

*The*  
**Agricultural  
Education**  
Magazine

April, 1989  
Volume 61  
Number 10



*Building International Linkages  
Through Agricultural Education*

**THEME: International Development**

# THE AGRICULTURAL EDUCATION MAGAZINE



April, 1989

Volume 61

Number 10

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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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# Understanding Agriculture

The country has received an additional coat of "green" in the past eight months! No, I am not announcing a new plant species or a new paint color, but rather the long-awaited, and in some cases feared, report of the National Research Council. *UNDERSTANDING AGRICULTURE: NEW DIRECTIONS FOR EDUCATION* was released on September 13, 1988. It was almost immediately followed up by the video conference '88, "The National Forum on Agricultural Education in the United States" jointly sponsored by the United States Department of Agriculture and the United States Department of Education.

## Impact

A question might logically be asked of the impact this National Study Report has had on agricultural education. Outside of the profession, there seems to be some "stirrings" in response to suggestions contained within the slick green covers of the Report. Whether the "stirrings" can be sustained and significant, far-reaching changes made so that a real agricultural education program emerges at the secondary school level remains to be seen. Certainly, if the Report is to have the impact desired by those who promoted it, authorized it, and labored on it, both the profession and key decision-makers outside of the profession must understand the suggestions and their implications.

## The National Report

Every professional in the agricultural education profession should have read, and studied the Report. If you have not, your lack of professionalism is showing. Our professional organizations, at all levels, need to focus attention on the Report and the implications for teachers, supervisors and teacher educators need to be carefully extracted. Further, and perhaps most importantly, we need to involve those outside of the profession with the Report.

What are the key points of the Report? The first paragraph on page one summarized the Report rather succinctly by describing two basic changes that must occur at the secondary school level. "First, agricultural education must become more than vocational agriculture." (National Research Council, 1988, p. 1.) The authors of the Report felt strongly enough about these two changes to suggest that they are needed in order for a competitive agricultural industry to survive in this country.

## More Than Vocational Agriculture

It seems rather obvious that the only way to make agricultural education at the secondary school level more than vocational agriculture is to create another delivery system. Only when there is some program in addition to vocational agriculture, can we logically use the term "agricultural education" at the secondary level. Those individuals who are simply using the term agricultural education in place of, or synonymously with vocational



BY PHILLIP R. ZURBRICK, EDITOR  
(Dr. Zurbrick is Professor in the Department of Agricultural Education at The University of Arizona.)

agriculture lack the vision described in the Report. Clearly, what is visualized are educational programs designed to provide instruction, 1) about agriculture, and 2) in agriculture. About agriculture programs would help create an agriculturally literate public, while the in agriculture programs would continue to provide vocational education in the broad occupational area of agriculture.

Some people are passing off responsibility for the agricultural literacy (the goal of education about agriculture) program as beyond the realm of the agricultural education profession. While it is true that the report recommends all students receive systematic instruction about agriculture, beginning in kindergarten and continuing through twelfth grade, the profession should be actively involved in this effort. It is ludicrous to expect that agricultural literacy can be achieved by teachers who are themselves agriculturally illiterate. Literacy at the secondary school level needs to involve instruction (perhaps semester courses) specifically designed to create or expand agricultural literacy of all students. These courses need to be taught by individuals who are agriculturally literate. Such an effort should not replace the vocational agriculture program, but rather compliment and augment it. An agricultural literacy program must have a different mission and goal from vocational agriculture and thus different program characteristics. It is not logical to include supervised occupational experience (SOE) in a program designed for all students whose goal is agricultural literacy. A participating experience program in agriculture might be very appropriate for students in an about agriculture course.

## Major Revisions in Vocational Agriculture

The National Report recommends major revision within vocational agriculture. Areas of revision include relevance  
(Continued on page 11)

## About The Cover

The cover was designed by Robert A. Martin to depict the concept that the world is in the hands of those who join together to foster international linkages through education in agriculture.

# A Global Perspective For Agricultural Education

If you were asked the following questions and your financial future depended on the answers, how many could you answer?

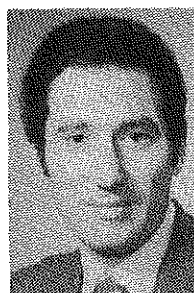
- Where is Nigeria?
- Where is Madagascar?
- What major food is exported from Argentina and what effect does it have on American agriculture?
- What major food crop is imported into the USA from the Middle East?
- Where are most of the world's groundnuts produced?
- What major food is being shipped to Middle Eastern countries from the USA?
- What country leads the world in wheat, corn, and rice sales?
- What percent of the world's population lives in rural areas?

What effect does this fact have on United States' agriculture? Explain the world market systems for grain.

If you can answer these questions, you are fairly well informed about some aspects of international agriculture. If students can answer them, they too, are informed and have at least a basic understanding of international agriculture, food and trade. It is probably safe to say, however, that most students in U.S. high schools in general and vocational agriculture students in particular have less than an adequate knowledge and understanding of the world or its food and fiber systems. According to Smuckler and Sommers (1988) a national assessment of the world knowledge of United States high school seniors showed that 40 percent thought that Israel was an Arab nation. A 1977 Gallup Poll showed that 50 percent of all Americans did not know that the United States must import petroleum. Less than 10 percent knew we were importing one-half of our energy needs. In addition, a 1988 Gallup/National Geographic Society Survey projection indicated that 58 million Americans cannot tell direction on a map.



Farm to market transportation in the People's Republic of China. (Photo by Joel Magisos.)



By ROBERT A. MARTIN, THEME EDITOR

(Dr. Martin is an Associate Professor in the Department of Agricultural Education at Iowa State University.)

One of the major challenges to agricultural education in the next decade will be how the profession will address the issue of a growing international interdependence in the area of agriculture. How will agricultural educators at all levels respond to the challenges? Why should we teach international agriculture in vocational agriculture? What might be taught in order to add a global perspective to vocational agriculture? What strategies should be implemented to add a global perspective to vocational agriculture?

## Why?

Why should we give instruction relative to international agriculture in local vocational agriculture programs? Students need a global perspective if they are to be functional and vital citizens of the world. The truly educated person in today's world cannot function within narrow perspectives. We need citizens who have a knowledge of world agriculture and its effect on trade, simple economics of world agriculture, geography and the uses of products from around the world. For the economics of agriculture to work in this world, all citizens need to have an understanding of the cultural differences and similarities of all those involved. Only then can we expect to strengthen communication.

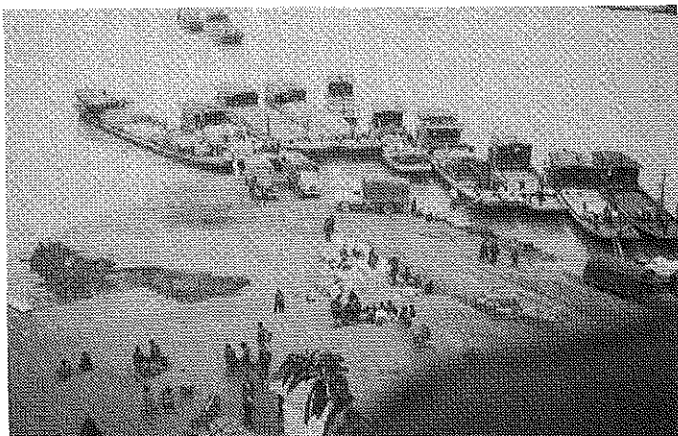
It is a fairly well known fact among our trading partners that Americans tend to take a John Wayne approach to dealing with other countries. Americans tend to shoot first and ask questions later. Americans, in general, do not take the time to understand the culture and the people with whom they are dealing. Most Americans are in a big hurry to get a deal. We don't seem to really care about personal relationships.

Trade negotiators indicate that Americans tend to lose more deals in the private sector than they win because of poor communications based on a lack of understanding about different cultures. Americans want a deal. People from other cultures want a meaningful relationship. Americans don't often seem to relate the two perspectives. Not everyone thinks like Americans think.

## What?

What might be taught to add a global perspective to the study of agriculture? The following list is by no means comprehensive, but it is a start. If we are to infuse a global perspective into the study of agriculture, teachers and students might begin by focusing on the following topics.

1. International marketing systems.
2. Economic geography as related to crop and livestock production.
3. Trade negotiations in agriculture.
4. Horticultural and vegetable crops sold in United States from other countries.
5. Water resource management - USA and elsewhere.
6. Green Revolution and its effects.
7. Communication skills on an international basis.
8. Soil types and conditions.
9. Wildlife and its use and conservation.
10. Food processing here and abroad.



Loading agricultural products for down river shipment on the Yangtze in the People's Republic of China. (Photo by Joel Magisos.)

## How?

How could teachers add a global perspective to the study of agriculture? The following list of activities provides a few ways to begin the process.

1. Stress origin of crops and livestock species and how they are used in various countries.
2. Develop a sister relationship with a youth group in another country.
3. Acquire and use films and videotapes on agriculture in other countries.
4. Work to remove stereotypes of people and their customs around the world.

5. Learn the jargon, language, agricultural systems and customs.
6. Enroll exchange students in agriculture classes.
7. Use student library reports on culturally different uses of food and production techniques.
8. Construct students' bulletin boards on subjects related to international food production, i.e. - soybeans in China.
9. Get students involved in the Work Experience Abroad program.
10. Identify and use local resource people having traveled/worked overseas.
11. Teacher involvement in travel/work experience overseas.
12. Study the effects of production of the same or like crops on world economy.
13. Develop an exchange system with a school in another country.
14. Develop linkages with language classes in high school in the study of foods and food production in various countries.
15. Study current world events in agriculture and their impact on United States' agriculture.

According to Smuckler and Sommers (1988), if the graduates of our secondary schools in the next decade are to be prepared for the world in which they will live, all teachers must be prepared to teach subjects with an international orientation. About 95 percent of the world's people are not like the citizens of the United States - i.e., language, culture, heritage, thought patterns, approaches to problem solving. Internationalizing the curriculum is not just a liberal arts responsibility. Vocational agricultural education has a responsibility to add a global perspective to the study of the agricultural systems of the world if students are to be able to apply the principles of agriculture and human development in an ever complex world community.

This issue of *THE MAGAZINE* focuses attention on the problems and issues related to international education in agriculture. In addition, it gives teachers some ideas for activities in which they and their students can get involved.

## REFERENCES

Smuckler, R. and Sommers, L. (Fall, 1988). "Internationalizing the Curriculum," *NATIONAL FORUM*, p. 5-12.

Answers to Questions: (a) West Africa, (b) off East African Coast, (c) Beef, (d) Citrus Oranges, (e) Africa, (f) Poultry, (g) U.S.A., (h) 80%.

## NOTE

Professionals interested in becoming a member of AIAEE should contact:

O. Donald Meaders, Treasurer AIAEE  
409 Ag. Hall  
Michigan State University  
East Lansing, MI 48824-1039

# Computer Technology Resources: Periodic Maintenance

What does an IBM PC, Apple PC, Tandy PC, John Deere tractor, and a Ford truck have in common? They all need periodic maintenance. Most people would not think of operating a tractor 150 hours or driving a truck for 10,000 miles without performing some form of periodic maintenance such as cleaning and lubrication, but it is common to operate a computer until it stops. It is easy to forget periodic maintenance of a computer. It may work perfectly for years before a breakdown. However, once it malfunctions it is often difficult and expensive to have it repaired. It can also destroy an expensive piece of software when it fails.

What needs maintenance on a computer? To answer this question let's look at some of the more common problems and their causes.

First, dirt and other contaminants are constant problems. Your computer may be located in the classroom or office but that does not mean that it will stay clean. It is exposed to dust, fiber particles, soot, smoke, oxides, and maybe even cookie crumbs and coffee. Dirt on the outside of the computer is a problem because it eventually finds its way inside. Dust can cause components to overheat and fail. Other contaminants such as graphite from pencils, and magnetic oxides from disks can create short circuits or erratic performance. Dirty cables, sockets, and switches can also fail to make proper contact. The result is often described as "computer ghosts" or "computer errors." Your data can become garbled, I/O errors surface, and disks are damaged.

The best cure for this type of problem is preventative maintenance. Cover the computer and its peripherals when they are not in use. Inexpensive, custom-made covers for computers and components are available from computer stores and mail order firms. Don't allow smoking or eating around the computer. Keep the door to the shop closed. Make sure your hands are clean when using the computer. Despite your best efforts, some dust and grime will eventually accumulate on your computer and its components. I recommend that you set up a periodic schedule to perform maintenance on your computer.

Before cleaning the computer or its components you should consult the owner's manual. The manual may list the components that need periodic maintenance and suggest methods and products for cleaning the components. Cleaning products should be purchased from a computer store or mail-order supply service and not from a grocery store. Some household cleaners and window cleaners can damage the plastic components. Window cleaners can be especially harmful to some monitor screens; they can cause some coated screens to become foggy. I recommend that you purchase pre-moistened screen cleaning pads to clean the monitor screen. The outside case of computers can be cleaned with a soft, lint-free, damp cloth or paper towel. If you



BY W. WADE MILLER, SPECIAL EDITOR  
*(Dr. Miller is an Associate Professor in the Department of Agricultural Education, Iowa State University.)*

prefer, you may purchase a commercial cleaner. Never use a petroleum based spray on your computer. Also, never spray any cleaner directly onto the computer, instead spray your cleaning cloth and then wipe off the computer.

The inside of a computer presents a different type of cleaning problem. Remember to turn the power off to the computer and its components before opening the case. Discharge any static electricity in your body by touching the metal plate on the computer switch or the metal power supply box before you touch any printed circuit board or card. Static electricity can "fry" computer chips and circuits. Do not use any cleaners or cleaning cloths inside the computer. Instead, consider using a small vacuum cleaner and a soft paint brush if the inside is especially dusty. If the gold contacts on the printed circuit boards need cleaning, you should use a commercial contact cleaner. The contact cleaner is also good for cleaning cable ends and connectors.

The keys and keyboard can be cleaned with cotton swabs soaked in isopropyl alcohol. If needed, the keys can be removed for cleaning by prying them off with a small screwdriver.

The read-write heads on your disk drives take a lot of abuse when it comes to dust and dirt. They also can be a major source of data errors. They are easily cleaned with a commercial cleaning kit. These kits are developed for specific makes of computers and contain approved cleaners and computer software to automate the cleaning process. An alternative way to clean the head is to disassemble the disk drive and clean the heads with a cotton swab and isopropyl alcohol. I don't recommend this method because it can cause your warranty to be voided.

The computer printer becomes dusty quickly. Use a small vacuum cleaner to remove all visible dust. The print rails can be cleaned with isopropyl alcohol and lubricated with very light coating of silicone spray or sewing machine oil. If your printer has a platen, it can be cleaned with a commercial platen cleaner. The print head can be cleaned by soaking it in isopropyl alcohol. Again, check the manual before performing these tasks.

*(Continued on page 7)*

# Teaching Tips

## Using Experiments in Teaching

As teachers gradually reshape their curriculum to reflect more science applications in agriculture, the use of inquiry teaching techniques becomes even more important. Science is best taught as a discovery activity, where students investigate the relationships between two or more factors. When science is taught in this manner, students learn to analyze problems and situations using the scientific method. They develop inquiry and problem-solving skills, and they are mentally (and often physically) involved as learners. In short, they are more active and motivated when science and agriculture are taught using inquiry methods.

One of the most effective techniques that supports learning through inquiry is the use of experiments. When using this technique, students are challenged to plan, monitor, and report the results of an actual experiment conducted during class. Even a small scale, very simple experiment can be an extremely effective teaching activity. Experiments are sometimes confused with demonstrations, but they are not the same. Demonstrations usually involve a display or presentation of procedures, with students primarily participating as observers. In experiments, one variable is manipulated, and the effects on another variable are observed and recorded. Experiments tend to be more investigative, while attempting to discover unknown effects, test hypotheses, or illustrate known laws or principles. The degree of student involvement is determined by the teacher, but the best use of experiments occurs when the teachers put the students in the driver's seat to plan, conduct, and analyze the experiment. The teacher's role in this case would be to monitor and guide the students' work on the experiment.

### Planning Needed

The list of possible experiments suitable for teaching agriculture and agricultural science is virtually unlimited. We can test the effects of (a) seed varieties on germination and yield, (b) soil pH on germination or yield, (c) soil fertility levels on yield, (d) joining techniques on strength of bond, (e) carburetor adjustment and timing on horsepower, (f) sprayer pressure on volume output, (g) welding position and type of rod on weld strength, (h) circuit load on fuse or circuit breaker capacity, (i) pruning techniques on fruit production, (j) and preservation techniques on cut flower longevity. Literally hundreds of other valuable experiments can be used to illustrate the science and practice of



BY ED OSBORNE, SPECIAL EDITOR

*Dr. Osborne is an Assistant Professor in the Department of Agricultural Education, University of Illinois, Urbana-Champaign.*

agriculture. These can be of short duration, requiring only a single class period, or long-term experiments lasting several days or weeks.

Once the experiment is identified, the teacher should plan how to conduct the experiment, gather the supplies and equipment needed, and develop a system for gathering and reporting the data. For most experiments a simple chart showing the treatment levels (e.g., seed variety) and the outcomes (e.g., germination and yield or growth rate) is all that is needed. The expected findings and conclusions should also be listed during the planning stage.

### Conducting the Experiment

The first step in using any teaching technique is to present an interest approach that creates interest and motivates the students to be involved in the learning activity. When using experiments, this can best be accomplished by asking students to predict results, presenting an experiment that doesn't work, asking students to explain specific results, etc. The teacher should then help students plan the experiment, predict results, conduct the experiment, and analyze the data. Students should draw their own conclusions and present a report to the class. The teacher should then lead the class in summarizing the experiment and drawing final conclusions. Students should compare their findings with those from other published and unpublished experiments of a similar nature.

### Taking the Plunge!

Do you want to make your classes more fun and interesting? Do you want your students to be more active and motivated as learners? Do you want your students to develop scientific inquiry skills and to really think as they learn? Would you like to illustrate principles and practices in science and agriculture during your teaching? If so, why not make experiments a regular part of your teaching and learning activities?

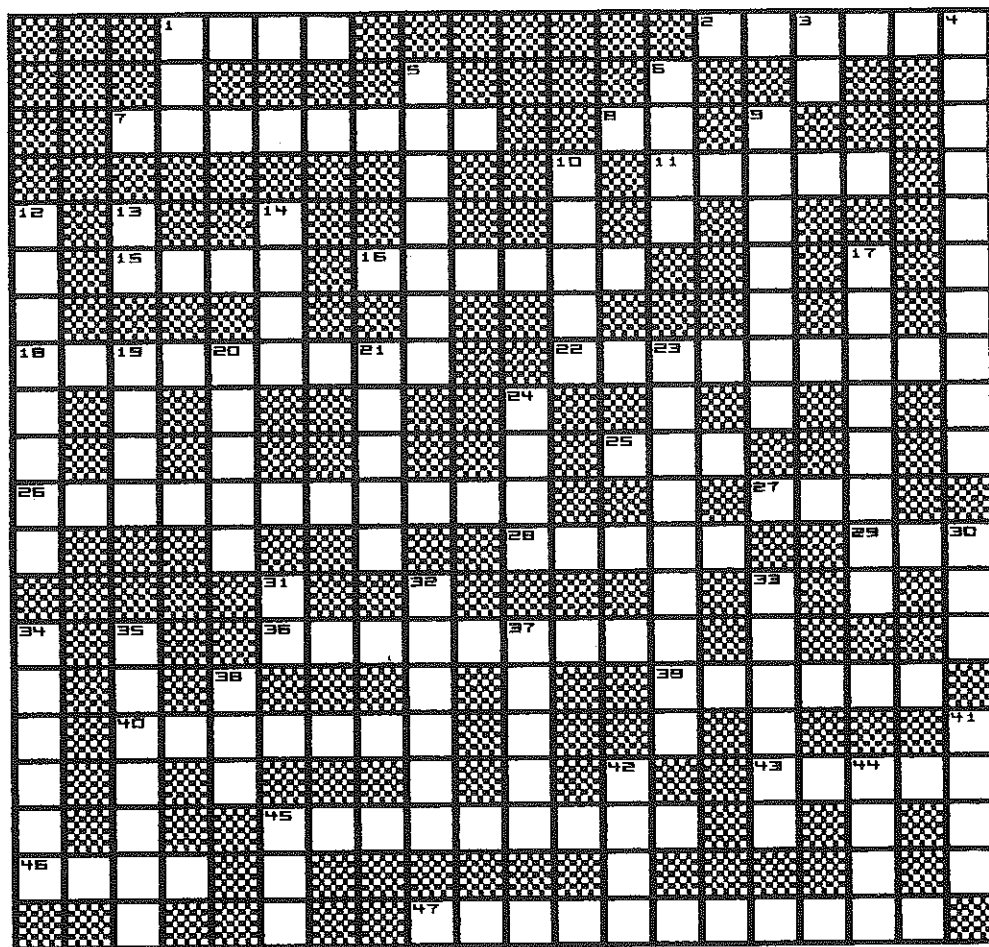
### Computer Technology Resources: Periodic Maintenance

*(Continued from page 6)*

It doesn't take much time or money to perform periodic maintenance on a computer. A few dollars invested in the

proper cleaners and cleaning kits can pay big dividends. Just think what one trip to the computer repair shop could cost. You wouldn't drive a car or operate a tractor without properly maintaining it; the same thing should hold true with your computer. In fact, maybe this is a skill that you should teach to your students!

# WORLD AWARENESS



## WORD LIST: WORLD AWARENESS

- |             |             |
|-------------|-------------|
| Africa      | Caspian     |
| Amazon      | China       |
| Argentina   | CU          |
| Asia        | Cuba        |
| Ash         | Debt        |
| AU          | Dog         |
| Bali        | East        |
| Brazil      | Europe      |
| Burma       | Greenlands  |
| Himalayas   | Netherlands |
| Hog         | New Guinea  |
| Indonesia   | New Zealand |
| India       | Nigeria     |
| Ireland     | Nile        |
| Islam       | Niger       |
| Kid         | Norway      |
| Malaysia    | OB          |
| Mali        | Oslo        |
| Paris       | UN          |
| Pacific     | USSR        |
| Philippines | USA         |
| Rome        | Yen         |
| Srilanka    |             |
| Tea         |             |
| Thailand    |             |
| Twine       |             |
| Uganda      |             |

### ACROSS CLUES

1. World's largest producer of wheat
2. World's second longest river
7. S.E. Asian country producing rubber, timber, palm oil, tin & the Proton Saga automobile.
8. Abbv. for copper.
11. Produces teak wood and gems.
15. Romanticized Indonesian island.
16. Largest producer of sugar (in South America).
18. Moslem national producing rice, cassave, soybeans, copra, rubber, coffee, palm oil & tea.
22. Exports meats, corn, wheat, wool & hides (in South America).
25. An evergreen shrub, the leaves of which must be picked by hand, grown in the tropics.
26. Grows & exports bulbs, grain & sugar (in Europe).
27. Currency of Japan.
28. Used to tie bales of hay.
29. Young goat.
36. World's second largest island (2 words).
39. North sea country known for fish, pulp, paper, oil & gas.
40. World's largest lake.
43. Capital of France.
45. World's highest mountain range.
46. Most populated continent.
47. Largest city of Manilla, piso is currency, grows rice, corn, coconuts, sugar & bananas.
5. African country which grows peanuts, cotton, cocoa, rubber, yams, cassava & livestock.
6. Communist country whose capital is Havana.
9. Grows potatoes & cattle, capital is Dublin.
10. World's largest producer of rice.
12. Bangkok is capital, produces rice, rubber, corn, tapioca, sugar & pineapples.
13. Principal river in USSR.
14. World's longest river.
17. Known for Ceylon tea (2 words).
19. Countries which buy more than they sell in trade accumulate
20. W. African country - mostly desert - only 3% of land useable for agriculture - peanuts grown.
21. Religion whose followers do not eat pork.
23. Largest island.
24. Communist Germany.
30. Animal used to herd sheep.
31. Abbv. for United Nations.
32. African country with world's largest man-made lake.
33. Continent with only 3% of world land area.
34. Content with 20% of world land area.
35. World's largest ocean.
37. Hini is major language & Hinduism the major religion - has world's lowest life expectancy.
38. Tree which produces wood used for tool handles.
41. Capital of Norway.
42. West African country in Sahara - capital is Bamako - only fertile area irrigated.
44. capital of Italy.
45. Animal considered as unclean by Jews and Moslems.

### DOWN CLUES

1. World's largest producer of corn.
3. 1st 2 letters of country whose capital is Canberra & agr. products are grain & livestock.
4. (2 words) has more sheep than people.



# Integrating International Concepts Into The Curriculum

It is reasonable to ask "Why should international concepts be integrated into the curriculum?" There are compelling reasons. The high school curriculum is changing and agricultural education must change if it is to succeed. United States' agriculture must compete in a global marketplace if it is to survive. In a real sense, high school students also must compete for survival in this changing context. As teachers of agriculture, can we help students to broaden their perspective beyond the local community?

## Why Integrate?

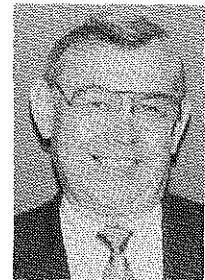
Integration of international concepts into the curriculum represents only one of some fundamental changes that may be necessary in the secondary level vocational agriculture program. The rationale for this change is rooted in the changes taking place in high schools, in the global economy, and in students themselves.

## High Schools Are Changing

Many high schools are increasing the academic requirements for graduation. The emphasis is upon English, mathematics, sciences, social studies, and foreign languages as recommended by the National Commission on Excellence in Education in *A Nation at Risk* (1983). This report and a flurry of others in the mid-eighties reflected the growing dissatisfaction with the results of American public secondary education, especially in comparison with other post-industrial societies. The United States' mediocre performance in the global marketplace led many to believe that both the cause and the solution were in the schools. With increased high school graduation requirements, vocational educators have had to compete for fewer elective hours. Marginal programs have been dropped; others have been modified. For vocational agriculture, these changes have motivated a major re-examination of purpose, principles, and practices. In *Understanding Agriculture: New Directions for Education* (National Research Council, 1988), a blue-ribbon committee on agricultural education in secondary schools has recommended a renewed commitment to and broadening of agricultural education to ensure the future vitality of American agriculture. The committee focused on two elements of agricultural education — education about agriculture (agricultural literacy) and education in agriculture (vocational agriculture).

## The Agricultural Market is Global

One need only wander through a supermarket or a department store to realize that our sources of food and fiber are worldwide. With an agricultural surplus in this country, it is easy to see that United States' agricultural products must be marketed worldwide. Patterns of agricultural production and consumption are changing. For example, soybean oil from the United States was once very competitive. Now it



By J. DAVID MCCRACKEN AND JOEL H. MAGISOS

(Drs. McCracken and Magisos are Professors in the Department of Agricultural Education at The Ohio State University.)

must compete not only with soybean production in other countries but alternative products such as palm oil. Changes in quality and quantity of production in other countries will continue to influence the marketability of agricultural products from this country. Nations that once were dependent on others for food now are food exporters, as well as cash customers for food products. Overlaying the natural market forces are such political decisions as import quotas, tariffs, and subsidies. The embargo on grain shipments to the Soviet Union after the Afghanistan invasion negatively affected grain prices in the United States. Subsidies to grain producers in the European Economic Community has effectively locked out United States' grain in Europe.

## Students Needs Are Changing

The world is getting smaller. Students can assume that they will have more opportunities to interact with people of other countries and cultures. Students of agriculture need to develop a willingness to both compete and cooperate internationally. This requires respect for political, social, and cultural differences and understandings of the interdependencies of an interrelated world. Students who understand these international relationships will be able to function better in the many roles that have an international dimension.

## Issues and Problems

There are several issues and/or problems related to the teaching of international concepts in high school agricultural classes. The first problem is one of a general lack of knowledge about the world in general, and international agriculture in particular, among secondary students of agriculture.

The second problem is that little thinking has been devoted to curriculum organization issues related to teaching

(Continued on Page 10)

# Integrating International Concepts Into The Curriculum

(Continued from Page 9)

international agriculture content. Should instruction be integrated with other subject matter or stand alone? Should one adopt objectives which are primarily cognitive in nature or should the major focus be to develop the attitudes of students? Should the concept of international agriculture be taught for its academic value or with a vocational purpose?

There also are questions relating to structure and method. Who should be taught? At what level should the instruction occur? Why is such instruction important? By what methods should this topic be taught? What is the important content necessary to bring about the desired learning in students?

## International Concepts

The international concepts that should be taught depends on the students, their educational level, and the purpose to be served by the instruction. Nevertheless, most students of agriculture need to grasp the international dimensions of agriculture. They need to understand the global economy, the marketing channel, and the national policies that affect agricultural trade. Most of all, students need to develop a keen appreciation of the interdependency and interrelationship of nations. With this new awareness, students also need to explore international career opportunities.

## International Dimensions of Agriculture

With respect to the international dimensions of agriculture, students of agriculture would benefit from knowledge and understanding of:

- Geographical, political, and economic factors influencing agriculture.
- Agricultural production and consumption areas of the world.
- Trends in the production and consumption of food and fiber.
- Agricultural practices in different countries.
- Agricultural trade and banking practices.
- Communications, transportation, and other technological developments influencing agriculture.
- Cultural and religious differences with implications for agriculture.

Students graduating from high school should understand how geographical, political, social, and economic factors affect what can be grown and marketed profitably. How has the Peoples' Republic of China become food sufficient in spite of having four times the United States' population and one-fourth the arable land. Why is the consumption of pork prohibited in vast areas of the Middle East and Asia? Students will come to realize that millions of human beings, presently entrapped in agrarian poverty, represent the sleeping giant that will someday free the world of hunger. For high school students interested in agriculture, an international course in agriculture could serve as the interdisciplinary cement that binds together other courses in the high school curriculum.

## Attitudes and Understandings

Students need to appreciate the strengths of differences

among nations and peoples. In general, Americans believe that whether man is good or evil is changeable, that man can master nature, and that man should be future oriented, taking action (doing), and individualistic. Values of traditional cultures throughout the world are more likely to suggest that the good or evil of man is unchangeable, that man either must be in harmony with nature or be subjugated by it, and that man should be past oriented, with a stress on who is (being), and subject to authority. Unless students learn to appreciate these differences, they will be frustrated in relating with peoples of other cultures.

An international visitor observed that Americans, "... always seem to be in a perpetual hurry. Just watch the way they walk down the street. They never allow themselves the leisure to enjoy life." An observer from another country said, "Americans appear to us rather distant ... they won't let you get too close to them." From still another country an observer noted "the tendency in the United States to think that life is only work hits you in the face. Work seems to be the only type of motivation." Another person stated "the American is very explicit; he want a 'yes' or 'no.' If someone tries to speak figuratively, the American is confused."

On the practical side, students need to understand the differences in approaches to buying, selling and trading. Americans often fail to recognize that a refusal is only a temporary bargaining position or that a 'yes' is sometimes a polite 'no.'

## Careers and Jobs

Most of us want to help our students broaden their career opportunities. In the course of learning about the international dimensions of agriculture and the global economy, students are afforded splendid opportunities to learn about the worldwide range of jobs in international development, trade, research and development, education, and technical assistance. Teachers may want to help students explore the education, work experience, language and health requirements associated with these jobs.

Because of the increasing interaction among countries, job opportunities in multinational corporations, government agencies, and missionary societies will continue to increase. Students should be made cognizant of the possibilities for a career path in the international arena. Many of the volunteers who served in the Peace Corps have later been able to build upon their experiences and continue in careers having an international emphasis. Having studied agriculture is an important qualification for many first-time appointments to other countries.

## Where and When Should International Concepts Be Introduced?

International concepts can be easily integrated into existing agricultural courses where appropriate. International trade practices may be taught within an agricultural marketing unit. These concepts are appropriate regardless of the level of student being taught. Whether students are in the 9th grade or are adults, international agriculture will have an impact upon their future.

International concepts may also be organized into separate courses in schools where semester courses are offered. A semester course on international agriculture might be especially attractive to college-bound students considering international careers. Other high school courses can be

enriched by introducing information related to international agriculture.

## How Should International Concepts Be Taught?

Developers of curriculum and reference books will need to provide more information to teachers and students than has been done in the past. As existing units are updated, persons serving on curriculum advisory committees and as reviewers for publications should insist on inclusion of material reflecting a relevant international perspective. Also, specific units of instruction on international agriculture need to be developed. These units could serve as the main resource for semester courses in international agriculture. The International Materials Service at Texas A&M University already has produced some useful materials.

Teachers of agriculture should consider working with their FFA alumni group or with their advisory committee to develop opportunities for their students to have international experiences. Local schools should provide intern opportunities for international students enrolled in nearby universities. The goal of such internships should be to benefit the local school students. More ambitious programs might involve study tours or exchanges of students or teachers with their counterparts in other countries. Such programs could lead to the exchange of ideas, materials, and methods for teaching agriculture.

A teacher who wishes to further develop an emphasis on international concepts should investigate the resources that are available. Films which have been prepared to assist people in preparing for international assignments may be used to develop cultural understanding. Games such as "Global Pursuit" (Figure 1) can be developed on the computer and might be used to help students learn about production and consumption areas of the world, locations where specific agricultural products are produced, and occupations and terminology related to international development. Magazines which have global perspective are a rich source of reference material.

Guest lecturers might be invited as resource persons for FFA meetings or classes. Many persons who have lived and worked in other cultures appreciated the opportunity to share their experiences. International students who have specific expertise in agricultural content areas could also serve as resource persons.

The FFA at local, state and national levels should consider developing contests that provide opportunities for competitive learning about international agriculture. The International Skill Olympics would give students in agricultural mechanics an opportunity to compete directly with foreign students. Awards for supervisor performance in international agriculture would provide incentives for teachers and students to give greater emphasis to this area.

### Summary

The change in high schools, in global agriculture, and in students are compelling reasons to integrate international concepts into the curriculum. The international dimensions of agriculture, the attitudes needed to compete and cooperate internationally, and the career opportunities in the international arena are viable content areas for integration into existing courses or for new courses. A variety of methods and approaches can be taken and resources are becoming available.

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### RESOURCES

- GLOBAL PURSUIT*. Washington D.C.: National Geographic Society, 1987. (A game for two to six players employing a wall map, map cards, trivia cards, tokens, and a die.)
- Various teaching materials on international agriculture are available from the Instructional Materials Service, F.E. Box 2588, Texas A&M University, College Station, TX 77843.
- Computer software for developing crossword puzzles: *Crossword MAGIC* (1986) by L&S Computerware, available from Mindscape, Inc., 3444 Dundee Road, Northbrook, IL 60062.

## Understanding Agriculture

(Continued from Page 3)

and scope of the curriculum, SOE programs and the FFA. The program needs to prepare students more effectively for the study of agriculture in post-secondary educational programs. This recommendation implies the need to incorporate basic agricultural science instruction in the curriculum as nearly all post-secondary agriculture programs are heavily science oriented. Programs that teach only agriculture production practices need to be upgraded or, as a last resort, phased out.

The Report also suggests that current vocational agriculture programs should be upgraded to prepare students ". . . for current and future career opportunities in agricultural sciences, agribusiness, marketing, management, and food production and processing." (Research Council, 1988, p. 4). Programs that are not teaching the knowledge, skills and attitudes (competencies) associated with current and future career opportunities in the broad areas of

agriculture must be revised or eliminated. The Report does not recommend or imply abandoning the vocational aspects of agricultural education at the secondary school level, but does foresee more emphasis upon agriscience and biotechnology in the vocational agriculture program of the future.

### Summary

The agricultural education profession must recognize and advocate the importance of the National Study Report. Agriculture is important to our nation, and if it is to survive as a competitive industry, serious changes must be made in agricultural education at the secondary school level. Policy at the local, state and national levels must address the challenge of educating all citizens about the food and fiber system and providing educational programs in agriculture for those preparing for or pursuing a career in the broad area of agriculture.

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# Rural Youth: A Neglected Resource

Approximately 20 percent of the world's population is between the ages of 15 and 25. In the developing countries this vast human resource is often neglected, exploited and left to develop in ill-defined settings where the highest government priorities too rarely include programs which help young people become self-reliant, productive citizens. Rural youth, and in particular rural young women, are especially disadvantaged in terms of access to relevant education and training. In many cases, the education provided in rural areas is not adapted to local needs. Instead of preparing young people to participate fully in the life of their rural communities, it often leads them to break with their environment and try their luck in the cities.

With less emphasis on the traditional social structures in many villages, customary forms of education and training have ceased to exist. In many cases, adults no longer pass on the traditional knowledge and skills that help young people through the transitional period from childhood to adulthood. Youth functions in society are often no longer performed and community ties are less important than they used to be. As a result, young villagers may find themselves without status. They do not have their traditional status as learners in an adult world, neither do they have the modern status as learners in an educational setting nor the status of adults. The result is often insecurity and confusion, compounded by a lack of employable skills.

## Demographic Profile

The world's youth population was estimated to have been 940 million in 1985, having increased by 82.5 percent from 515 million in 1960 and by 42.2 percent from 661 million in 1980. This segment of the population is expected to exceed one billion by 1990. Three out of four youth are residents of less developed countries. The difference in the relative size of the youth population, between more developed and less developed regions, is increasing due to the differential growth rates of the age group. Based on current estimates, 84 percent of the world's youth (age 15-24) will be living in the less developed regions of the world, by the year 2000. Approximately 11 out of 20 of these young people will be defined as rural residents. The youth population of three major regions of the world - Africa, Asia, and Latin America - will almost double in the quarter century between 1975 and 2000. In the next 15 years, over 80 percent of the world's population growth will occur in low income countries, where there are already food shortages, massive rural to urban migration, substandard housing, inadequate health care, limited educational opportunities and high levels of unemployment.

Rural youth and the rural population in general are going to have an increasingly difficult task in expanding their



By WILLIAM I. LINDLEY

*(Dr. Lindley is an Agricultural Training and Extension Officer in the Human Resource, Food and Agricultural Organizations of the United Nations.)*

current share of resources and services. The increased numbers of people in the urban centers will continue to divert attention and resources to the most visible areas of concern, ranging from unemployment to the high crime rates associated with the cities. Further, the strains on the urban areas will likely lead to ill-informed, high cost "crisis solutions", which treat the symptoms of the problems rather than addressing the long-term issues related to the perceived differences between rural and urban opportunities.

## Education and Training

It can be argued that agriculturally-related education is now and has been offered at the secondary school level. But the number of developing countries where truly practical agricultural science is offered as a secondary school subject, with qualified teachers, are so few that those good examples should perhaps be called pilot efforts. Agriculture as a secondary school subject has merit and more countries would do well to examine the possibility of initiating such programs. Secondary school agricultural science does not, however, solve the many problems related to the fact that rural youth drop out of school at an alarmingly high rate, long before they finish elementary school.

Are elementary school agricultural classes and gardens the answer to helping rural young people learn some of their first lessons about the principles and practices of farm production? Clearly an enlightened approach to elementary school agriculture in the rural areas of many developing countries would be at least a partial answer. An adequate supply of well-prepared teachers would be a problem, but in-service training and a cooperative arrangement with the agricultural extension service would go a long way in bringing the quality of instruction up to an acceptable level. The financing of such programs would be a factor to carefully consider, but the cost of this type of resource development could be written off against reduced rural-to-urban migration, high cost urban crisis solutions and increased agricultural production by generations of young men and women who, with a small amount of appropriate training, could

begin to understand the complexities of the kind of agricultural production needed to feed the ever increasing numbers of consumers.



Ohio vocational agricultural teacher, Buddy Feeser discusses agricultural research findings with the president of a Chinese agricultural university. (Photo by Joel Magisos.)

Post-secondary school agricultural training has been and will continue to be an area where significant amounts of development aid are concentrated. Admission to post-secondary education in agriculture and other subjects is based on the results of competitive examinations. Simply stated, secondary school leavers with the best examination scores are selected to study medicine, law, agriculture, etc. The competition is keen and failure to be accepted to study at the diploma or University level will almost certainly have a lifetime effect on secondary school students who do not do well on their examinations.

A ramification of the system which is not often discussed is that rural youth suffer from the lack of good schools at the village level, they have little money and reduced access to schooling which allows them to be competitive. Affirmative action programs are needed to give the sons and daughters of farmers greater opportunities to study at the post-secondary level. Agricultural production and non-farm agriculturally related employment provides over 80 percent of job opportunities in many developing countries. For the foreseeable future more than half of the developing world's population will continue to be classified as rural. With such large numbers of people living in rural areas, emphasis must be placed on involving youth and young farmers in learning improved agricultural principles and practices through both formal and non-formal training. The improvement of educational opportunities in rural areas is necessary to provide incentives for rural youth to stay in their communities as full participants in rural development. The growing ur-

ban segment of the population is becoming increasingly dependent upon agricultural production that must be geared to creating enough surplus to feed the growing population of non-producers. Increased production will, to a large degree, depend upon incentives at the farm level. In the same sense, rural to urban migration will be reduced only when the apparent disparity between the two sectors is reduced. Training for self-employment has been neglected. The entrepreneurial skills gained through apprenticeships have not been included in formal training programs. And, in many cases, the goal of working for someone else has superceded the need to be self-reliant and self-employed. Small, rural non-farm businesses as well as industrial development are needed in the local communities to support the agricultural producer.

### Programs of Action

The potential of rural young men and women will never be realized and their problems will not be solved without appropriate action specifically designed to meet their needs. Such action programs must be centered at the country level, but they have also implications for action at the international level.

#### International Level

International Youth Year (IYY) proved to be an example of what can be done on a global scale with sufficient support is generated through to cooperation of many countries. International activities such as the Expert Consultation on Rural Youth and Young Farmers which was held in Rome in 1985, can be repeated periodically to review the progress being made. Exemplary programs can be discussed at regional meetings and ways of adapting successful activities in new locations can be explored.

There is need for national level leaders of rural youth programs to get together to exchange ideas and to promote cooperative ventures. Periodic regional meetings also offer an opportunity for inter-agency collaboration in both sponsorship and technical input.

Youth activities and competitions at the national, regional and international level are almost non-existent in the developing countries. Support and promotion of international youth exchanges among developing countries would provide opportunities for leadership development for rural youth.

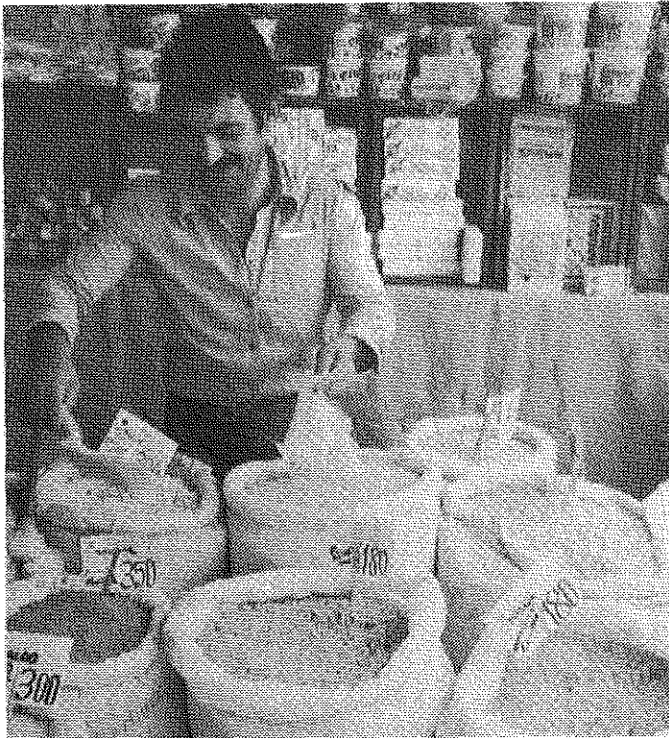
#### National Level

The preparation of rural youth for well-adjusted, productive and progressive lives in the rural environment largely depend upon the values, policies and programs of the country in which they live. The first and most basic condition that should exist in each country is a high value on the importance and needs of rural youth. This must be reflected in governments' recognition and full understanding of the potential of rural youth and their problems. Secondly, governments must have the will to initiate basic policies that are favorable to rural youth development. Those policies need to support rural and agricultural development. Such policies should lead to the creation of opportunities for rural youth not only to receive benefits, but also to participate in development activities.

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## Rural Youth: A Neglected Resource

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Bulk agricultural products for sale in Ankara, Turkey. (Photo by Joel Magisos.)

Programs and projects need to be specifically designed to allow rural youth to participate in development activities. Government and non-government organizations (NGOs) can effectively work together in developing training activities where rural youth and young farmers can bring together the knowledge, skills and attitudes necessary for successful lives in the rural areas.

As recommended by the FAO World Conference on Agrarian Reform and Rural Development (WCARRD), programs should deal with the particular needs of special groups such as young farmers, out-of-school youth, rural young women and the disabled. Young farmers, for example, are at a critical stage where they can benefit from opportunities to learn and improve their capacities to increase food production and generate income. Young farmers and young farm couples need a variety of services if they are to be successful. Extension services must be prepared to provide information through a non-formal educational system. Young farmers need advice about agricultural production techniques, farm management, market information. They need access to inputs and credit to make the purchases. Young farm families need support in areas related to nutrition, preparation and preservation of food items, family life education. The out-of-school rural youth (both male and female) need to have the opportunity to use their time for learning and their energies for productive, income-generating activities.

Examples of rural youth components in rural development programs include the following:

**Formal education with a rural development bias.** In some countries, school curricula at the elementary and secondary level have been modified to include practical agriculture, handicrafts, home economics, etc.

**Non-formal education programs for out-of-school youth.** Generally these are introduced as special training programs in literacy improvement, leadership development, vocational and productive skill training, youth cooperatives, population education, etc.

**Provision of rural services that include youth as beneficiaries.** These services may include supervised credit for young farmers and rural youth, making available learning and production resources, health care and recreation activities.

**Organized community development programs that challenge and satisfy the energies and aspirations of rural youth.** Reforestation, community beautification and community agricultural shows are examples.

**The organization and guidance of rural youth for leadership development, skill training, service and production purposes.** This includes the formation of youth clubs such as 4-H in the USA, Tani Tasuna (future farmers groups) in Indonesia, Anak Bukid (farm youth clubs) in the Philippines, rural youth clubs in South Korea, 4-S in Swaziland, 4-K in Kenya through the agricultural extension services.

Considering the nature and interests of youth, much can be accomplished by instituting programs of recognition for outstanding achievements (in productive work, leadership and service) of rural youth and young farmers. With imagination these activities could be carried out both at the local and national level with very little resource allocation. Recognizing the large number of rural youth in each country, their varied needs, interests, abilities and problems and the limited resources of governments and NGOs, it becomes evident that cooperation and collaboration among ministries in government is a necessity. In general, the Ministries which may have programs for rural youth are the Ministry of Education, Agriculture, Local Government, Labor, Industry and Finance.

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# Internationalizing Agricultural Education: An Infusion Project

The need for developing an awareness of the global nature of the agricultural industry has become one of the major issues of our time. It has become increasingly apparent that if a person is to be considered educated in agriculture, he/she must be cognizant of the inter-relationships of various agricultural systems and the governments, cultures and societies in which they function. It is no longer sufficient to know how to produce food and fiber and conduct or manage the many tasks in today's agricultural industry. Development and enhancement of one nation's agricultural system is unavoidably interwoven with those of other nations. If these developments and inter-relationships are to be successful, it is critical that students of agriculture learn as much as possible about systems of agriculture in cultures and societies around the world.

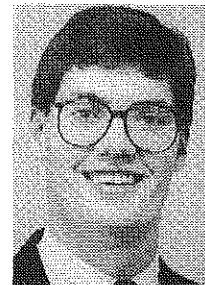
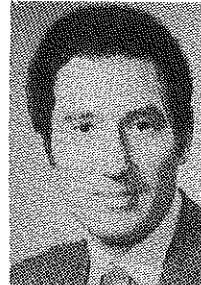
## Project Description

A national program related to international education in agriculture has been initiated by The National Council for Vocational and Technical Education in Agriculture. A National Task Force was established in July, 1987 and eventually developed an international infusion project which has the potential to involve agricultural educators at all levels. The project focuses on the annual selection of state teams (5 persons each) to participate in an international experience and instructional materials development and dissemination project. Interested states will develop and submit a proposal for participation in the project. The state teams selected to participate will receive a three day orientation in Washington, D.C., relative to the project's mission. Each team will spend approximately 14 days in an international setting - ie. Japan. This experience will include a number of professional and cultural activities. Following the selected teams' return to the U.S., a one week session will be held to coordinate the development and dissemination of selected materials and strategies to enable local teachers of agriculture to infuse a global awareness into their curricula. Individual states involved in the project will conduct in-service education programs for teachers in their states. Over a period of several years a broad spectrum of states will be involved in this project. The project has been initially funded by the U.S. Japan Foundation and two state's proposals have been accepted. The first group of participants in this project will begin their activities during the summer of 1989.

## Participant Experience

The focus of this project is on educators. If there is to be real change in the curriculum, the Task Force concluded that teachers, supervisors and teacher educators must be directly involved in the program.

Participants in this program will have experiences in each



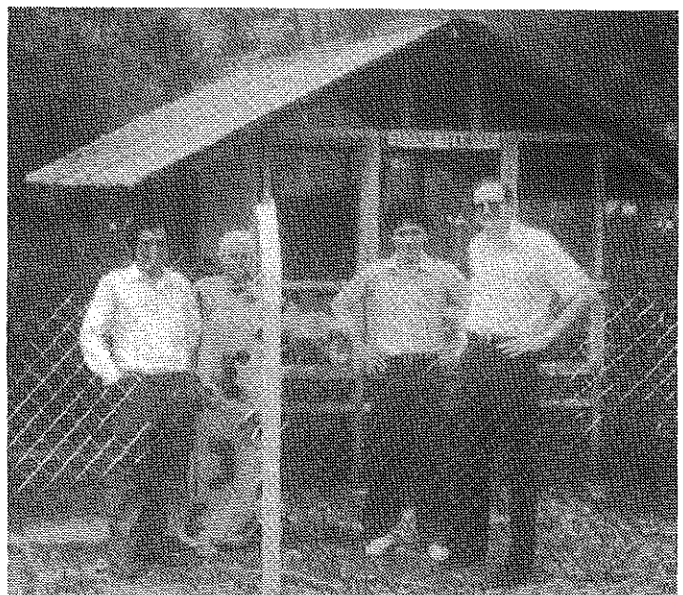
BY ROBERT A. MARTIN AND JACK KELLER

(Dr. Martin is an Associate Professor in the Department of Agricultural Education at Iowa State University and Mr. Keller is Program Coordinator, The National Council.)

of three areas: technical, societal and personal. Experiences may include the following:

### A. Technical Experiences.

1. See or experience the exporting/importing of products.
2. Observe markets - food and other.
3. Attend agriculture shows and exhibits.
4. Visit schools and observe educational system in action - secondary and university.



Chickens being raised as a class project by agricultural students enrolled in a comprehensive school in Malaysia. Persons shown are four generations of teacher-student relationships. (Photo by Jacqueline McCracken.)

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# Book Review

## Natural Resources/Cattle Science

Searching through the mail this month I found a "mixed bag." Natural resources and beef cattle science, further the authors represent a long time favorite and two relatively new writers.

Our colleague from our northern most state, Alaska, has reviewed *Managing Our Natural Resources*, written by Camp and Dougherty and published by Delmar Publishers. This seems like a very appropriate combination of book title and reviewer. Carla Kirts, Assistant Professor, Agricultural Education, University of Alaska — Fairbanks is in an ideal setting to review a book on natural resources.

The second review is handled by Bill Umbaugh, Vocational Agriculture instructor, Norfolk County Agricultural High School located at Walpole, Massachusetts. Bill has the pleasure of reviewing the 6th edition of Dr. Ensminger's book entitled, *Beef Cattle Science*, published by our friends at The Interstate Publishers and Printers.

*Managing Our Natural Resources*, by William G. Camp and Thomas B. Dougherty. Albany, New York: Delmar Publishers, Inc., 1988, 300 pp., Price \$20.95.

*Managing Our Natural Resources* provides a panoramic, interdisciplinary approach to natural resources management as it should be taught at the secondary level. A broad range of topics are included. Characteristics of the basic resources, principally soil and water, are presented in separate chapters. However, relationships between these resources and other multiple-resource disciplines such as forestry and wildlife are interwoven throughout the text.

Contents include a historical perspective, general concepts, basic resources (soil and water, excluding air), erosion, pollution, land use planning, forestry, fish and wildlife, outdoor recreation, energy, fossil fuels and nonfuel minerals. Each chapter begins with objectives and "terms to look for and learn" followed by a brief introduction, basic information and a summary. Discussion questions and suggested activities are provided at the end of each chapter. For each major discipline area, a chapter on careers is provided.

The cover of this text is extremely attractive, colorful and especially representative of the major natural resources. It even includes human activity in the picture! The structural design of the text is conducive to instruction, following the format of a typical lesson from objectives to summary and evaluation. Discussion questions and suggested activities are especially outstanding in that various levels of cognition are required. Emphasis on divergent perspectives and attitudes toward natural resources management (preservation, conservation and exploitation) is accomplished throughout.

This is a text about natural resources, not natural resources management. In fact, management is not defined. As such, the concepts and techniques of responsible



BY DAVID L. HOWELL, SPECIAL EDITOR  
(Dr. Howell is an Associate Professor in the Department of Vocational-Technical and Adult Education, University of New Hampshire.)

stewardship of natural resources could be more formally addressed. Resource economics and decision-making, two major topics directly related to management, are omitted. Range or grassland management is another omission, a definite disadvantage to teachers in the western states who may want to use this text.

It is unclear whether "our" in the title of the text refers to all people of the world or just those in the United States. Regardless, an international perspective is solely lacking. In many areas of resource management, other countries are more involved than the U.S. Desalination and nuclear energy production are two examples. In addition, many issues facing future generations are international in character. Examples of these include nuclear hazards and acid rain.

Vocational agriculture teachers, science teachers and other teachers interested in practicing interdisciplinarily applied education should be encouraged to review this text. However, to be used appropriately in a natural resources management course, the contents should be appended with units such as management concepts and techniques, resource economics, range management, and international perspectives. Used in conjunction with *Our National Resources* by Harry Kircher and Donald Wallace and/or *Conservation and Management of National Resources in the United States* by Charles F. Bennett, these texts can provide all essential concepts, techniques and issues required for providing a comprehensive natural resource management course.

Realizing that it is difficult to develop a text that is broad in scope, while maintaining definite direction in content and function, the authors are to be commended for tackling such a task. As a result of their efforts, a current and useful secondary-level text is available.

Dr. Carla A. Kirts  
Assistant Professor  
Agricultural Education  
University of Alaska - Fairbanks

(Continued on Page 23)



# University/High School Global Exchange Program

Most agricultural education students at the Montevideo, Minnesota, High School had never met a Chinese citizen, let alone lived with one. Ms. Liu Pi Ying, a Chinese student studying agricultural education at the University of Minnesota, had never visited a farm in the United States. Montevideo High School students and University of Minnesota international students all expanded their horizons through a pilot cooperative agreement between the University of Minnesota and Montevideo High School in 1987.

Can a similar cooperative exchange program be adapted into your agriculture program? Examine the concept, the planning involved, the exchange arrangement and the results of inviting international students to a United States agricultural education classroom.

## The Exchange Concept

Several organizations and groups are promoting the study and integration of international agriculture into high school agriculture classrooms. The report of the National FFA Agrimarketing Study Committee (Leising, King & Treiche, 1987), the recent report of the National Research Council (1988) entitled *Understanding Agriculture*, and the new program on Infusing International Agriculture of the emphasis given to international agriculture integration into agriculture classrooms. Given the current international climate and economic interdependency between nations, it's time to open our high school agriculture doors to an opportunity for students. But how can international agriculture be infused into our high schools in a reasonable cost effective manner?

The cooperative agreement between the Montevideo High School and the University of Minnesota was based on a simple concept. The students at Montevideo needed and desired to learn about the culture and agriculture in other countries. The University of Minnesota international students desired and see rural United States and experience its culture. Why not bring the two together?

The Montevideo School Board and administration agreed to pilot a class entitled World Agriculture and Trade. The University of Minnesota Agricultural Education Division was contacted about providing a half-day seminar to high school students on the University campus and to send international students to Montevideo. The international students were asked to teach five class periods per week about their home country. They were to live with the families of students enrolled in World Agriculture and Trade. The international students would also be provided the opportunity to spend half days with adult farm management instructors, extension agents and local farmers.

## Preparing For The Exchange

Both parties agreed to the pilot exchange program. To gain full advantage of the program, planning was required



BY LYLE WESTROM

(Mr. Westrom is a Graduate Research Assistant in the Department of Agricultural and Extension Education at Mississippi State University.)

by the Agricultural Education Division at the University of Minnesota and the Montevideo Agricultural Education Department. University of Minnesota international students who agreed to participate in the exchange were asked to prepare a list of the experiences they desired to gain while spending three to five days in rural Minnesota. They also began acquiring information about their country to present at the campus seminar and the Montevideo High School. University of Minnesota staff coordinated the on campus seminar.

Montevideo agriculture teachers were charged with developing a curriculum for World Agriculture and Trade. This curriculum was to prepare students for the exchange by spending six weeks discussing the global agriculture structure. This included the study of world trade from the perspective of importers of United States products, competitor countries of the United States, and knowledge of developing countries. During this period of time, students and teachers used a teacher/pupil planning model to prepare an outline of topics (Figure 1) that they desired to have the international students discuss during the three-to-five day visit to Montevideo High School. Major topics selected were culture, education, agriculture (farming), natural resources, and cooperation between the United States and the international students' country. Awareness of the upcoming exchange was enhanced when the high school class attended the half-day seminar at the University of Minnesota two weeks before the exchange. After meeting the international students, the Montevideo students visited with their own families and arranged to host their international guests.

## Bringing The World To The Students

Describing the education and cultural exchange that took place during the international students' visits can most easily be conveyed by sharing some of the thoughts and conversations between the international students and their United States hosts. To fully appreciate the communication as a reader, imagine the laughter, the shock, and the facial expressions that accompanied the interchange.

(Continued on Page 18)

## University/High School Exchange Program

(Continued from Page 17)

Suleiman Ngware explained to Montevideo students that in Tanzania the extended family includes brothers, sisters, aunts, uncles, cousins, and grandparents. He proceeded to explain that the extended family moves in with the highest wage earner, which was Suleiman. Montevideo students couldn't believe what they were hearing. One student asked why he didn't just kick them out. Suleiman explained that his culture wouldn't permit that and then he jokingly added, "They can't stop me from going to the United States though."

Suleiman also explained that he was sent by his father to get an education because he was the poorest cattle herder in the family. As a boy Suleiman would forget to tend the gate and the cattle would get out.

Later in the week Suleiman became more candid with students. He admitted being amazed at how poorly the United States people treated the elderly. He also challenged the United States students to learn as much about other countries as international students knew about the United States. During a radio interview, Suleiman summarized his week long mission by stating that he had been trying to demonstrate to high school students that "America is not the World."

Ms. Liu Pi Ying admitted being unsure of her ability to adapt to the United States culture. People in China took one or two hour naps in the early afternoon, and since that wasn't accepted in the United States, she feared that she couldn't adapt. She spent two weeks in China practicing going through the day without a nap. When Liu explained Chinese medicine, Montevideo students were shocked. They were even more surprised when they discovered that ginseng grown in the United States was marketed to China for medical purposes.

Jana couldn't believe that Liu would lock her car doors in rural Montevideo, Minnesota. When other class members asked if she would travel through China without locking her car doors at night, Jana realized that she would likely do as Ms. Liu had done.

### Evaluation of the Exchange

The previous stories are real examples of the type of interchange that the program facilitated. It is difficult to measure in concrete terms how valuable the exchange was, but it can be evaluated by the perceptions of the participants. In an evaluation at the end of the class, students rated the visits from international students and the campus seminar as the most valuable experiences in the class, even though these experiences were competing against numerous other guest speakers and tours. University students all stated that the days were times well spent. One international student thought it to be the most valuable experience while in the United States. The fringe beneficiaries of the exchange were the parents of the host students. Some have exchanged letters after the international students returned to the university.

How much was gained from the exchange program? Many stereotypes were broken. Ms. Liu admitted that she had stereotyped the United States people as wealthy and lazy, but now realized her stereotype wasn't true. Montevideo High School principal, Dave Baukol, stated that students, parents, and international students gained an appreciation for each other's culture. Perhaps Suleiman summed up the feelings best while being interviewed on a radio show. He stated that the program would have far reaching effects on many lives, but that full realization by the participants would become more vivid in years to come.

### Your School

Can your school develop a similar cooperative agreement? The resources are available. Most universities have a wealth of global knowledge available in their instructional students. This knowledge when shared with your agriculture students can provide them with cutting edge knowledge of worldwide agriculture. Most universities desire to provide their international students with unique educational experiences. This type of exchange program can fill the practical experiential needs and desires of international students studying in the United States. As Suleiman Ngware stated, "I'm not underestimating what I get from the university, but you need to get more than what's in the four walls . . . believe me the best university is down on the street."

Is a program similar to the one described in this article feasible in your school? Present the idea to your school board and nearest agriculture university. With their cooperation, even distance is not a major deterrent. Montevideo and the University of Minnesota are 130 miles apart. Both agreed to continue the cooperation when Montevideo High School made the course part of its permanent agriculture curriculum.

Global education is one wave of educational reform that is not likely to go away. Consider opening your agriculture door to a concept that may provide an alternative to students who desire to learn about the world without committing to a specific language spoken in only a small part of the world. Agriculture teachers take pride in developing programs that serve the student and community needs. Expand your students' world by bringing the world to them!

FIGURE 1  
Teacher/Pupil Plan For Guest International Speakers

#### DAY ONE — CULTURE

1. Religion
2. Family
3. Foods
4. Customs
5. Personal Aspects
6. Urban-Rural Relationship

#### DAY TWO — EDUCATION

1. Type - Levels
2. Teaching Materials
3. Funding
4. Length of Term
5. Number of Years
6. Grading System
7. Literacy Rate
8. Cost to Individual
9. Extracurricular

(Continued on page 21)

# Internationalizing Agricultural Education: Infusion Project

(Continued from Page 15)

5. Visit Extension system.
6. Visit lending institutions and observe financial strategies.
7. Receive embassy briefing on country.
8. Visit agriculture businesses.
9. Visit with farm leaders.
10. Visit commodity organizations.
11. Visit and observe farm cooperatives.
12. Visit and participate in production agriculture.
13. Visit Ministry of Agriculture.

## B. Societal Experiences

1. Visit historical and religious sites.
2. Visit parliament or legislative group.
3. Visit several government offices.
4. Visit tourist sites.
5. Attend cultural events.
6. Record experiences and collect materials about the country.

## C. Personal Contact Experiences

1. Placement in a family "home situation."
2. Gain a specific agriculture experience on a local level.
3. Participate in family social events.
4. Spend at least 2 days with host family.

## Project Outcomes

This project involves much more than just a trip to fascinating and exciting countries around the world. The individuals and state proposals selected to participate in this project are committed to learning as much as possible, assisting in the development of instructional materials and giving instruction to fellow professionals in their respective states and regions. Over a period of time the eventual pay-off for this project is best expressed by the assessing among students the specific learning objectives that are to be accomplished. The Task Force stated in its initial report that as a result of this program, educators and their students should be able to do the following:

- Compare and contrast the marketing systems of the U.S. and at least one other country.
- Compare and contrast the trade policies of the U.S. and at least one other country.
- Describe the general geographical and environmental characteristics of a country other than the U.S.A.
- Identify and explain water use and management in selected countries.
- Define the term "green revolution" and explain its impact on agriculture.
- Identify various soil types and conditions in at least one country other than the U.S.A.
- Explain the food distribution system in a given country.
- Describe the extension education system in a given country.
- Explain the extent of mechanization in a given country.
- Describe how food is processed and handled in a given country.

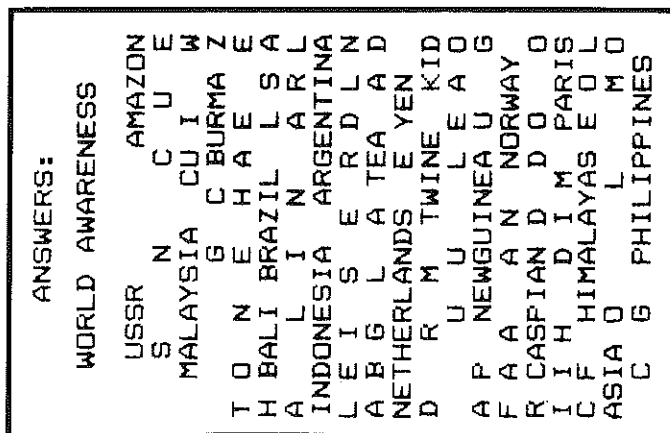
- Identify and describe major crops and livestock enterprises of a selected country.
- Describe the culture and lifestyles of people in another country and explain their impact on agriculture.
- Identify major historical and cultural events and explain their significance to agriculture.
- Describe the leadership, management and work styles of the participants in the given country and explain their significance to agriculture.
- Describe the types of products imported to the country from U.S.A. and exported out of the country to the U.S.A.



American agricultural educators visit with a Chinese farmer in his home. (Photo by Joel Magisos.)

The mission of agricultural education in the United States of America (U.S.A.) is to foster the development of knowledge and skills related to the industry of agriculture. Pursuant to this mission is a growing need for students and educators to develop an understanding of world agriculture and its impact on U.S. agriculture as well as its effect on local production and marketing of food and fiber. To address this need requires the development of a systematic approach for infusing various aspects of international agricultural education program.

The plan outlined in this proposal is the first step in a series of activities that should be conducted in the agricultural education profession on our way to developing a systematic approach to internationalizing the agricultural education curriculum.



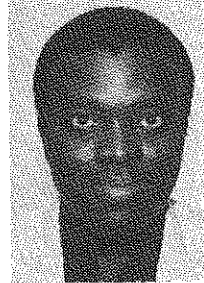
# International Development: An Agricultural Education

No doubt, we are in a world in which global interdependence is growing daily. Many United States colleges and universities are encouraging international education. An increasing number of foreign students are studying in the United States of America (U.S.A.). There were 356,187 foreign students in the U.S.A. in the fall of 1987, up from 326,000 in 1981-82.

During the fall of 1987, a total of 7,930 (2.23%) international students studied agriculture in the U.S.A. It is estimated (NAFSA, 1984) that about 75% of the foreign students studying agriculture in the U.S.A. are from the developing countries of the world. It is further estimated that foreign students in the U.S.A. spend more than \$1.8 billion annually on living costs. Quite apart from the positive economic benefits of having international students, the international perspective a varied foreign population brings to the various institutions in this country is an asset. The image of the host institution is boosted not only for recognition here in America, but also in other countries. The visiting students learn not only advanced technologies, but gain skills, new ideas, and understanding of different cultures.

Education generally within the framework of humanism serves as an agent of transmitting and communicating selectively to each new generation the cumulative skill, knowledge and tradition of the past. It also acts as an agent of adaptation, education readies individuals to desert their provincial worlds for the evolving world of the "not yet." This is really a developmental function. Hence out of the three functions of education — transmissive, adaptive and developmentive — the developmental function is the most complex and laudable, because it shines as education's lodestar.

Internationally, there are many agencies and associations at work with the goal of promoting education of people from other countries. The United States Agencies for International Development (USAID) is one. Others include the United Nations Food and Agriculture Organization (FAO), the United Nations Education, Scientific and Cultural Organization (UNESCO), and various financial organizations, such as the World Bank, the Africian Development Bank, the Inter-American Development Bank, the Saudi Development Fund and the Asian Development Bank. Most of these agencies and organizations sponsor programs which bring students, faculty, and research scholars from other countries, mostly the developing countries, for technological education. These donor agencies also send experts abroad for study, teaching, research and advisory services in education and related subjects. Under these programs approximately 23,000 American scholars, experts and technical assistants (citizens) have gone abroad and 58,000 foreign nationals have come to the United



BY FAMIWOLE O. REMIGIUS

(Mr. Remigius is a Graduate Student in Agricultural Education at Southern Illinois University.)

States for university study, advanced research, teaching and education consultations of various kinds.

Not all international students are sponsored by an agency or organization. Many concerned and knowledge-hungry students are sponsoring themselves. This shows how important and worthwhile an educational experience outside their countries' boundary is held in developing countries.

There are international associations and societies such as the Association for International Agricultural and Extension Education (AIAE) and the International Society of Agricultural Education (ISAE), which encompasses agricultural educators. There are channels for international students and educators from both developing and developed countries to exchange and propagate useful dialogue.

## Benefits of Global Interdependence

International education provides worthwhile learning experiences for both the host country and the visiting citizens. The foreign exchange program allows for youths from another country to participate in varied agricultural programs. New ideas and concepts are exchanged and lasting friendships formed.

Degree programs at most United States universities and in some other developed countries help provide the seed for growth in developing nations, especially in areas of advanced new technologies and in hands-on experience programs in agriculture. Ideas and new methods in agriculture are shared with agriculturists in the host countries. The process is mutual but generally it helps to build a global bridge of understanding between the countries involved and helps in structuring a developmental program for the needy developing nations.

Many of the international programs are developed to focus on the needs of the developing countries. The agencies and universities are partners in the planning, conducting and evaluation of the foreign projects. Many of these projects have supported the establishment and strengthening of agricultural colleges, experimental stations and extension services in the developing worlds. Those efforts are yielding results in Latin America, Africa, Asia and the Near East.

However, in designing international education, more attention should be focused on helping the international students to help themselves. Efforts should be made to introduce modern agricultural concepts based on the indigenous talent, skill and their home based natural resources. It must also focus on the felt and unmet needs as expressed by the nation's populace. It is the belief that regardless of what stage of development a nation has reached, the sponsoring agencies cannot continue permanently to do for the developing nations what they could do for themselves.

The "help them" as well as "help themselves" concept should pervade. Effective planning should be made to look upon the operational and cooperative arts as being symbolic because one cooperates with both the established canons of a society and the existing natural laws and dictates of the environment. Greater impact will be felt when indigenous attributes are manipulated into the agricultural education goals by both the nation and visiting populace.

Technologies and ideas are frequently not transplantable or transferable to programs in other countries but can "spark" new ideas for program development and improvement and allow for innovative creations. Again, quick developmental programs and skill manpower training programs for developing nations will satisfy only the emergency situation, but long term and broad based measures are necessary for a permanent and effective solution to the developmental quest.

The smallness of the world, the interdependence of all human beings, the need for a global outlook, are concepts that remind us of the similarities of human beings (McBreen and Perry, 1985). The Peace Corps program of the United States government is a good program assisting many international education and developmental efforts.

The integration of teaching, research and extension that exists in the United States Land Grant model is equally necessary in national institutions as a long-term solution to agricultural development. In as much as the United States model may not be cloned, a hybrid should be developed to take into consideration vegetational, climatic, government priorities and needs and other natural resources in the agricultural systems of the developing countries.

International education provides effective linkage within developed and developing nations. Various agencies, organizations and self-sponsored students are increasing their efforts in international development. The agricultural planners and educators are in the best position to contribute to the improvement of this trend. Resources within the host countries, foreign experts, students and visitors should be utilized to enrich curriculum and curricular offerings in both countries.

The world should be seen as a global laboratory and efforts should be made to open the students' eyes and minds to meeting the needs of the world.

There must be effective evaluative procedures for foreign students by the host institution and home government. Institutions which recruit and educate foreign students should be more responsible to help integrate these students back to their home environment. International students after graduation should be allowed to utilize the acquired skills and technologies by their government. This could be achieved by recruiting the successful students for responsible and leadership positions that may affect and promote the countries' development.

Transmissive and adaptive education are the cornerstone to international development in agricultural education.

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## University/High School Exchange Program

(Continued from Page 18)

10. Entrance Exam
11. Discipline

### DAY THREE — COUNTRY'S AGRICULTURE (FARMING)

1. Major Exports
2. Equipment
3. What They Produce
4. Land Available
5. Season Times
6. Irrigation
7. Infrastructure

### DAY FOUR — NATURAL RESOURCES

1. Wildlife
2. Fishing
3. Forest
4. Water (Use and Recreation)

5. Sewage Treatment
6. Parks and Refuges
7. Mineral

### DAY FIVE — U.S. & YOUR COUNTRY'S COOPERATION

1. Personal Thoughts on U.S.
2. Trade Cooperation with U.S. (Present and Future Potential)
3. Government Structure
4. Government's Relationship with U.S. Government
5. Military

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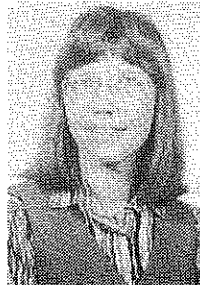
# The Role of AIAEE In Agricultural and Extension Education

The Association of International Agricultural and Extension Education (AIAEE) will hold its fifth annual meeting this year in Washington D.C. This fledgling association, first organized in 1984, was the brain child of a small group of agricultural and extension educators seeking greater involvement of agricultural educators and agricultural education in international development activities. The impetus for this effort included both a desire on the part of individuals for increased opportunities for involvement in international development and a belief that the basic tenets of agricultural and extension education are also basic components of agricultural development.

AIAEE has made a conscious effort to attract membership from throughout the organized structure of the agricultural and extension education profession and from related areas. The concept of "related areas" has been defined very liberally with the hope that anyone who is interested in agricultural and extension education in an international context would be encouraged to become a member. The organization has also sought to attract membership from all areas of the profession to include students, secondary teachers, county agents, researchers, college and university faculty and administrators, consultants, and staff of donor agencies, government agencies, and private voluntary organizations.

The need for a broad representation of people interested in international agricultural and extension education becomes especially clear when the objectives of AIAEE are considered. Among those objectives are the following:

- To examine and articulate the role of agricultural and extension education in international agricultural development;
- To establish a continuing dialogue within the profession on international agricultural and extension education on a global scale;
- To establish and maintain a continuing dialogue between AIAEE and donor agencies for international agricultural development;
- To encourage research within the profession which will favorably impact on agricultural and extension programs in developing countries;
- To increase the capabilities of members of the profession to provide technical assistance and conduct research related to international agricultural and extension education;
- To encourage the inclusion of and promote research related to an international curriculum focus in agricultural and extension education programs in all settings and at all levels including elementary, secondary, post-secondary, and undergraduate and graduate university



BY EDNA L. MCBREEN

*(Dr. McBreen is Associate Director of International Programs, The State University of New York and President, AIAEE.)*

programs; 4-H and FFA activities; and other outreach activities.

## An International Focus For The Profession

While AIAEE has a clear focus on international development, especially in the Third World countries, it would be a mistake to assume that the benefits of the organization will only accrue to that focus. The field of agricultural and extension education in the United States will probably gain more from this affiliation than will the Third World. This is not because of some neo-colonial plot, nor is it a statement on the inadequacies of technical assistance or research activities and their impact on the Third World. In fact, it is a very positive statement related to the amount of learning that goes on when individuals and organizations examine themselves in relation to the rest of the world.

In general, the growing focus on development education, global education, and international education that has been increasingly evident in agricultural and extension education over the last five to ten years has led the profession far beyond opportunities for selected professors of agricultural and extension education to provide short- and long-term technical assistance in Latin America or Africa. This focus has put agricultural and extension education in the forefront of the current increased concern throughout the education community about the severely provincial, parochial knowledge and attitudes of most Americans.

As a profession we are just beginning to acknowledge the characteristics of the United States economy which indicate the integral importance of the global economy to the preservation of our own lifestyle:

- Twenty percent of the United States' industrial output is for export.
- The jobs of one in six United States' production workers are directly dependent on international trade.
- Forty percent of United States' farmland produces for export.
- About a third of United States' corporate profits are generated by international activities.

- United States commercial banks have over 130 billion dollars in loans outstanding to developing countries and the communist bloc, with 1,500 banks from throughout the country involved in lending to Latin America alone.

There are no data available regarding the relative knowledge level of agricultural and extension educators regarding the global environment, the global economy, or the interdependence between our traditional clientele and the rest of the world. We may wish to assume that, as a profession, we have greater knowledge in these areas than the general population. However, even that is not certain. In fact, our traditional program efforts tend to relate to local needs. Historically, local needs in the United States have not included an understanding of the impact of international activities or characteristics on localities. Our government may have abandoned policies of international isolationism, but our communities and individual citizens hold the philosophy to be quite clear.

The data related to our agriculture, our economy, and our place in the world point directly to a need to have a more knowledgeable citizenry. Agricultural and extension education has an admirable history of providing leadership to our clientele. If we are to be able to provide the leadership necessary to help that clientele understand the world economy and their place in it, we must also understand it.

### A Role For AIAEE

As a professional organization, the AIAEE has both the opportunity and the responsibility to help the profession provide leadership in international development and international education. Several elements of the organization give it the potential to fulfill that responsibility.

- The variety of backgrounds represented by the AIAEE membership teamed with a common concern for inter-

national agricultural and extension education has brought an equivalent variety of resources for problem-solving, research, and networking.

- Although AIAEE focuses upon education in agriculture, it has not got an inherent allegiance to any particular approach to that focus. The organization has equal allegiance to the methodologies of vocational agriculture, post-secondary agricultural education, extension, adult education, and youth development activities. Thus, it has the flexibility to focus, not on how our approach fits into the needs of international development or on the need to increase the knowledge level of Americans relative to the rest of the world, but on the challenges of international development and the internationalization of our clientele in the United States and the best approaches to meeting those challenges.
- AIAEE's goal is to be an international organization and include agricultural and extension educators and representatives from related fields from around the world. When this goal is attained, we will begin to really examine the global issues of agricultural and extension education, not just provide a forum for Americans to talk to themselves about these issues.

Clearly, if any of these elements are to be a lasting part of AIAEE, the membership and leadership of the organization will have to be innovators and risk takers. They will have to be willing to look at problems and opportunities from non-traditional perspectives. They will have to be willing to dedicate the time and the effort necessary to international agricultural and extension education so that it will be accepted as an integral part of the profession. They will also have to take the responsibility of helping the profession embrace a global perspective.

## BOOK REVIEW

### Natural Resources/Cattle Sciences

(Continued from Page 16)

*Beef Cattle Science* by M.E. Ensminger. The Interstate Publishers and Printers, Inc., Danville, Illinois, 1987, 1025 pages, price \$53.25.

The sixth edition of Ensminger's *Beef Cattle Science* is an excellent reference book for anyone engaged or interested in beef production. It is scientific yet practical and would be an excellent addition to all resource libraries and classroom textbook lists. This book is written in the traditional format all Ensminger's books are written, with each chapter containing a table of contents, questions for study and discussion, selected references and a variety of charts, graphs, tables and photos. But more importantly, *Beef Cattle Science* answers the questions anyone would ask about beef production.

The extensive coverage of *Beef Cattle Science* is indicated in the table of contents. Part I of the table addresses general topics of beef production including cattle breeds, principles of cattle genetics, pastures and ranges, buildings and equipment, and beef cattle health. Part II identifies topics specifically related to the cow-calf system including feeding

and managing brood cows, feeding and handling calves, and replacement heifers. Cattle feedlot and pasture finishing are found in the third section of *Beef Cattle Science*. Ensminger specifically addresses the many options available to market finish cattle including chapters on equipment and facilities, kinds of cattle to feed, cash flow analysis, and management of the feedlot. In chapter thirty-five Ensminger looks at the future of feeding cattle and discusses trends and issues the beef industry will be facing in the near future. Additionally, Ensminger identifies similarities and differences between purebred and commercial herd production.

Useful and interesting topics in the appendix include composition of feeds, weights and measures, breed registry associations and breed magazines. Throughout the book, numerous graphs, tables and figures complement the narrative and present information in a clear and concise manner. This book would be an excellent reference for any vocational agriculture teacher who would like to develop a unit of instruction on beef production or assisting adults with the management of their beef cattle herd.

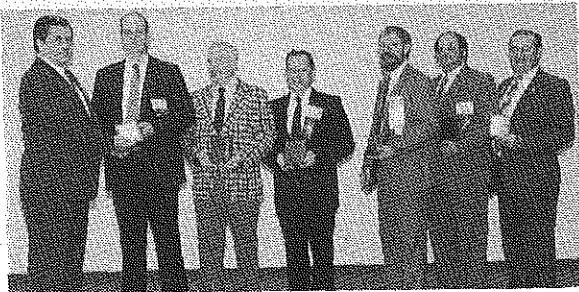
Bill Umbaugh  
Vocational Agriculture Instructor  
Norfolk County Agricultural High School  
Walpole, Massachusetts

# Stories in Pictures



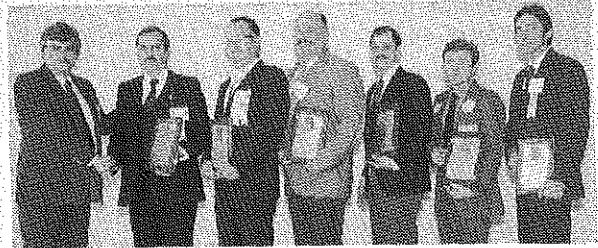
## NVATA BOARD OF DIRECTORS 1988-89

Seated (Left to Right): Sam Stenzel, Executive Director, Alexandria, Virginia; Duane W. Watkins, President, Thermopolis, Wyoming; Douglas B. Spike, President-Elect, Bloomfield Hills, Michigan. Standing (Left to Right): Tom Parker, Vice President, NVATA Region I, Torrington, Wyoming; Dale Turner, Vice President, NVATA Region II, Holdenville, Oklahoma; Dennis L. Jackson, Vice President, NVATA Region III, Mankato, Minnesota; Kathy Day, Vice President, NVATA Region IV, Lexington, Kentucky; Roy W. Cooper, Vice President, NVATA Region V, Mantachie, Mississippi; and Frederic H. Stillwagen, Vice President, NVATA Region VI, Allentown, Pennsylvania.



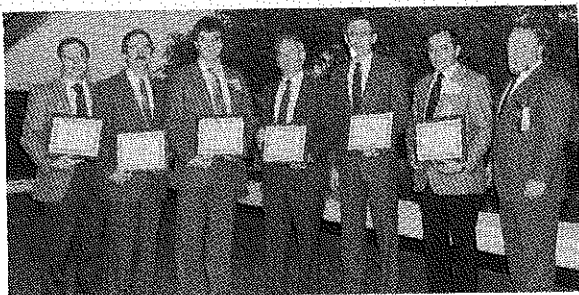
## NVATA OUTSTANDING VOCATIONAL AGRICULTURE TEACHER AWARD — 1988

Left to Right: Allen Hesse, Branch Manager, Ford New Holland, Kansas City, KS, presented the awards; Joe D. Stafford, Tipton, OK; Richard C. Kjar, Gunnison, UT; Doyle E. Paul, Berlin, PA; Duane M. Fisher, Mt. Auburn, IA; Robert E. Philpot, Williston, FL; and Eldon R. Aupperle, Toulon, IL. (Photo courtesy of the NVATA.)



## NVATA OUTSTANDING VOCATIONAL AGRICULTURE PROGRAM AWARD — 1988

Left to Right: George Mueller, Manager, Product Information & Training, Case IH, Racine, WI, presented the awards; Larry Lokai, Northwestern-Clark High School, Springfield, OH; Murdock L. Gillis, Ponce de Leon High School, Westville, FL; Del Petersen, Santa Maria High School, Santa Maria, CA; Doug Rinker, James Wood High School, Winchester, VA; Thomas P. Cory, North Polk Community High School, Elkhart, IA; and Ray Chelewski, Raton High School, Raton, NM. (Photo courtesy of the NVATA.)



## NVATA HONORARY LIFE MEMBER AWARD 1988

Left to Right: Bill Jimmerson, President of the Montana Association and Vocational Agriculture Teacher at Conrad, MT (accepted the award for Don Owen, Vocational Agriculture Teacher (retired), Columbus, MT). Charles P. Griner, Vocational Agriculture Teacher at Moultrie, GA (accepted the award for Henry R. Madison, Vocational Agriculture Teacher (retired), Cairo, GA). Tom Faulkner, Vocational Agriculture Teacher at Biggsville, IL (accepted the award for Don Nitchie, Commodity Marketing Associate - Chicago Mercantile Exchange, Chicago, IL). Curtis Corbin, Jr. State Supervisor-Agricultural Education (retired), Watkinsville, GA. Larry D. Case, Senior Agriculture Program Specialist-USDE, Washington, D.C.; Vernie L. Thomas, President-Interstate Printers & Publishers, Danville, IL; Carroll L. Shry, Jr., NVATA President and Horticulture Instructor at the Frederick County Vo-Tech Center at Frederick, MD, presented the awards. (Photo courtesy of NVATA.)



## NVATA OUTSTANDING SERVICE AND COOPERATION AWARD — 1988

The 1988 NVATA Outstanding Service and Cooperation Award was presented to The Chicago Board of Trade, Chicago, IL during the 40th annual NVATA Convention in St. Louis, Missouri, December 2-6, 1988. The award is made annually to an organization, agribusiness industry, and/or others who support NVATA activities and promote vocational education in agriculture.

The Chicago Board of Trade and the NVATA work closely in coordinating programs for vocational agriculture instructors in secondary schools. The Chicago Board of Trade provides stipends for up to 50 agricultural educators to participate in a Chicago workshop on grain futures, hedging and classroom applications. The program was initiated in 1982.

Carroll L. Shry, Jr., NVATA President, Woodsboro, Maryland, presented the prestigious award to Patricia Pembroke, Manager-Education and Marketing, Chicago Board of Trade, Chicago, IL, during the annual Awards breakfast at the national convention in St. Louis.