusiness segment of our economy.

Unfortunately, teachers who honor and develop the vocational goals and objectives primarily are sometimes branded as being non-innovative, non-progressive or worse yet, not cooperative. Yet, as professional vocational educators, we must remain conscious of the major criteria upon which we are evaluated — which ultimately is how successful our students are that we placed in jobs for which they have received education. This is a particularly good period to look globally at the community and determine the successes and failures of people in all aspects of agricultural production and agribusiness employment. A close analysis may clearly determine that education in vocational agriculture has made a difference. As a professional vocational educator, I am betting that there is a positive correlation between the degree of participation which people have had in vocational agricultural education, and their economic success in agricultural production or agribusiness.

### ARTICLE

## Image Building With Agri-Science

With the increasing concern over dwindling enrollment, it is surprising to find that many teachers are employing activities that contribute to a negative image of their department. We have experienced much success in marketing our programs to top-notch students. The reason for this success has been due to the positive image that has been cultivated in our departments. The major components of this success have been: 1) innovative curriculums, 2) student appearance and behavior, and 3) organized public relations and media activities. There are many negative stereotypes associated with agriculture in today's society as well as many activities employed by vocational agriculture departments that reinforce those images. Therefore, in marketing today's secondary agriculture programs, we must build positive images.

### Curriculum

Early in our teaching careers, it became apparent that students and parents were not interested in the study of traditional production agriculture. Our public had to be convinced that there was a future in the agricultural industry and at the same time fulfill the needs of those students who would return to the farm or go directly into careers following graduation. We had to develop a curriculum that could be marketed throughout our school districts and appeal to those interested.

Our first step was to develop a positive title for the course

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offerings. We selected a name that reflected the true nature of today's agricultural industry, thus the term "Agri-Science" was developed. It was also determined that the most important skills students learn, as a result of enrollment in our programs, were the communications and personal development. To give our courses a collegiate flavor, we gave them the numerical designation of Agri-Science/Leadership Development 100, 200, 300, and 400. These titles replaced the old Vo-Ag I, II, III, and IV headings that had become habit over the years.

The second and most time consuming step was the development of a teaching curriculum that lived up to the expectations of the new course titles and that could be marketed to both traditional and non-traditional agriculture students. Traditional courses of study in secondary agricultural education have emphasized the production agriculture aspect and has done little to incorporate the scientific nature of the total agricultural industry. Our curriculums are two-fold, do not emphasize production, and accent it with the

scientific instruction and laboratory activities essential to careers related to "high-tech" agriculture. This type of instruction is now incorporated into nine areas shown in Figure 1.

1. Personal and Leadership Development
2. Crop and Plant Science
3. Animal Science
4. Agricultural Mechanics/Engineering
5. Agricultural Economics (including farm business management)
6. Natural Resources, Wildlife, Conservation, and Energy
7. World Agriculture, Science, and Technology
8. Research and Development in Agriculture
9. Food Science and Technology

Figure 1: Instructional areas in AgriScience curriculum.

The essentials to the instruction of secondary agricultural education have remained in tact. In addition they have been simply supplemented with the needs of modern industry. Our curriculums are relatively new and have been compiled from a wealth of sources and we are constantly looking for improvements and/or additions to make them better.

### Student Appearance and Behavior

Like the teacher, the appearance and behavior of students in group and public situations have a profound effect upon our image and subsequent marketing of our programs. Student behavior is enhanced by informing them of expectations and corrections to deviations. When our students look good, the teacher, the department, and the school look good as well.

The appearance of our students during field trips, tours, traveling, and FFA activities where they are before the public are essential to image building. We have been rather demanding, requiring that specific guidelines of student dress be followed on all out-of-school activities. Over the years, we have noticed a number of students from other schools who attend functions wearing clothing not appropriate to the situation. Examples include wearing hats or sunglasses needlessly, carrying large portable radios, and demonstrating various interpretations of official FFA dress. As picky as this sounds, the appearance of our students does make a difference, and it is a key to image building for any program.

To take the use of the FFA jacket a step further, our students use them only on official FFA business. When our

students are assisting with 8th grade recruitment or participating in other curriculum related activities we require that they be in business attire. Professionals in today's agricultural industry are just that, professionals. It is that type of public image we wish our students to present. In our programs, the FFA jacket and official dress are to be used only on official FFA business.

### Public Relations and Media

An ongoing program of public relations is essential to the marketing of our AgriScience departments. An exciting curriculum, combined with a positive attitude shown by the teacher and students, is the foundation for enhancing and/or building the public image. The final step is the appropriate use of the media.

A large part of our success has been a result of the type of information we have printed. The public sees a great deal of FFA related activities in the news, but we have seen a need to publicize the curriculum and classroom related activities as well. The printed media and radio broadcasts now include the news of the "high-tech" agriscience activities that are part of our classrooms. Professionally produced radio commercials have also been incorporated throughout the winter, prior to 8th grade registration. This type of programming and news writing are done with great regularity and supplements the units we teach in Agricultural Journalism and Broadcasting.

Again, caution is used in selecting public relations activities in order not to reinforce the negative stereotypes we wish to terminate. It seems ludicrous to push "high-tech agriscience" and then take a group of prospective students and parents on a tour that includes the vocational agriculture shop, a farm animal display, or hands-on activities that are associated with traditional agriculture. In essence, recruitment for us is an ongoing program of carefully planned public relations activities throughout the year. We build the positive image, and in doing so, make it easier to market our programs.

### Conclusion

It is absolutely essential to promote a positive image of our programs. There has been a great deal of change in agricultural industry over the last several years and secondary agricultural education programs need to incorporate that change into their curriculums on a timely basis. Our students, through the example of their instructors, need to cultivate an image of professionalism and pride that does not escape the notice of the public. Finally, appropriate use of the media in rounding out a finely tuned public relations program, geared toward the promotion of our departments, keeps the community informed to the need for our services. Image building in secondary agricultural education is the key to marketing these programs.

Coming in February

## MARKETING AGRICULTURAL EDUCATION

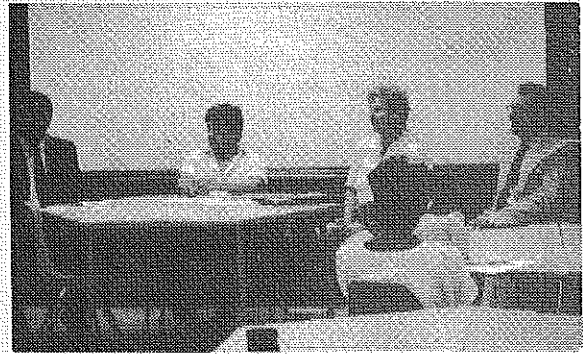


# Stories In Pictures

## Natural Resources Workshop For Academically Talented Minority Students



Randy Heiligmann, OSU Extension Forester (second from left), instructing students about tree identification.



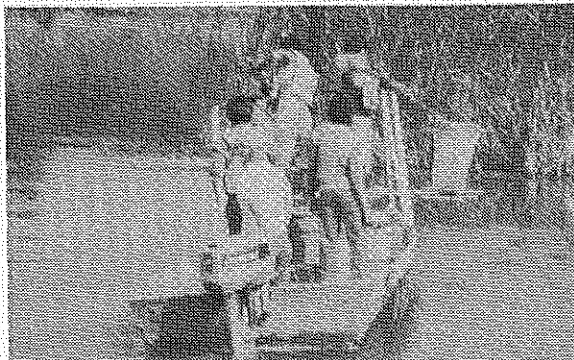
Front left — Eddie Anderson of the U.S. Forest Service; Leobardo Martinez, an undergraduate in Natural Resources; Mary Lynn Bowman, Associate Professor Emeritus and Workshop Co-Director; and James M. Dowdy, Assistant Director of the School of Natural Resources, discussing career opportunities.



For recreation, a workshop participant demonstrates his gymnastics skills. He is being heavily recruited by major universities as a gymnast.

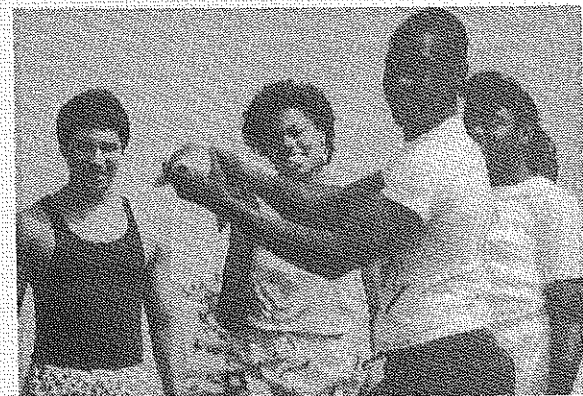


Dave Johnson, (standing, second from left), Associate Professor of Natural Resources, instructing students on sampling procedures used in fisheries.



Students practicing techniques learned during fisheries instruction.

*(Photos courtesy of the Editor. Workshop conducted Summer, 1987 at Ohio State University. Contact the Editor for details.)*



Students with one specimen from their sampling. Most had never touched, much less weighed and identified, fish before the workshop.