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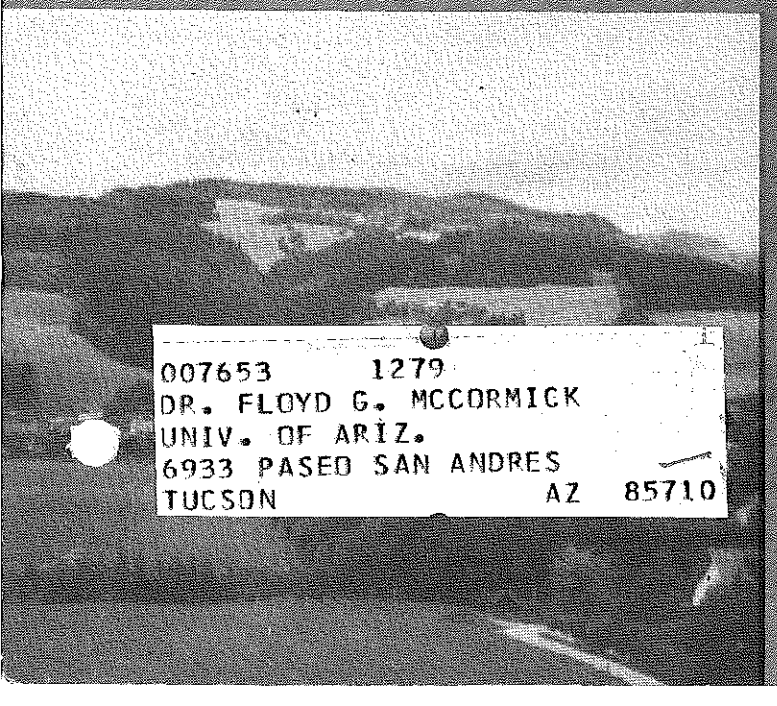

Theme — International Agricultural Education — Filling The World's Bread Basket

July 1979 Volume 52 Number 1

AGRICULTURAL EDUCATION

Theme — International Agricultural Education — Filling the World's Bread Basket

COVER PHOTOS

Top Photo — *Representatives from 70 countries met in Germany for the International Seminar for Youth Leaders. (Photo courtesy Don McCreight, Univ. of Mass.)*

Center Photo — *Young women are also preparing to be agriculture teachers in both Jamaica and Guyana. Over 25% of the agriculture students at the Guyana School of Agriculture are women. (Photo courtesy Burton E. Swanson, Univ. of Ill.)*

Bottom Photo — *This view of agriculture around Langenwang, Austria illustrates some of the different experiences awaiting FFA members in the Work Experience Abroad program. (Photo courtesy Carlos A. Navar, WEA participant Ten Boer, Holland — see related article.)*

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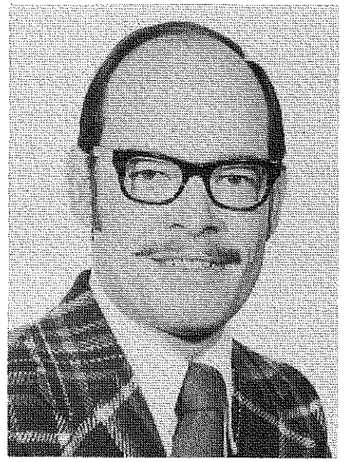

William L. Thuemmel

BEYOND FILLING THE WORLD'S BREADBASKET: A CHALLENGE FOR AGRICULTURAL EDUCATION

by
William L. Thuemmel
Teacher Education
University of Massachusetts

Just as agriculture is more than farming, adequate human nutrition on a global basis is more than just having enough food in the world's breadbasket to theoretically feed every man, woman, and child on earth. Surprising, perhaps, but total world food grain supplies continue to be more than adequate to feed the world on a per capita basis. This trend has persisted for the past two decades and is expected to continue into the next century.

Why, then — if food is so plentiful on the average — do an estimated one billion people currently suffer from hunger and malnutrition? Basically it is a food distribution problem exacerbated by geographical regions of low agricultural productivity, high population growth rates, and poverty. This problem is expected to become even more acute in those developing countries which depend heavily upon foreign oil to fuel their fledgling industries. In some respects, the prognosis for alleviating the poverty and suffering of large segments of humanity seems bleak, even futile.

However, there is also cause for cautious optimism as the United Nations and its affiliate organizations (FAO and the World Bank for example) and other internationally oriented agencies and foundations give increasing attention to worldwide agricultural development. Moreover, several of the more developed industrial countries are taking a more active role in furthering their own agricultural and rural development efforts abroad. One such example is the United States.

The U.S. passed the International Development and Food Assistance Act in 1975 (Public Law 94-161), amending its Foreign Assistance Act of 1961 and giving U.S. universities a greater role in the planning and conduct of foreign assistance programs. Title XII ("Famine Prevention and Freedom From Hunger") of the Act is to strengthen the capacities of the land-grant and other eligible universities in the U.S. to participate in agricultural institutional development and research throughout the world by applying agricultural science toward the goal of increasing world food production and solving food and nutrition problems of the developing countries. This legislation focuses on helping the poor majorities of the most poverty stricken nations and promises to have considerable impact on the U.S. foreign assistance programs during the 1980s.

THE CHALLENGE FOR AGRICULTURAL EDUCATION

In their book, To Feed This World: The Challenge and the Strategy, Wortman and Cummings (p. xi) note:

> *The world food situation is alarming, but increased food production is only a part of the solution. All nations — wealthy or poor, agrarian or industrialized — must work more effectively to increase agricultural production, decrease population growth rates, and promote widespread improvements of incomes in developing countries.*

The challenge for improving the living conditions of the world's poor confronts agricultural education head-on, for historically agricultural education has played a key and central role in the socio-economic progress of mankind. Much of the rapid industrialization of Japan, Taiwan, and the United States, for example, was made possible by first developing a sound infrastructure of agricultural and educational programs which focused on the needs of large rural populations. Those components included compulsory primary education, agricultural and vocational schools and colleges, and agricultural research and extension systems. However, since World War II, many nations in their haste to industrialize have neglected both agriculture and rural development. Consequently, people have streamed into the cities in search of food and better living conditions, greatly overtaxing the ability of urban areas to provide either. Title XII is an attempt by the U.S. to help the developing nations successfully realign their development priorities. There is some question though

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about the capacity of the U.S. land-grant system to fully respond to the challenge of Title XII.

During the past couple of decades (post-sputnik) the growth and increasing complexity of scientific knowledge has resulted in the U.S. land-grant colleges and universities becoming highly discipline oriented. Agricultural faculty members tend to receive recognition only from within the narrow context of their disciplines. Strict "publish or perish" policies compound the problem, often placing a higher premium on research than on instruction and public service. This has contributed to a lack of pragmatic research and a phenomenal lack of communications and distrust among disciplines — especially between those in the biological and social domains. Also, college of agriculture faculties have become increasingly dominated by academicians and theoreticians at the expense of the applied agriculturalists. Higher education currently has a critical need for more generalists and specialists in scientific agriculture who can relate what they know to the practical problems of agricultural development both here and abroad. In short, the university community will need to draw heavily upon the ranks of the applied disciplines if it is to meet the challenge of Title XII.

The writer wholeheartedly concurs with an editorial statement expressed by Matteson in an earlier issue of *Agricultural Education* that "... the greatest reserve of personnel which have experience working with small farmers, and in many cases poor farmers, rests within the ranks of the Agricultural and Extension Education profession. Qualitatively, Matteson was correct; however, he did not raise the quantitative question "From where will they come?" The United States has a perennial shortage of teachers of vocational agriculture and agricultural extension agents. Even teacher educators in agriculture and post-secondary agricultural instructors are in short supply. Much of this shortage in the U.S. is attributed to a dwindling population of college students with farm backgrounds and the relatively low priority accorded Agricultural Education by some land-grant universities, government officials, and educational leaders.

SOME IMPLICATIONS FOR AGRICULTURAL AND EXTENSION EDUCATION

If Agricultural and Extension Education is to play a key role in furthering agricultural and rural development abroad, what can the profession do to ready itself for greater involvement in overseas developmental activities? Also, how can agricultural educators strengthen global agriculture through education? These questions and others are the focus of the suggestions, observations, and/or recommendations which follow:

First, agricultural educators should establish and maintain contact with the Title XII representative(s) in their respective institutions. Each land-grant university has a Title XII representative. Teachers and extension agents interested in overseas assignments should make this known to their Agricultural and Extension Education staff.

Second, agricultural educators need to do a better job of "tooting their own horn" as essential professionals in the perpetual process of development. It should be no secret that both extension (nonformal) and vocational (formal) education in agriculture have been important institutional factors in enabling the U.S. to extensively industrialize and urbanize and still become the world's leading exporter of agricultural products. Agricultural education is one of the few professions capable of bridging the gap between agricultural technology and human/community development.

Third, the Agricultural Education profession needs to re-examine its philosophical foundations and expand its operational parameters. At the time the Smith-Lever (1914) and Smith-Hughes (1917) acts were passed most Americans had firsthand knowledge of farming or rural living; therefore, it was logical that agricultural educators devote their entire professional energies to the preparation of high school students and adults for entry into, and advancement in, agricultural (then farming) occupations. However, today, according to U.S. Census Bureau data, only about ten percent of the U.S. labor force use agricultural competencies in their employment. For this group and their replacements, agricultural education programs should remain vocationally oriented. But, what kind of agricultural education is being offered to the rest (90%) of the American public? Most of the voting public in the U.S. has little or no firsthand knowledge about the production of their basic sustenance — food and fiber. Is this the kind of educational system we wish to share with other nations? Perhaps agricultural educators will respond to this challenge at the 1980 National Seminar on Agriculture/Agribusiness Education.

Fourth, agricultural educators must expand their communication efforts to better inform local citizens, government leaders, and other educators about the basic importance of agriculture to the welfare of people everywhere. Agriculture and food should be dealt with as one highly integrated topic. The productive and consumptive/nutritive aspects of agriculture have been divorced into separate categories for too long, contributing to ig-

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COMING ISSUES

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- AUGUST — The Overworked Ag Teacher — Determining Priorities
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- NOVEMBER — Adult Education in Agriculture — An Extension of Our Vo-Ag Program
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TRADITIONAL PROGRAMS FALL SHORT

by
John B. Swanson
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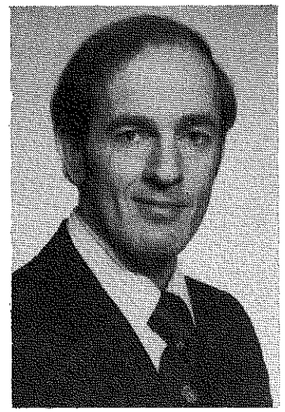

John B. Swanson

One important aspect of international agricultural education is the training of graduate and undergraduate students from developing countries. There are two ways of visualizing international agricultural education; first, as all international education related to all fields of agriculture; and second, as programs which parallel agricultural education (preparing vocational agriculture instructors) in the U.S. This article focuses on the second concept and deals specifically with graduate and undergraduate training programs as they relate to international students. These students, upon completion of their studies, play an increasingly important role in the development of human resources which are essential in filling the world's breadbasket. Related questions and answers are posed in the following paragraphs.

Are traditional graduate and undergraduate courses appropriate for international students? Are courses slanted toward large scale, capital intensive, temperate zone agriculture appropriate for international students from countries where small scale, labor intensive, tropical agriculture is the rule?

Traditional curricula as such fail to meet many needs of most international students. To rectify existing inadequacies flexibility and adaptation are key words to keep in mind in assisting international students with the preparation of their programs of study. Independent study and problem type courses are ways of building in such flexibility.

How well prepared are U.S. professors to advise international students? Advisors of international students seldom have in-country experience in the student's homeland, hence, for increased effectiveness, special efforts on the part of the advisor are required. A detailed graphic explanation, by the student, of the home country's educational system, agricultural sector, and agricultural education division, including a description of where the student will fit in on return to the home country can be most helpful. By having the student outline constraints to development in the home country, the advisor can provide more meaningful guidance. For example: if illiteracy is a serious problem, a course in the use of different media such as radio for education could be relevant. If unemployment and underemployment of the agricultural labor force is a problem, perhaps the student should study alternative educational systems; such as that proposed by Axinn [1] which has a career education slant, preparing all levels of students for relevant employment by providing advancing degrees of skills training from elementary through higher education.

The student also should assess the practicality and applicability of the agricultural education system in the home country. Frequently a strong theoretical base exists, but little benefit is achieved which has any direct influence on the problems faced by farmers.[2] Enrollment in courses in research methodology, conduct of surveys, and extension and diffusion of knowledge are essential in such cases.

How relevant is research conducted in the U.S. to agricultural development in developing nations? Often, the research done by international students has little bearing on problems in their home country which desperately need attention. When possible, research should be conducted in the student's home country in order for it to be meaningful to the student, and for it to make a significant contribution to problem solution. Opportunities for collaborating with international centers for research and training such as CIMMYT, IRRI, IITA, and others exist and can also provide relevant studies. A third, yet perhaps less desirable alternative which may be necessary is to carefully assist international students in research topic selection, directing them to choose topics such as leadership development or technology transfer which have international application.

Title XII of the International Development and Food Assistance Act of 1975 deserves mention in that it can play a role in lessening some of the problems mentioned above. Title XII is designed to fight famine and hunger by strengthening the capacity of U.S. universities in agricultural institutional development and to aid in U.S. government efforts to increase world food production.[3] This legislation is enabling a) university personnel to gain more international experience, b) universities to develop more appropriate curricula for international students, c) universities to increase emphasis and commitment to international agricultural research and development as proposed by Zuidema,[4] and d) establishment of long term collaborative efforts and linkages between universities in the U.S. and educational and other agricultural institutions in developing countries.

How comprehensive is the student's program? Does it provide opportunities to observe or visualize the total scope of the agricultural education system in the U.S.? Are "hands-on" activities included in preparing the student? All too frequently the international student's program of study fails to be compre-

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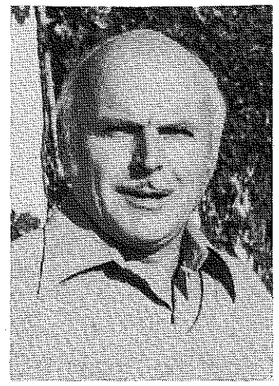
THE AMERICAN FARM SCHOOL THESSALONIKI, GREECE

by
Harry E. Pierce
Director of Curriculum Development
American Farm School
Thessaloniki, Greece

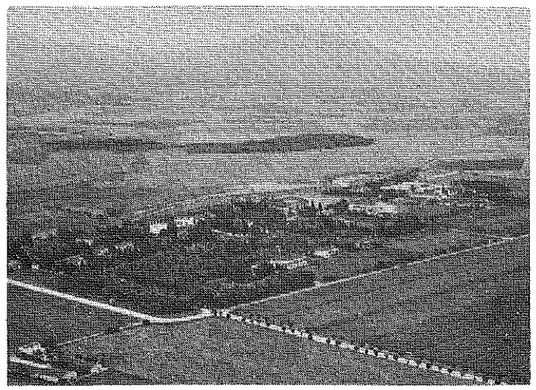


Harry E. Pierce

Agricultural education has been flourishing for 75 years in Greece; a small country with a rich cultural heritage. The American Farm School was founded by an American missionary, Dr. John Henry House, in 1904 near Thessaloniki, a Macedonian city still under Turkish rule.

As the Ottoman empire was crumbling, it became perilous for missionaries to travel to the villages to preach and to teach in the small schools that they had started. It seemed prudent and safer, therefore, to bring the boys from the villages to a new school near the city where protection could be provided.

It was incorporated under the laws of New York State as the Thessaloniki Agricultural and Industrial Institute as a non-profit private institution and is financed by the school farm, private contributions from the United States and Greece, and the Greek and U.S. governments.



THE BEGINNING

The Farm School began with the purchase of 52 acres of supposedly worthless, barren land. A two-room adobe house was constructed with one room for a farmer and his family and the other room for 12 orphan boys to use for sleeping, eating and as a classroom.

A yoke of oxen and an Abrahamic wooden plow were used to plant a vineyard and mulberry bushes. As with all early agricultural schools, students would work the farm half days and attend classes half days. The first "approved practices" were grafting, plowing deeper and spreading manure for fertilizer.

THE MISSION

The primary mission of the American Farm School (as Greeks affectionately call it) is "to train young Greeks as well as adult farmers and their families on a highly selective basis in specialized vocational skills which will equip them to manage an agricultural enterprise and/or assume positions of leadership in Greek agriculture".

The AFS is indeed achieving its mission as is evidenced by the nearly 1600 graduates who have traditionally made an impact on Greek agriculture. Not only has the school farm introduced many new agricultural innovations but also its graduates today hold numerous leadership positions in their villages, Ministry of Agriculture, cooperatives and agribusinesses.

DEVELOPMENT

From a humble beginning, the AFS has developed into a modern agricultural training institution with two formal education programs for 200 boarding students (boys and girls) and a Ministry of Agriculture Short Course Training Center for rural adults and professional agricultural personnel. The 400 acre farm supports the School financially as well as providing practical training for students. Today's students enjoy the latest in dormitory facilities provided by the U.S. Agency for International Development in 1977.

The AFS also sponsors two summer programs for foreign youth; the Greek Summer for 40 American high school seniors and the Agricultural Development Center Program for university graduates and students from the U.S., Europe, Africa and Asia.

DIRECTORS

A unique historical feature is that the School has had only three Directors in its history. The present Director is Bruce Lansdale who succeeded Charles House in 1955 who had, in turn, succeeded his father. Diplomatic

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THE AMERICAN FARM SCHOOL

measures by the Directors have enabled them to keep the School from the sometimes turbulent political situation. An exception happened during World War II when Charles House and his wife, Ann, were interned in German prison camps. Also in 1949, during the Greek Civil War, the entire senior class was kidnapped by the rebels and taken to the mountains. They managed to escape, however, one by one and all had returned in time for graduation.

Mr. Lansdale, with a staff of 95 (89 are Greeks) has managed to develop an agricultural training institution that serves as a model, not only for Greece, but for European, Asian and African countries as well. His administration is constantly striving to keep their educational and agricultural methodology current.

PROGRAMS AND CURRICULUMS

The programs and curriculums have changed over the years as the Greek scene and students' needs have changed. In 1978, the AFS began a transition period from a three-year vocational farm machinery program to a three-year vocational agriculture lyceum (senior high-school) and also a two-year mechanized agriculture school. Dr. Harry E. Peirce, former vo-ag teacher from Minnesota and agricultural educator for the World Bank and Universities of Purdue and Florida, was hired as Director for Curriculum Development. He is directing the curriculum changes, developing instructional materials and teaching methodology, and is also in charge of the student project program. Competency based instruction is not new to the American

Farm School as traditionally each vocational course has a list of skills for each student to develop.

THE SPIRIT

The spirit of love and dedication to mankind of Dr. John Henry House continues to be transmitted to the students of the American Farm School through the hearts and energies of the staff. As Mr. Lansdale states, "For as we have taught, we have learned. As we have given, we have received. As we have changed others, we also have changed. As we have given new life, our lives have been renewed. For that which we keep, we lose and only what we give — be it knowledge, skill, attitude, or a road to a better life — remains our own".

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norance and misunderstanding among the general public about the total food/fiber cycle. The complexities of agribusiness — production, transportation, marketing, legal restrictions, distribution, foreign trade, consumption patterns, and related functions — must be better understood and appreciated by people of all nations.

Fifth, agricultural educators need to bring their pre- and in-service curricula more in line with national and international priorities in agriculture. More emphasis should be given to such topics as rural development, urban agriculture, energy efficient agricultural technology, nonformal educational techniques, adult education, part-time farming, entrepreneurship, and non-farm agriculture.

Sixth, agricultural educators need to intensify their recruiting efforts for students willing to enroll in Agricultural and Extension Education. Job prospects for both teachers of vocational agriculture and agricultural extension agents remain strong — domestically and internationally. With a declining farm population in the U.S. it becomes more and more difficult to find college students with good agricultural work experience backgrounds. This deficiency can be compensated some if colleges of agriculture will bolster the practical portions (labs, practica, field exercises, and the like) of their degree programs.

Seventh, agricultural educators interested in international agriculture should begin now to improve their qualifications and opportunities for future assignments. Some positive steps might include hosting or working with foreign students and visiting professionals from other countries, attending international conferences on agricultural education, enrolling in courses relating to agricultural education, enrolling in courses relating to agricultural development and/or other cultures, becoming involved with FFA international activities, and by beginning to learn a foreign language. French and Spanish are probably the most useful languages for working in the developing countries.

Filling the world's breadbasket is just the first step toward feeding a hungry planet . . . and agricultural educators have made a significant contribution toward making this achievement possible. However, a giant step for mankind will occur when international development efforts succeed in raising the purchasing power of the world's poor. Will agricultural education respond fully to this greater challenge?

References

Hunsicker, H.N. "Information Prepared for the 1979 Annual Report Relating to Vocational Education for Agriculture/Agribusiness/Renewable Natural Resource Occupations," paper prepared for use by the U.S. Commissioner of Education, n.d.
Hutchinson, Joseph. "Beyond Agriculture." *Ceres* 4 (May-June 1971): 30-33.
Matteson, Harold R. "Involvement in International Agriculture — A Challenge for Agricultural Education." *Agricultural Education* 50 (March 1978): 195.
Mayer, Leon A. "Ag Manpower Expansion in Developing Countries." *NACTA Journal* 22 (March 1978): 15-17.
Mosher, Arthur T. *Thinking About Rural Development.* New York: The Agricultural Development Council, Inc., 1976.
Wortman, Sterling and Cummings, Ralph W., Jr. *To Feed This World: The Challenge and the Strategy.* Baltimore: Johns Hopkins University Press, 1978.

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TRADITIONAL PROGRAMS FALL SHORT

hensive. Students should have exposure to and should be expected to demonstrate a thorough knowledge of the total agricultural education delivery system in the U.S. This is not to say that this system is transferable, but rather that since it is a complete system, any system developed for the home country should include all components, even though specifics may differ greatly. Time should be spent with vocational agriculture instructors while practical "hands-on" activities are being conducted. The concept of learning by doing is definitely transferable and is sorely needed in many developing nations.

Involvement of rural people in the agricultural education system decision making process can be learned by having the international student attend local agricultural advisory committee meetings and similar types of local participation activities. This type of direct interaction between farmer and educator is urgently needed and is an important way to increase effectiveness of programs locally and nationally. By observing and participating with vocational agriculture instructors, international students will have the opportunity to see the use of innovations and the important role of motivation of both instructors and students.

Does the student's program provide opportunity for substantial interdisciplinary interaction? The agricultural education delivery system is only a part of the agricultural sector of a nation's socioeconomic, cultural and political structure. As such, it is highly interdependent with other components of the environment within which it exists. A way to insure an understanding of this interdependent relationship is to participate in courses related to development, such as multi-disciplinary seminars that include agricultural economists, agronomists, rural sociologists, animal scientists and others. Inter-disciplinary studies are helpful as such since in many ways they simulate the multi-disciplinary situation in which the student will function on returning home.

More frequently than not, on returning home, international students rapidly advance to positions of authority within the system. Usually this results in increased administrative duties and responsibilities. To help cope with these responsibilities it is helpful to include at least some course work in administration and/or management.[5] Mann states that business or industrial administration tends to be more relevant than public administration since most developing nations have different governmental bureaucratic structures than exists in the U.S.[6]

Is ample time allowed for appropriate experiences and necessary course work to be included in the student's program? Time budgeted for degree completion is frequently insufficient. All too often international students are expected to complete their studies in shorter time periods than domestic students. Compound that pressure with past curricular deficiencies and/or language problems and the results can be unfair to the student, and inefficient in terms of long run productivity. This problem is not easily overcome, as usually financial limitations are the rationale behind crammed schedules. Advisors of students in such a bind need to be vocal in expressing their concerns to the sponsoring agency, be it USAID, USDA, FAO, or other. Aside from placing a nearly unbearable burden on the student, such short itineraries seldom allow for adequate field experiences and practical interactions in rural areas.

Was the selection process appropriate for: a) admitting the student into the program, and b) choosing the educational institution the student attends? Selection of students is a problem which must be dealt with by teacher educators since in many cases little warning of arrival is received prior to registration time. Seldom have department members had a chance to have input in the selection of international students, but when improprieties crop up, they must be pointed out to sponsoring agencies. Oftentimes political pressure results in selections which might be considered improper in the U.S. This is an extremely difficult problem to solve, since in most cases, dealings are on a government to government basis.

Selection is often unfairly the result of a person's English language fluency. This is most unfortunate since frequently outstanding, highly motivated individuals have not had the opportunity to learn English. Less weight should be given language in selection, and if language deficiencies exist, intensive training can be conducted on arrival in the U.S. By careful selection of participants, greater developmental achievements will result.

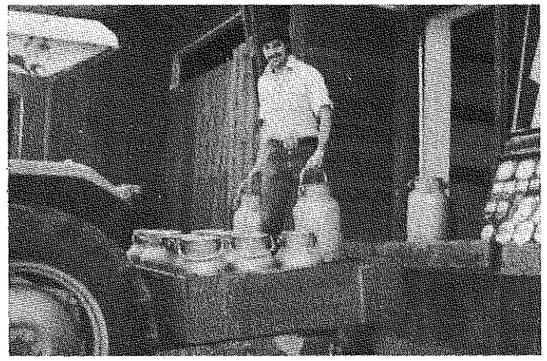
Are follow-up activities, reports and linkages a part of the student's program, or is communication between the U.S. institution and the graduate terminated on degree completion? Brinegar and Santas point out that U.S. universities have been historically weak in maintaining contact with international students after they leave the U.S.[7] The cost of this lack of committment to development is high. Hopefully, the Title XII legislation through strengthening grants and collaborative research support programs will allow universities to increase their long-term committments to former students and to institutions in developing countries.

This article briefly touches on some problems existing in training of international graduate and undergraduate students studying agricultural education in U.S. universities. Solutions to the problems will continue to require the dedication and innovative insight of teacher educators and vocational agriculture instructors across the U.S.

REFERENCES

1 Axinn, George H. *New Strategies for Rural Development,*
2 DeWitt, Rural Life Associates, 1978, p. 123.
Swanson, Burton E. "Creating Technical Capabilities Abroad: Training Agricultural Leaders". Paper presented at Conference on International Development, Sept. 27-29,
3 1976, Virginia Polytechnic University, p. 3.
Perez, Eduardo A. *The Role of U.S. Universities in International Agricultural Development.* Report Number THA/CDT-78/7, St. Louis, Washington University, 178, p.
4 43.
Zuidema, L.W. "Key Elements in U.S. Training Programs for International Agriculturalists." Paper presented at Regional Conference on International Agricultural Train-
5 ing. Washington, D.C., May 25-26, 1976. p. 2.
Matteson, Harold R. "An International Perspective on Agricultural and Vocational Education." Paper presented at the University of Missouri, Columbia, Graduate Seminar, Jan.
6 29, 1979. p. 9.
Mann, Fred L. Comments from personal interview conducted April 9, 1979, University of Missouri, Columbia, MO. (Dr. Mann is Asst. Director, International Agricultural
7 Programs at UMC)
Brinegar, George K. and John W. Santas. "Effectiveness of U.S. Training of Foreign Students for Technology Transfer". Paper included in Proceedings of the 14th Annual Conference of the Association of U.S. University Directors of International Agriculture Programs. June 21-23, 1978, Utah State University, Logan, Utah. p. 50.

WORK EXPERIENCE ABROAD — INTERNATIONAL AGRICULTURAL EDUCATION



by
Carlos A. Navar
WEA Participant
Ten Boer, Holland
and
Steve Forsythe
Graduate Assistant
Ag. Ed. — Oklahoma State University

That a native born El Pasoan from the Ysleta FFA Chapter would have visited 19 countries, be a dairyman in Austria and Holland respectively, and have been very much "internationalized" in agriculture as well as other areas could hardly have been imagined some 14 months ago! For it was in April and May of 1978 that I began a great association with the National FFA's Work Experience Abroad program. My International Agriculture Education had begun.

WORK EXPERIENCE ABROAD

The Work Experience Abroad program is an international exchange which places FFA members who are out of high school, on farms and agri-businesses all around the world. The WEA program is run through the cooperation of the National FFA, the Department of Health, Education and Welfare, and the United States Department of State. The goals of WEA are to provide international education and understanding of agriculture and ways of life in other parts of the world. We of the WEA develop quite an "espirit de corps" and take pride in trying to serve as good-will ambassadors from America.

Many questions are sometimes asked concerning the WEA and how things work. Probably the biggest question in the minds of interested agriculture students or FFA advisors is, "How do you go about participating?" I feel the key to having this question answered is the local agriculture teacher! Without the support and communication between the agriculture teacher, the interested student, and his parents — as far as explaining how the program works, cost, etc. — you're going to get nowhere. Upon the teachers recommendation and completion of a WEA application available through the National FFA office, your next move is to wait to hear if you're accepted.

ACCEPTANCE?

What happens if I'm accepted? The WEA program under the leadership of Len Gammage works very hard and quickly to set you up with a host family and give you, if possible, the type of work experience for which you asked. Also they try to match your desire for a particular country and experience as best they can, quite often on a first come, first serve basis. I was interested in Sweden or vicinities around Germany and in working on a dairy farm. I was selected to be in Austria for five months, and in January opted for another five month stay in Holland, again on a dairy farm.

COST

What about the cost on the student's part and the host families? The WEA participant has the responsibility for handling his own expense to go to and from the host country. However, the monthly salary received (which varies) plus room and board provided by most host families will make up for some of that investment. Also I can't say strongly enough, how valuable and exciting are the experiences of international agricultural education while living and working in another country!

HOST FAMILIES

The host families are picked carefully and are an important part of the total WEA experience. I was fortunate to live with and work for Mr. Sepp Zwing and family for five months in the province of Steirmark in Austria. The Zwing farm is very diversified with dairying being the major industry on their 49 hectare farm.

(Concluded on page 22)

AGRICULTURAL EDUCATION THROUGH NON-FORMAL PROGRAMS — JAMAICA

by
David C. Williams
Senior Advisor
Rural Development Loan Program
Ministry of Education
Kingston, Jamaica

In the throes of shifting world economy, food commodities often become vulnerable pawns. Poorer nations, battling inflation, energy shortages, and industrial stagnation, are particularly susceptible to immense costs of food importation. At the same time, the same problems may compel declining domestic production.

THE SETTING

Jamaica is very much in this state. However, unlike many of its Carribbean and South American neighbors, it possesses vast potential for offsetting import demand with internal development. While more than 55% of the island nation of two million is arable, only half of this is utilized. Nearly any fruit, vegetable, or grain will thrive (notable exceptions are wheat and apples). The most prized tropical fruits proliferate freely. Jamaican coffee is nearly legendary in quality.

DIFFICULTIES

But mounting difficulties rapidly deflate optimism. Average age for Jamaican farmers is over 55 years old. Youths leave rural areas in droves, seeking illusive employment opportunities in Kingston, the nation's sprawling capital. Nearly four out of five farms are less than five acres. In the last decade, production in nearly all categories of agricultural commodities has declined. Meat, fruit, rice, and dairy products lead the list. Simultaneously, importation of these items has nearly tripled, severely aggrevating foreign exchange standards. Planting of chief agricultural export items — banana, coconut, sugar, and citrus — has declined steadily.

Note all roadblocks to recovery stem from manpower matters. Until 1978, years of drought choked all of the island. In a country which must import nearly all energy fuels, the 1973 oil embargo brought harsh consequences. For a decade, spread of coconut palm disease far outpaced efforts to replant with Malaysian dwarf palms. Over four million trees perished.

APPROACHES

Today, the immediate challenge is to increase production. Beyond the obvious, however, a two-pronged educational mission addresses more pervasive underlying problems: how to encourage youth to remain "on the land," and how to fortify existing agricultural skills. In unprecedented joint ventures, the Ministries of Education and Agriculture now mount steady attacks on these most pressing restraints. Above all else, a shift to non-formal education typifies successful approaches.

Some activity does center on expansion of agricultural education through existing schooling patterns. New agricultural high schools serve previously ignored regions, while innovative modules on agriculture bolster secondary and all-age school curricula. More extensively, however, agricultural extension and continuing/community education workers are advancing non-formal adult education as the key to long-range stabilization of production.

NON-FORMAL EDUCATION

Non-formal education efforts are non-graded. Further, "students" range from sixteen to eighty years of age. Most "classes" are in the evening, and these link with cognate programs in crafts, literacy development, child care, and leadership training. Above all, local communities, through elected councils, establish learning priorities, contract for services, and evaluate results. Accountability is based directly with those who are to be served.

EXAMPLES

Examples of this pathbreaking approach are as diverse as Jamaica itself. In the small community of Redwood, famed "sugarloaf" pineapples are a chief product. Abundance, however, carries with it problems in marketing and quality control. Working with extension service advisors and community education councils, growers now perfect diversified uses for the crop: jellies, wine, and vinegar. Further, new cooperative distribution techniques reduce individual overhead.

Elsewhere, coffee growers, like longer-established cane growers, form associations to study common problems in production and marketing. Responding to escalating world demand, farmers rapidly support such collective measures, and entire communities benefit. In other sectors, hog growers join forces to control disease, and banana farmers combine resources to reduce theft.

ADDED CONFIDENCE

In any nation, there are no instant recoveries from such misfortunes as Jamaican agriculture has had to absorb in the last decade. Education can prove worthwhile in its endeavors only if younger farmers can see greater purpose in their labor, as well as solider markets for their products. Yet, bolstered by technical assistance from abroad and an expanding cadre of agricultural expertise within, Jamaica has turned a corner. Leading that shift has been non-formal education at the "grassroots" level. Working with existing resources, rural communities have charted their own courses out of the doldrums. Confidence instilled by such action is at least as precious as value added in expanding production.

BY THE BLUE DANUBE

by
Lee A. Traver, Chief
Bureau of Agricultural Education
State Education Department
Albany, NY

Lee A. Traver

Need reinforcement, revitalization, inspiration, and renewed commitment for your vocational agriculture philosophies? Then conduct a "supervisory visit" to neighboring programs — neighboring programs in foreign countries. The following is a brief discussion of vocational agriculture, Romanian style.

ROMANIA

Romania, slightly smaller than Pennsylvania and New York combined, is bordered by Bulgaria, Russia, Hungary, and the Black Sea. The Communist dominated government is responsible for an agricultural industry using 63% of the land and 42% of the labor force.

AGRICULTURAL EDUCATION

Agricultural education is an integral part of a high school system organized according to trade or subject matter specialization. Two hundred specialized agronomic industrial and eight food industry schools are preparing students for agricultural jobs. All high schools emphasize a practical rather than theoretical approach.

"PROFESSIONAL" SCHOOLS

Students begin studying general agriculture at the 9th grade level and complete an examination at the end of 10th grade. Those individuals with high achievement progress to specialized training at the 11th-12th grade levels. Those students not making the "cut-off" on the exam go to "professional" school rather than high school. "Professional" schools are shorter, ranging from one to one-and-a-half years and prepare students for jobs requiring lower levels of competence. Very specific vocational training, 80% practical work experience, and 20% related knowledge, is emphasized in "professional" schools.

The high schools and "professional" schools are basically residential with 95% of the students in residence. Formal instruction and practical experience is given six days a week.

GOVERNMENT MASTER PLANS

The government system relies heavily on master plans for its administration and allocation of resources. The high school program becomes part of the total agricultural industry planning for each county and nationally. Agricultural labor demand is projected along with other factors of input and output. Supply and demand data for all counties is then compiled and the central administration decides on the number of people in each job title to be trained. An allocation of student positions is then made to specific schools. Students at any one high school may come from all over the country. Upon graduation they are assigned wherever they are needed, regardless of personal preference.

CLASS/LAB INSTRUCTION

Each agronomic high school specializes in two to three agricultural areas. The most common fields of specialization are horticulture, agronomy, animal science, veterinary science, and mechanics. A few schools focus on crop harvesting machine operators, irrigation specialists, and commercial fishing. The food industry schools focus on skills needed for jobs dealing with the raw agricultural product through the distribution of the food product. The four basic specialization areas include: bread-potatoes, milk-vegetables-meat, beer-wine, and mechanics.

The total school program and courses of study are determined by the Ministry of Agriculture and Food Industry (MAFI) central administration. All schools are obligated to follow the prescribed content which is revised on a five-year cycle. The mandated instructional content is determined in consultation with local school directors, teachers, and specialist engineers. The MAFI fixes a ratio of 40% class instruction and 60% practice for the 11th-12th grade specialized high school courses.

The required teaching plans are very detailed with intricate hand drawings included in the plan. Plans follow the format of theme, subject, aim/purpose, method of instruction, educational material, bibliography for teacher, and steps for the lesson. Instructional materials are limited, particularly audio-visual and student use items.

Agriculture teachers are initially trained as "engineers" or workers in specialty fields of agriculture, not as teachers. They must spend five years as an "engineer" before being eligible to teach. Once teaching, a person concurrently takes courses in pedagogy for three years. An examination is given at the end of three years and again at five years before a permanent license is issued. Poor quality instruction can result in a salary reduction and, if severe, reassignment to a farm or factory as an "engineer".

SUPERVISED WORK EXPERIENCE

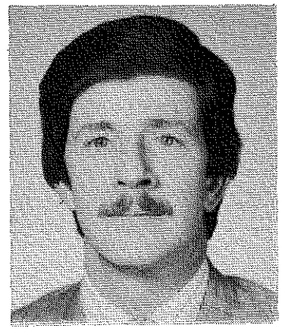
Supervised work experience is a very important portion of the agricultural education training in Romania. Instructors accompany students on the job to provide supervision and instruction along with the specialist at the work site. Work experience activities are those assigned and, in accordance with the political system, do not provide for individual projects for the student's own gain and incentive. Much of the experience appears to be of a low skill

(Concluded on page 21)

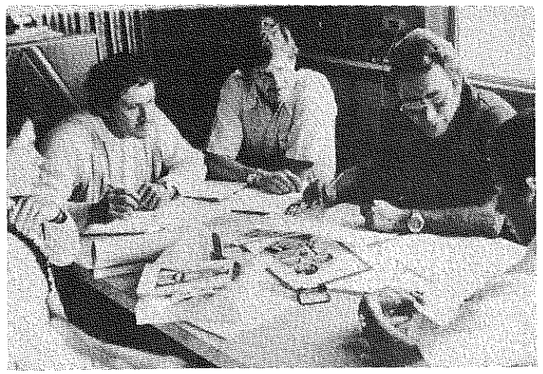
FEATURING: NON-FORMAL EDUCATION

CHANGING THE PRACTICES OF THE GUATAMALAN MAYA

by
Richard W. Tenney
Field Program Leader
Basic Rural
Education Project
Academy for
Educational Development
Guatemala



Richard W. Tenney



Promotors are given in-service training in program planning.

Guatemala — a country of volcanos, Mayan temples, the marimba, and tall corn. In fact you could say the Mayans "invented" corn long before the new world was discovered. A land the size of the state of Ohio, Guatemala, with a population of over 7 million inhabitants, still farms and lives much as it did before the Spanish came in 1523.

In the area called the "Western Highlands," and inhabited primarily by the Mayan, live 31% of Guatemala's population. They are 70% rural, over 75% Indian, and more than one-third speak only an indigenous dialect. Of the Mayan population 54% of the men and 84% of the women are illiterate. The Highlands is also characterized by a scarcity of potable water, sanitary, and public health facilities, resulting in high rates of infant mortality and infectious diseases.

However, in spite of centuries of tradition, the Mayan are changing their practices of farming methods, their practices of sanitation and health, their practices of nutrition, and their ability to read and write. Village level promotors of non-formal education are causing the Guatemalan Maya to change their practices.

IMPROVED VARIETY OF CORN

Humberto Silvestre is a young farmer who lives in the village of Santa Rosa, and raises corn on his small parcel of land. Last year in his work in his community with 60 farmers he planted a demonstration plot of a new corn variety called "Guatayan Xela." This is a variety that is being recommended in his area by technicians of ICTA. (Institute of Agricultural Science and Technology) Recently Humberto revisited the ICTA technician who had made the presentation in his community last year. The presentation had been a part of the program developed by Humberto and the members of his community. The purpose of the visit by Humberto was to purchase enough of the "Guatayan Xela" seed corn so that each one of the 60 farmers could plant one "cuerda" (just over one-tenth of an acre) of the new seed.

TERRACE CONSTRUCTION

The community of Chimachoy is attended by Gregorio Cana who received special training last year on how to identify his community's needs and then develop a program to meet those needs. As a result of this programming he arranged for the DIGESA soil conservation specialist to present a demonstration on the value of terraces and how to build them. As a result

A young farmer explains the use of the "A" frame level.

of this demonstration, Gregorio worked in subsequent meetings with his group of farmers making "A" frame levels for marking contour lines and then constructing terraces. Within a few months, 11 members of his group had constructed terraces on their land. One young farmer of the group — with only minimal education, but highly intelligent — has become a volunteer leader regarding the construction of terraces. He explained how he had demonstrated the construction and use of the simple "A" frame level to several groups of farmers from neighboring villages who had visited his small plot of land. He not only explained the value and procedure of terrace construction but very clearly outlined the economic (benefit/cost) aspects to his visitors. (In parts of the Highlands, crops are frequently raised on land that has from 50 to 80% slope.)

GARMENT MAKING

Carmen Chavez, who lives in the village of Parramos, has organized two groups of women and young girls. For one of the groups she has located a volunteer who teaches the group sewing and dressmaking. The second group is being taught knitting techniques by the promotor of a neighboring village. During 1978 the 15 members of her smaller knitting group made 22 sweaters, 22 vests, 31 pairs of slippers, and many other items. Using $1.25 worth of wool to make a sweater worth $3.00, each group participant learned a new skill that could provide real economic benefit to their families.

Women learn new knitting techniques.

IMPROVED POTATO VARIETY

In the village of Pampay, Miguel Xecoy works with a group of 15 young farmers. Last year they planted a group test plot with 9 potato varieties provided by ICTA. At harvest time they selected the highest yielding variety and kept it for seed. After completing the harvest they gave back to ICTA the half due ICTA and kept the other half for their group. When they sold their share of the potatoes that were not to be used for seed they made $50, which they used to buy fertilizer and insecticide. The best variety was reseeded in the group plot to multiply the quantity of seed. Next year there will be enough seed available so that each member of the group can plant his own land using the improved variety.

NATIVE SEED SELECTION

Felipe Garcia has spent 10 years selecting seed from his crop of native corn. He selects ears based on size, height, stalk strength, etc. He estimates that over 80% of the stalks bear more than one ear — many have three nice sized ears. This year his crop yield was over 100 bushels per acre. Now Felipe is working as a volunteer showing and explaining to others in surrounding villages that with proper seed selection, the native corn, grown for centuries in the Highlands, can produce high yields.

NON-FORMAL EDUCATION

What is behind the action that is causing the change in practices? The Guatemalan program of "Educacion Extraescolar" (Non-Formal Education) became field operational in 1977. The program is primarily one of integrated rural development with institutional technicians, village level promotors, and community volunteers using basic extension techniques. The National Board of Non-Formal Education is responsible for the program. This board is composed of the heads of the following government institutions: DIGESA — agricultural services of the Ministry of Agriculture; DIGESS — health services of the Ministry of Health; Community Development; DIGEEX — non-formal education programs of the Ministry of Education; INTECAP — a vocational technical skills training program; the literacy program of the Armed Forces; and a representative of the National Economic Planning Council.

GOALS

The program, called EEE, now has 2½ years of field experience. Currently there are 250 promotors working in 125 villages. The promotors use the 3 indigenous dialects of Mam, Quiche, and Cakchiquel in addition to Spanish. Program goals are aimed at improving the quality of life; increased educational opportunities; more efficient use of resources through coordination; and training in the performance of production and social tasks. These goals are based on content in the areas of:

1. Health, nutrition, and clothing.
2. Literacy and basic arithmetic skills.
3. Teaching skills related to agriculture, handicrafts, and small industry.
4. Conservation of natural resources.
5. Conservation of cultural values.
6. Community organization.
7. Socio-economic development.

METHODS

At the village level the EEE promotors work with the institutional technicians of the different ministries and leaders of the community to build a practical pro-

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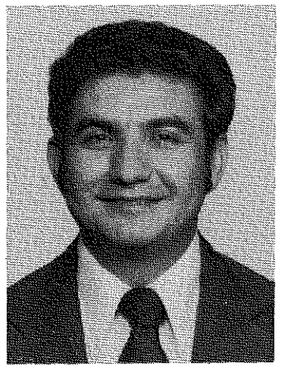
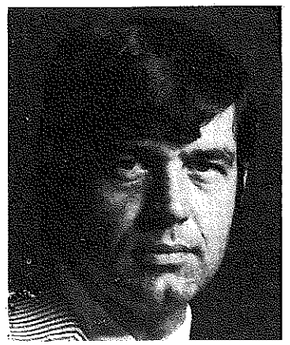


Ismael Gonzalez

International Ag. Ed. — A Partial Solution

by
Ismael Gonzalez, Caracas Coordinator
David Howell, PSU Coordinator
Venezuela-Penn State Project



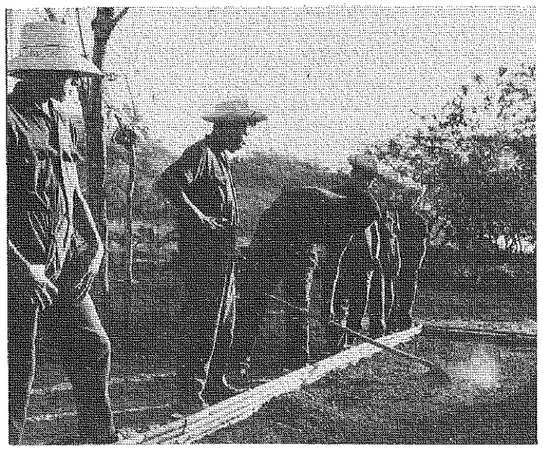
David L. Howell

Can an agricultural education program help Venezuela develop its agricultural productivity to a point where it can become self-sufficient? Venezuelan officials feel that such a program can be a partial solution to their existing problems in agricultural production.

To accomplish such a goal, the National Institute of Cooperative Education, (INCE), an autonomous institute in the Ministry of Education of the Republic of Venezuela, entered into a cooperative agreement with The Pennsylvania State University. The two-fold objectives of the contract are: 1) to provide immediate in-service technical and professional training for INCE personnel already involved in its current educational programs and 2) to establish a sound instructional program (pre-service) in agricultural education to prepare agricultural instructors and extension personnel that will help meet the development needs of agriculture in Venezuela.

ECONOMIC BACKGROUND

Venezuela is a country whose primary source of income is derived from the production and sale of oil. It has experienced tremendous growth in recent years in all segments of its economy, including agricultural production. In spite of impressive gains in producing many agricultural commodities, demand for more and better quality products has far exceeded domestic availability. About one-third of the country's farm imports originate in the United States. These imports amounted to approximately 275 million dollars worth of food and other agricultural products during the first nine months of 1978 — the highest import levels on record. Consequently, the government of Venezuela has initiated new programs in agriculture and education to aid the country in achieving a level of agricultural production which will eliminate its dependency on imported food and in the long run provide the human and economic resources needed to achieve this level of self-sufficiency. The prospects of this occurrence must be viewed with a certain degree of optimism since the current food and agricultural policies have the financial support derived from petroleum revenues.



Horticulture students at the technical school at San Carlos receiving instruction in propagation bed preparation for fruit production.

CURRENT EDUCATIONAL PROGRAM

In light of the developments needed in the agricultural sector, the educational program currently being implemented by INCE serves two functions. One of these is the training of farmers and agricultural workers (campesinos) through a non-formal process in which "mobile instructors," (extension agents) who are trained in specialty areas such as corn, sugarcane, and beef production, teach courses for their specific crop or livestock species for most of the production year. This new "knowledge" is learned and applied by the "campesinos" directly on the production site. There are approximately one thousand of these instructors working throughout the country.

Part two of the program is involved with the training of students, ages 14 to 20, at one of the four agricultural centers located in the rural areas. These students can specialize in the production of crops such as peanuts, corn, sorghum, tomatoes, etc. or in livestock production areas such as beef, dairy, swine, and poultry. In addition, one center teaches only courses in mechanics and mechanization. The duration of these training periods is one year. The students receive instruction in liberal arts subjects, in addition to their agriculture courses.

Upon completion of their training period, the students return to the home farm (average size about 15 acres) or attempt to find employment with larger farms or ranches in the surrounding area. The opportunities for many of these young people are still very limited. In many cases, they leave the rural areas and move to the already over-crowded urban centers seeking employment opportunities.

PREPARATION OF INSTRUCTORS

The programs that INCE has started are helping to train an average of nine thousand adults and students annually. In spite of this fact, the officials at the institute feel that their personnel need more and better training if they are to meet their goals. They have identified deficiencies which exist in the current preparation of these individuals and hope to resolve some of these through the project with Penn State. The following are examples of these deficiencies:

1. As noted previously, most mobile instructors are trained in only one speciality area, have teaching assignments in only that area, and thus are unable to provide the "campesino" with a broader training or more comprehensive technical and professional advise.

2. Mobile instructors are frequently recruited upon graduation from agricultural schools and often lack the basic academic training in higher education or experience in the technical fields of agriculture.

3. A great number of the individuals employed by INCE as instructors do not receive further in-service education once they are on the job.

4. There is a shortage of written curriculum materials and audio-visual aids that the instructors could use in their training courses. Although a division in INCE is now developing course outlines and A-V materials, the instructors need to know how to develop and use these in their training programs.

5. The state and center directors, or coordinators, have very little background or experience in curriculum development, administration and organization of programs, program planning and evaluation or in supervision of programs and personnel.

6. The mobile instructors and their supervisors have not had courses related to the principles, methods, and practices of extension education in agriculture.

PENN STATE'S PROGRAM

In an effort to correct the present situation at INCE, the institute has sought both technical and pedagogical assistance from several agencies both nationally and internationally. The Penn State contract is one example of the institute's desire to resolve its present dilemma.

The major activities of the Penn State-INCE agreement are the following:

1. To acquaint the director general and other top level administrators in the division of rural training (INCE-Angrario) with the program in Agricultural Education as well as other departments in the College of Agriculture. These individuals will also visit farms, ranches, agri-businesses and high school vocational agriculture programs throughout the state.

2. To provide in-service courses for INCE personnel, both at home and abroad, in subjects such as: methods of teaching and extension, curriculum development, instructional media, supervised occupational experience, and program planning and evaluation. In addition, courses in technical agricultural areas such as agricultural mechanics and mechanization, animal science, soil science, and plant science will also be provided.

3. To provide an opportunity for qualified members of INCE to enroll in advanced degree programs in Agricultural Education. These programs would include study at both the Master's and Doctoral levels, thus providing a base of qualified professional education personnel to develop and staff a teacher education program in Venezuela.

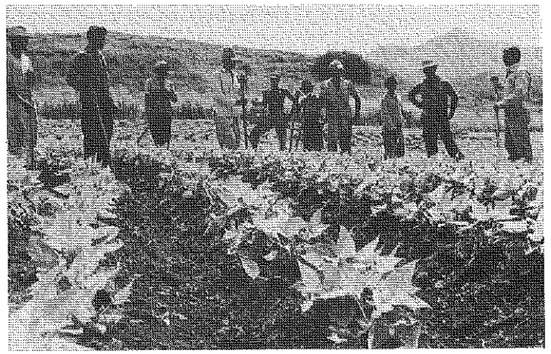
4. To develop a Department of Agricultural Education and Extension at an agricultural center or university to provide 1) pre-service and in-service education for mobile and center instructors, 2) short courses for farmers or "campesinos", 3) training for other agriculture teachers and preparation of curriculum materials for primary and secondary schools, and 4) training for agricultural teachers from other Latin American countries.

During the latter stages of the program, Penn State faculty will be stationed in Venezuela full-time to assist with the development of facilities and of the instructional program. These activities are being evaluated periodically and adjustments are made to insure that the project is viable, successful, and will meet the needs of the institute and the country.

FUTURE OUTLOOK

Like other third-world nations, the problems facing Venezuela's agriculture are not simple ones, nor are the solutions. Modern agriculture is a complex business and it takes both time and money to be successful in making the necessary changes come about.

The government of Venezuela and its many affiliated agencies are committed to solving many of these problems and believe that progress can be made once the proper incentives, both economic and social are developed and implemented in rural areas. An improved system of agricultural education and extension, such as the one being developed by INCE, can provide the necessary human resources needed to bring about the projected goals; a productive and prosperous agricultural sector which can provide food and fiber for a rapidly growing population in an oil-rich nation.



A group of farmers tilling a bean crop as a part of a course in bean production taught by an INCE mobile instructor.

Leon Boucher

"GIVE US THIS DAY OUR DAILY BREAD"

by
Leon Boucher
Teacher Education
Ohio State University

THE NEED

Many Christians have subscribed to the premise that, "you are your brother's keeper." The altruistic act of helping others can have a tremendous impact upon the world. Never before have so many people suffered so much from hunger. The world has a record population which is increasing the demand for adequate food supplies. At least ten million persons died in 1975 as a direct result of receiving too little food. Over one-half of the human race exists in conditions of chronic poverty that keep them underfed. Hunger is the families' greatest foe, but it may also be the most conquerable. Applied technical knowledge, economic resources and ethical wisdom could possibly overcome hunger within two decades if the problem is attacked with vigor by dedicated persons.

THE PLAN

A general conclusion affirmed by the 1974 United Nations World Food Conference indicated food deficit nations could end their dependence upon food from outside by developing their own food producing capacities. The old adage of, "give a man a fish and you feed him for a day; but teach a man to fish and you feed him for a lifetime," is part of the plan. Vocational Agriculture teachers have the technical agriculture expertise to share with food deficit nations. A community, a district, or a state may be influenced by a technically competent vo-ag teacher demonstrating approved practices of food production.

THE RESULTS

Three vocational agriculture teachers along with two teacher educators from Ohio demonstrated the ability to cause change by helping young adult students to improve agricultural practices in India.[2] Accomplishments within a two year period include:

1. Four college departments of agricultural education were established with qualified instructors to prepare competent agriculture teachers. Thirty-four were trained the first year to serve as vocational agriculture teachers.
2. A supervised Occupational Experience Program was initiated with each enrolled student of agriculture.
3. Each school established a land laboratory to demonstrate and provide practice for students.
4. Adult farmers were invited to work along side the U.S. technicians in performing the agricultural practices needed to improve production.
5. Many textbooks were developed for elementary and high school students shifting the emphasis from spinning and weaving to agricultural food production.
6. Yields were tripled and quadrupled in wheat and rice production on the school farms compared to the local indigenous practices.
7. Poultry was improved both in the meat and egg production phases to the point families could not consume all the product and began marketing poultry and eggs.

The need is indisputable, the plan of helping others improve agricultural practices has been demonstrated, now it is up to agricultural education to commit efforts toward helping solve the situation.

PERSONAL REQUIREMENTS

Assuming you can qualify for one of the foreign positions because of your experience and technical competence as a successful teacher of vocational agriculture, you must give consideration to the following questions if you are to enjoy and be successful in the assignment.

1. Does the family concur with the proposed foreign assignment?
2. Do you really want to assist others in another culture?
3. Do you understand you will always be viewed as a stranger in a foreign country, possessing advantages the natives do not enjoy?
4. Are you willing to devote the time and energy to develop a working knowledge of the native language?
5. Are you willing to enjoy the good things, overlook the bad aspects, and not criticize a different culture?
6. Are you willing to attempt challenges under difficult situations and strive to accomplish goals you never dreamed possible?

Most people working overseas, who do not accomplish project goals, fail because of the above questions and not because of being professionally incompetent.

Think it over, there is nothing the world needs more than to believe that every human life has value and dignity. A productive agriculture can go a long way to providing the basic needs for humanity. You could be a part of something great and have a very rewarding experience.

Some possible contacts are:

BIFAD — Agency for International —Development — Department of State — Washington, D.C. 20523.

ACTION/PEACE Corps — 806 Connecticut Avenue N.W. — Washington, D.C. 20523 - Toll Free Number: 1-800-424-8580

ACTION/VISTA — Same address as above.

★ ★ ★ THIS WORKED FOR ME! ★ ★ ★

LARGE ROUND HAY BALE FEEDER PIPE BOW BENDER

*by Philip Fuss**
Vo-Ag Teacher, Keota, OK

This pipe bow bender can allow three to four students to bend up to fifty, twenty-four foot pieces of pipe an hour. The end results are more hay racks built and a better looking product.

This pipe bow bender could be used in numerous jobs and will be a definite asset in many jobs requiring bowed pipe.

The power source consists of a ¾ HP, 1725 RPM electric motor. The power wheel of the bow bender is reduced to 28 RPM with the use of a gear reducer (8" pulley on high speed side, 3" pulley on low speed side) and a four speed transmission with a 12" pulley.

Three roller wheels are used. Various kinds of wheels or pullies could be used, however, on this bow bender the center power wheel is 12" while the small free-rolling wheels are 8". Note that the smaller wheels are secured to a plate which allows adjustments in order to make larger or smaller rings. These adjustable wheels can turn freely since they are mounted on car front spindles.

The pipe bow bender is painted to the safety color code.

Yellow: Applied to operating levers and moving wheels (both table surface and below)

Green: Applied to non-critical parts

Aluminum: Applied to table tops

Ivory: Applied to table edge (to show the way)

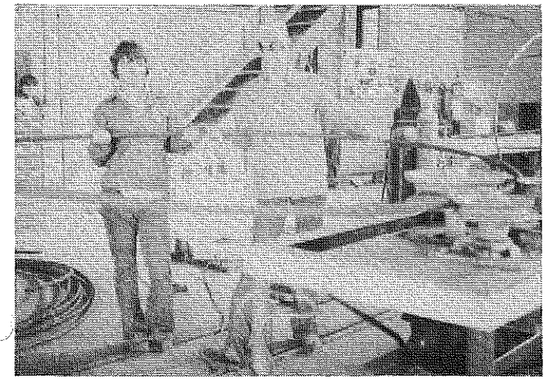
Orange: Applied to electrical switches

**Region II and National NVATA Ideas Unlimited contest winner for 1978.*

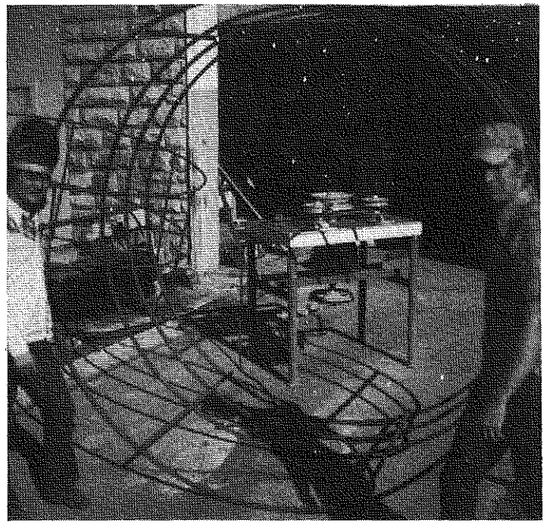
Bill of Materials
Pipe Bow Bender

No.	Description
1	30" x 40" mild steel plate 3/8" thick
2	Cast iron wheels 8" diameter
1	Cast iron wheel 12" diameter
2	Automobile front wheel spindles
4	2" pipe, 40" long
2	2" pipe, 25" long
2	2" angle iron, 38" long
2	3" angle iron, 40" long
2	3" angle iron, 30" long
2	Collars for auto transmission
1	4-speed Chevrolet 3/4 ton transmission
1	3/4 horse power electric motor
1	8" pulley (for auto transmission)
1	4" pulley (for electric motor)
1	Electric switch
2	V-belt
1	Pulley type gear reducer

This Pipe Bow Bender is powered by a ¾ HP electric motor and gear driven by a 4-speed truck transmission. The smaller rotor wheels are adjustable to accommodate various size pipe and are adjusted to bend any desired bow.



These two students are shown bending ¾ inch pipe into a complete circle for use in a hay rack.



Displayed are both the pipe bow bender and the finished product, a completed hay rack.

ONE WAY — FRUSTRATING, BUT REWARDING!

by
Dick Yencer
Vo-Ag Teacher
Wyoming, NY

There I was, standing in the middle of a rice field, up to my knees in mud with about twenty-five Indonesian farmers standing on the dike, laughing at me. Why were they laughing at me? Undoubtly I did look a bit funny, but, now after four years of working in their culture I can understand why they were embarrassed — it is a taboo for an educated man to get dirty in Indonesia.

QUESTION — NEW TECHNOLOGY?

I questioned myself: Just what am I trying to do? Why am I standing in the sun, covered with mud, and 13,000 miles from home? I was working in a rice field in the province of Minahasa on the island of Sulawesi, trying to teach rice farmers how to plant their crop. I began to wonder: Who do I think I am? It was only the second time I had planted rice and they had the experience of a life time. I answered myself by saying that I had some of the "latest technology".

MIRACLE RICE

I was trying to teach them to plant rice in rows so that it could be weeded, instead of planted randomly and left until harvest time. Secondly, I was introducing a new variety of rice called the "miracle rice". This so-called "miracle" rice would out produce the local varieties by three-to-one, the only problem being that the village people did not like its taste. They said it had no flavor and did not stick together. Thirdly, I hoped to introduce a new method of raising the seedlings. The old method was to start the seedlings in the field and, after six weeks, transplant them. My plan was to make a new type of seedbed (on concrete next to the house) and transplant the seedlings after two weeks. I told the farmers that transplanting in two weeks saved time, and, besides, the seedlings were like children. When they are young they can be moved and readapt faster than older seedlings whose roots are too deep in the ground. In other words, two week old transplanting was not such a shock to the young plant.

A SEARCH FOR INNOVATORS

In searching for ten farmers to try my new idea, I asked them to plant half of their field to my methods and the other half to their traditional methods. The changes would not cost them anything extra, only a little more work. Their yields could double (being conservative) and possibly they could plant three crops per year instead of two because of the new seedling method.

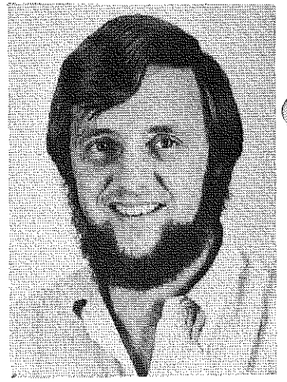
THE RISK!

First, you must understand that I was working in a country where the average per capita income was about $100 per year, and the average farmer owned two acres of land for rice production. He knew that following his traditional methods could produce enough rice for his family. What he did not know was, could he trust my ideas and take the risk on his food supply? His back was against the wall and he would not risk because if these new methods did not work he might starve. In the same situation — would you take the risk?

YES OR NO?

Also, these farmers had seen government experts try new methods of rice production and flop. Then I come, with a beard and white skin, and say with all confidence, "Try these new methods and you can double your production." They would smile politely as I would explain my ideas and say "yes" but mean "no thanks". (In Indonesia, there are several ways of saying yes — some of which mean NO!)

A farmer's tools consisted of a hoe and a long knife which together cost six dollars. He has to work 20 days to pay for them. He does not own such luxuries as a refrigerator and a stove. A farmer of great wealth may own a horse. He is a tough person who can work long hours barefoot in the hot sun with just simple hand-tools. He knows how to work.



Dick Yencer

PERSONAL RELATIONSHIP AND TRUST

I came to the conclusion that I could not compete with the farmer's hard work, but I could deal with and try to understand them. Ultimately, when all was said and done, it was their personal relationship and trust that would affect change. There must be a trust and concern for each other. For this reason I question big government programs.

What have I learned from this experience? When dealing with other countries we have to be careful. In our country, if something fails, it's not the end of the world, we can afford to gamble and try something new. That is not the case everywhere.

If we are going to propose something, even if we "know" it will benefit them, we are going to have to build a personal trust because that's how their system operates. Governments spend millions of dollars, write thousands of pages of reports, and propose hundreds of changes. Without personal trust the best idea in the world is not going to be used by the poeple. They will politely say "yes" to our idea, but actually mean "no". Why? Because we do not have someone on the spot who has developed relationships with the people and their culture. I know that after four years in an Asian environment it is still extremely difficult to affect change — even with trust.

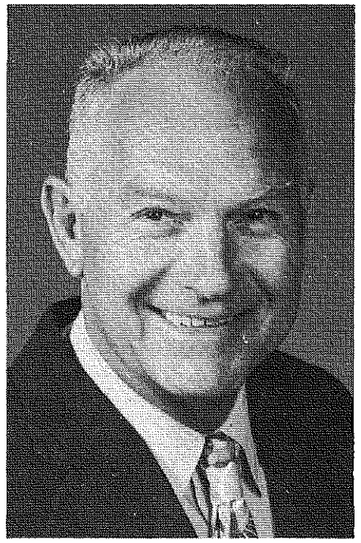
My highest frustration levels and highest fulfillment levels were reached while in Indonesia. I'm ready to go back.

Leader in Agricultural Education:

Elwood (Juergy) Juergenson

1938-1972

by
*Orville E. Thompson**

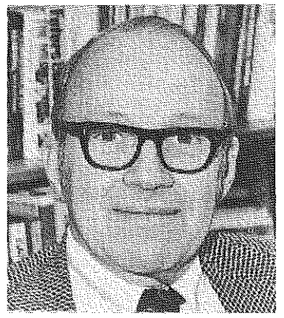


"Juergy," like "Elvis," is one of the few professionals who is known by first name across the nation and in many parts of the world. In fact, his wife "Jinx" (whose real name is Norine) is the only person in the quarter of a century I have known Juergy, to ever call him Elwood — his given name.

Juergy has spent his entire life in a close proximity to Davis, having been born and reared in Sacramento, where after completing Sacramento Junior College, he enrolled at the University of California at Davis. Here he received his bachelors and masters degrees. His doctorate was earned at Pennsylvania State University in 1958.

His first teaching position was at Linden Union High School, where he remained for ten years before joining the faculty at the University of California, Davis, as assistant teacher educator working with S.S. Sutherland. At Linden, "Juergy" was a supervisor of many student teachers, a number of whom are now in prominent positions in agricultural education. Possibly the best testimony to his success as a vocational agriculture teacher at Linden is that his former students still hold an annual picnic in his honor though he has been away from there for thirty years.

As a teacher educator, "Juergy" has few equals. Testimony of this was that nearly three hundred former students and spouses attended his retirement celebration. Some came from as far away as five hundred miles. His infectious smile, enthusiasm and innovativeness are symbolic of everything he did. He believed in getting his students involved in their communities and today a significant number of his former student teachers have advanced in the profession to post-secondary institutions and into program directorships. At last count, of 208 of his former student teachers, 197 (94 percent) were in teaching and of this number, 25 were in community colleges. Several were in college administration.



Orville E. Thompson

**Teacher Education*
University of California
Davis, California

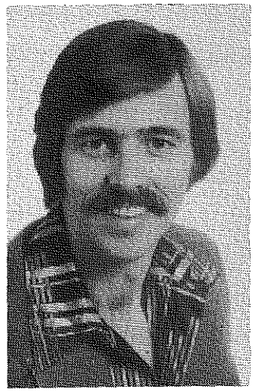
"Juergy" is possibly best known nationwide for his publications, which number nearly a hundred. He built on the early work of G.C. Cook and has either authored or co-authored ten textbooks for students of vocational agriculture, most in the "Approved Practice" series, and a number of these have been revised several times. Several of his books have been translated into Spanish and have extensive adoption in Latin America.

Home and family have always commanded a high priority in Juergy's life. All of his five children, three daughters and two sons, have finished, or are in the process of completing, college work. His sons, Don and Yancey, are teaching in community colleges and one daughter is a nurse. There are eight grandchildren ranging to fifteen years of age.

In retirement Juergy continues to write and he keeps close contact with vocational agriculture through attendance at various FFA and other teacher events. He has recently completed a new home on a small farm near Davis and has completed a cabin at Lake Tahoe. His son Don lives on the family farm near Auburn, where he keeps a few head of livestock with his father. Juergy puts the same kind of energy into retirement as he did to teacher education. He manages to hunt and fish, which rank second only to being a doting father and grandfather. His current address is:

Route 3, Box 170B11
Woodland, California 95695

BRINGING INTERNATIONAL AG. ED. INTO THE SECONDARY CLASSROOM



H. Gene Peuse

Burton E. Swanson

by
H. Gene Peuse
Graduate Student
and
Burton E. Swanson
Teacher Educator
International Agricultural Education
University of Illinois
at Urbana-Champaign

WEA, Balance of Trade, Panama — what do these things have to do with preparing my students for an agricultural occupation or about what I teach in my agriculture courses? Quite a bit, if you examine these and other items a little further.

The Work Experience Abroad (WEA) program is a relatively new, but rapidly growing FFA program designed to give FFA members experience working on farms and in agricultural industries of other countries. The purpose of this exchange program is to enable agricultural young people from the United States to learn about agriculture in other countries and for the host families and communities to learn more about American agriculture. WEA is only one of several programs that provide exchange opportunities for our agriculture students to learn about and perhaps pursue a career in International Agriculture.

Are you aware that the United States exports more than one fourth of all its agricultural production each year? Agricultural exports help pay for the foreign oil and the many consumer products Americans have come to expect and to depend on. American agriculture may be called on even more in the future to help our country solve its balance of trade deficits.

Finally, the National FFA Center recently signed a contract with the U.S. Agency for International Development to work with the Future Farmers of Panama (FA deP) to develop rural youth projects and help plan agricultural education programs in Panama. The government of Panama believes that the objectives and programs of the FFA have a lot to offer in developing rural leadership and in improving the skills and knowledge of farm people in their nation.

WHY IS INTERNATIONAL AGRICULTURE IMPORTANT FOR MY STUDENTS?

Teaching students about the relationship of American agriculture to world agriculture is becoming important, if not essential. First, the study of contemporary world agriculture will illustrate the global importance of U.S. farming and agribusiness. Not only does the production, distribution, and service of American agricultural goods generate work in this country, but U.S. agriculture also affects the economies of other nations around the world.

> *"The world is getting smaller — all of us should know the effects on our economy"**

Second, we live in a shrinking world that affects American agriculture. Foreign agriculture — such as palm oil production in Malaysia or soybean production in Brazil — can have an important impact on the world market and thereby affect prices and production here at home. The successful farmer of the future must understand and keep abreast of trends in foreign agricultural production. Students must be able to examine and understand the consequences of changing foreign agricultural output and its relationship to farm policy and American agriculture.

Third, the study of world agriculture, particularly as it relates to low-income nations in Africa, Asia, and Latin America, can provide students a better appreciation about how American agriculture developed. In contrasting the differences in soils, topography, water resources, and local plant and animal life, or in comparing the use of oxen, wooden harrows, and hand implements in today's economically poor countries, students can better grasp the contours and richness of America's own agricultural past. Agriculture teachers can provide both up-to-date information on world agriculture and emphasize the importance of U.S. agricultural history by studying the problems faced by small, peasant farmers abroad.

> *"We have one WEA participant. We want to get more kids interested in world agriculture."**

As students learn more about farmers and agricultural production in other countries, this will stimulate an interest in programs like the FFA's WEA program. Futhermore, American agriculture is highly productive and efficient. Through technical assistance programs like the FFA project in Panama, perhaps our country can help the less developed countries of the world increase food production and reduce human misery.

CONTINUED — BRINGING INTERNATIONAL AG. ED. INTO THE SECONDARY CLASSROOM

HOW CAN I TEACH INTERNATIONAL AGRICULTURE?

Since international agricultural education is a new area of interest, most agriculture teachers will have to rely on different types of instructional resources. Materials can be obtained through private voluntary agencies or religious groups such as CARE, Meals for Millions Foundation, Bread for the World or CROP, and through public voluntary or development agencies such as the Peace Corps or the Agency for International Development.

Materials on international agriculture, that are specifically designed for use in agricultural classrooms, have been recently developed by the Vocational Agriculture Service, University of Illinois at Urbana-Champaign. Three instructional units are available that deal with world agriculture: 1) "Helping Provide Food for the World's Growing Population," 2) "The World's Chief Food Crops," and 3) "International Agricultural Exchange and Work Opportunities." In addition, two other units are in the process of being written and deal with World Animal Agriculture and International Agricultural Trade.

> *"It is time we start teaching on an international basis. Agriculture is worldwide and food shortages are a world problem."**

Reaction to these units on international agriculture has been positive among Illinois agriculture teachers. A follow-up study involving the 340 teachers who received the first unit indicated that 78% of the respondents had either used or planned to use these materials in the classroom. The comments by Illinois teachers in bold type in this article are indicative of teacher receptivity to broadening their curricula to include international agriculture education.

CONCLUSION

As agriculture is a dynamic, changing sector of our economy, so too must be the teaching of agriculture. Course content must reflect the many changes that occur in the agricultural industry. As some Illinois agriculture teachers have observed, the time has come for international agriculture to become part of the agriculture curriculum. This observation is very consistent with a statement John Dewey made over 60 years ago: "A modern society is many societies more or less loosely connected . . . scattered over the face of the earth . . . they have aims in common, and the activity of each member is directly modified by knowledge of what others are doing."[2]

As agricultural educators we have a responsibility to prepare our students for a steadily shrinking (agricultural) world.

*Comments in *italics* are statements made by Illinois agriculture teachers in response to a follow-up study evaluating new instructional materials in international agriculture.

[1] The authors will supply addresses of agencies that have free materials on International Agriculture upon request.

[2] Dewey, John. *Democracy and Education*, New York: Macmillan Company, 1916, p. 24-25.

CONTINUED

BY THE BLUE DANUBE

level with few occasions for a student to become involved in management activities. The intensive hand labor and cooperative system of management is reflected in the kinds of practical experiences students receive.

Work experience sites are easy to locate for all students since the research farms and food processing factories are required to accommodate them. The high school has a staff member serving as the liaison working with the farm and factory administrators. Students perform duties for researchers, they do not conduct research themselves.

YOUTH LEADERSHIP TRAINING

There was no evidence of any youth leadership training program similar to the FFA program. Several schools do have competitive events of both a written and performance nature. Occasionally, the best students from each school in a region will get together for a competitive event. The organization of contests and student selection is handled solely by the teachers and director. It was apparent that activities to develop leadership abilities and individual growth are not promoted.

The commitment and dedication of teachers to their students, their profession, and agriculture is unquestionable. Once again, the program is only as good as the teacher no matter where you look.

CONTINUED

NON-FORMAL EDUCATION . . .

gram to meet the needs and interests of the people. The program takes into consideration both the resources and limitations of the institutions and of the community. Supporting the different activities at the village level are radio programs and graphic materials. The radio messages transmitted over government radio stations are based on the content of the different individual village programs. Graphic materials include posters, flip charts, educational comics, and literacy materials.

The promotors receive various types of training to improve their skills in working as catalytic agents. Their goal is the accomplishment of coordinated and integrated work at the community level by institutional technicians. This training includes workshops and in-service training in the areas of using simple audio-visual aids, community programming, and applied communications.

Through the efforts of the EEE program, institutional technicians are becoming more effective in their field work. Village level promotors such as Humberto, Carmen, Gregorio, and others are truly causing the Guatemalan Maya to adopt and change practices. As a result they are having an impact on the improvement of the living conditions of their people and the future of their country.

The Non-Formal Education program in Guatemala is being provided technical assistance by AID through a contract with the Academy for Educational Development. UNESCO and UNICEF are also providing some program assistance.

CONTINUED

WORK EXPERIENCE ABROAD

Mr. Zwing was a great person to live with, work for, and learn from! He is one of 2 persons from that area of Austria to earn the Stiyra Meister Brief Award for excellence in agriculture and forest production. He was the president of the Stiyra Young Farmers of Austria for 2 years (yes, they have Young Farmers chapters over there). He has hosted to date, 11 WEA participants from 10 states as well as 2 exchange students from Holland and Germany.

HOLLAND

In January, I began a five month experience with the C.P. Balhoic family in Ten Boer, Holland. Again, the host family provides excellent experiences, as I am involved on a 43 hectare farm, milking 80 Holstein cows and raising grass seed.

PREPARATION

Another important question may be, "How are you prepared for your experiences (mostly 1 year, some six month stays) overseas?" In June of each year, a workshop is conducted for WEA participants at the National FFA Center in Alexandria, Virginia, and then it's off to St. Marten or another area of the world depending on the language spoken, for a 2 week intensive, 8 hour per day school on language, culture, and a bit of history. You then go to your host family. I sound probably somewhat strange, speaking German with a somewhat slight, Spanish accent! Language was no real problem to me, but I could sure understand it (German) better than I could speak it!

UNIVERSAL LANGUAGE

I could go on and on about the many experiences and things I have learned agriculturally, and otherwise while participating in the WEA. People and places may be different but everywhere I went, people looked at the same moon, sun, and we all laughed the same language. I now have a newfound respect for the American farmer and American agriculture! I have grown in many ways while participating in a great program that allows a young person to do just that! Truly the Work Experience Abroad Program is a unique experience in international agriculture education.

BOOK REVIEWS

FLOWER AND PLANT PRODUCTION IN THE GREENHOUSE, Kenneth S. Nelson, The Interstate Printers, 3rd ed., 1978, 335 pp., $10.50.

This textbook is divided into eight chapters. Chapter One is an introductory section on the scope of the floriculture industry, including the wholesale market and the florist shop retail end of the industry. An intriguingly long list of trade organizations, publications, and trade papers is also included in Chapter One.

Chapter Two, "Structures for Growing Flowers," discusses all types of structures: plastic, rigid, fiberglass, and glass, with their individual advantages, disadvantages, and energy problems. It discusses how bench arrangement and construction can vary due to the crop grown and many examples are given.

Chapter Three, "How the Surroundings Affect Plant Growth," is an interesting basic unit in plant growth, development, and processes. The information is given in simple and easily understood terms and proves interesting academic material.

Chapter Four relates, in detail, soil media types and their relations to various irrigation or watering systems, utilizing different fertilizer forms and ratios. "Reproduction of Plants," in the next chapter, discusses sexual propagation, pollenation, propagation by cuttings, bedding, and grafting. Much theory is devoted to proper soil, water, and air conditions conducive to proper germination and propagation.

Chapter Six deals with cut flower crops such as snapdragon, rose, carnation, chrysanthemum, and bulbs by discussing seed or propagation techniques through light intensity schedules. For holiday and seasonal sales, Chapter Seven discusses pot plant crops, including azaleas, bedding plants, chrysanthemums, foliage plants, geraniums, hydrangeas, Easter lilies, and poinsettias. Again, the book goes into great detail about propagation, light schedules, and holiday or sales seasons. Both chapters have provisions for constant checks and maintenance schedules usable by crew members on the job. This could prove valuable for training prospective employees.

Chapter Eight covers troubles, pests, and diseases. Taking a very practical approach and in general terms, this sometimes complex subject is discussed in easily comprehended terms.

To produce a learned student-employee, instruction must be based upon new techniques developed by people in the field of floriculture who have solid concepts of all aspects of plant growth. This is the basis of this book on floriculture. The author, Kenneth S. Nelson, B.A., M.S., Ph.D., is formerly an extension specialist in floriculture at The Ohio State University.

The chapters were written using quickly understood terminology for very complex subjects. The large print makes for comfortable reading. Major topic areas within each chapter are printed in dark bold type for referral or outline sketching. Although only black and white photographs are used, these are clear and precise with one subject per photo having detailed captions. This book would be ideal for vocational agriculture/horticulture classes in high schools. For post-high school training centers, the book would be a good text as the author gives plenty of ideas, schedules, and examples for projects. As for college curriculum, the book could be a textbook for a first-year horticulture course. Any agriculture program, regardless of the training level, would do well to use this book.

Alfred R. Clarke
Grand Strand Career Center
Myrtle Beach, South Carolina

THE RURAL COMPONENT OF AMERICAN SOCIETY by Edward W. Hassinger. Danville, Illinois: The Interstate Printers and Publishers, Inc. 1978, 397 pp. $12.75.

The culture and organization of the rural segment of our society form the topic of this book. It emphasizes the interaction between rural society and the larger American society. An appropriate subtitle would be a history of American agriculture and its people. To comprehend the present rural society, one must understand its beginning and development. This concise, comprehensive, historical account will be an asset to agricultural educators as a source of information about our agricultural development.

The book is about rural society, emphasizing that it is an interrelated part of our national society, not a separate, distinct society. Its communities and organizations, schools, churches and local governments of rural society are discussed in relation to the national society as well as in the local context.

The book reflects the author's knowledge and understanding of rural America. He is a professor of rural sociology at the University of Missouri.

This book is designed to be used in introductory college courses in rural sociology. The facts and figures about the rural population and rural organizations will make it a useful reference.

Eugene Anderson
Program Development Specialist
University of Minnesota
St. Paul, Minnesota

GRANDFATHER'S COLLECTION

Grandpa sure did get an introduction to the "self-serve, impersonal and tough if you don't like it atmosphere" that seems to be coming more prevalent in some of our bigger towns. Grandpa finally broke down and bought a new truck last month from one of those smooth talkers you see on the boob tube. It was the first new truck he had ever owned and sure enough, it turned out to be a real lemon. It seems the turn signals worked backward which got Grandpa in a couple jams on his monthly trip to town. He wrote a pretty forthright letter about the matter to the president of the car company. We all told him that he wouldn't receive so much as a reply. So you can imagine out surprise when he received an apologetic letter from the president assuring him how valuable he was considered as a customer. Grandpa's joy was short lived however when he discovered the inter-office memo which had been inadvertantly inserted with the letter which said tersely, "send this S.O.B. the blinker letter". Needless to say Grandpa is back to driving his '49 flatbed.

# # # # #

How about the farmer's wife who got rid of two-hundred pounds of ugly fat in less than a week. That's right, she got a divorce!

# # # # #

It seems there is less and less down home religion now days. I'm sure you heard about the little old lady who got very excited on her first plane ride when the plane got into some bad weather. She went down on her knees and shouted, "Everybody in the plane pray."

A youth about eleven replied, "I don't know how to pray." The lady said, "Well, do something religious." So the youngster started a bingo game.

# # # # #

From the Cowboy Dictionary — Inflation — When it costs fifteen dollars to fix something that cost ten dollars new.

# # # # #

The trouble with being a leader today is that you can't tell if people are following you or chasing you.

# # # # #

Mr. P.D. Armour, the meat packer, was of the same school as old Grandpa. He was a hard worker, a gentleman and a generous employer. On one occasion he made a present of a suit of clothes to each of his employees. Each man was told that he might order his own suit, and send the bill to Mr. Armour, no restriction being made as to price. Taking advantage of this situation one young man ordered the latest fashion costing eighty dollars. When the bill was sent in, Mr. Armour sent for the clerk to vouch for its accuracy, and finding it right, assured the man that it would be paid. After he had counted to ten Mr. Armour was overheard saying, "I wish to say that I have packed a great many hogs in my day but I never dressed one before."

Until next time . . .
Keep up the good work

From the Book Review Editor's Desk . . . BOOKS TO BE REVIEWED

ORGANIC AGRICULTURE by Robert C. Oelhaf, Halstead Press, 1978, 271 pp., $18.00.

FINANCIAL MANAGEMENT IN AGRICULTURE by Peter J. Baker, John A. Hopkin, and C.B. Baker, 2nd edition, Interstate, 1979, 530 pp., $11.75.

AN INTRODUCTION TO ANIMAL HUSBANDRY by J.O.L. King, Halstead Press, 1978, 433 pp.

FARM MANAGEMENT MANUAL by Kenneth C. Schneenberger and Donald D. Osburn, Interstate, 1978, 127 pp., $4.95.

SELLING AGRIBUSINESS by Larry E. Miller, McGraw Hill, 1979, 136 pp., $5.00, Activity Guide Available: $3.00.

INTRODUCTION TO AGRIBUSINESS MANAGEMENT by Don L. Long, J. Dale Oliver, Charles W. Coale, McGraw-Hill, 1979, 136 pp., $4.33, Activity Guide Available: $3.00.

PRINCIPLE OF HORTICULTURE by Ervin L. Denisen, 2nd edition, Macmillan Publishing, 1979, 485 pp., $14.95.

LAW AND COURT DECISIONS ON AGRICULTURE by N.G.P. Krausz, D.L. Uchtman and H.W. Hannah, Stipes Publishing, 1977, 480 pp.

AGRICULTURAL ENTERPRISES MANAGEMENT IN AN URBAN-INDUSTRIAL SOCIETY by Portia Christian, Gale Research Co., 1978, 314 pp., $18.00.

AGRICULTURAL ECONOMICS AND AGRIBUSINESS: AN INTRODUCTION by Gail L. Cramer and Clarence W. Jensen, John Wiley & Sons, 1979, 440 pp., $18.95.

PROFITABLE PASTURE MANAGEMENT by Roy A. Chessmore, Interstate, 1979, 424 pp., $13.95.

INTRODUCTORY HORTICULTURE by H. Edward Reily and Carroll L. Shry, Jr., Delmar Publishers, 1978, 562 pp., $15.00.

INTRODUCTORY SOIL SCIENCE by Leon J. Johnson, Macmillan Publishing, 1979, 289 pp., $5.95.

THE PLANT PROTECTION DISCIPLINE by Webster H. Sill, Jr., John Wiley & Sons, 1979, 190 pp., $25.00.

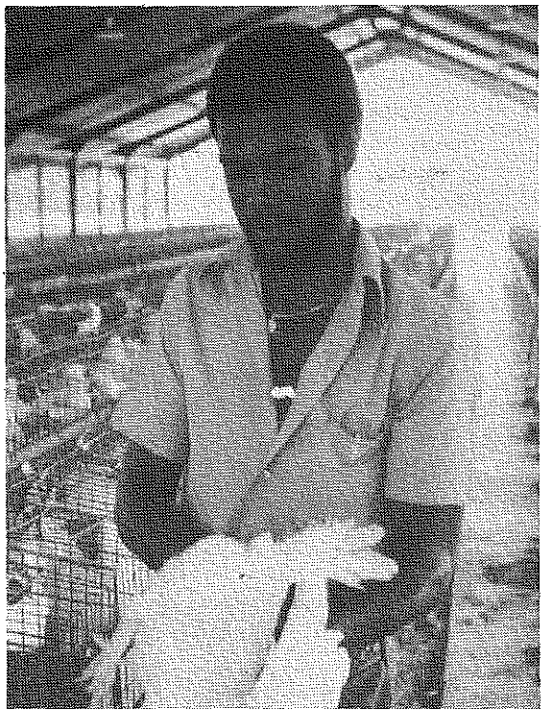
CHAIN SAW MANUAL by R.P. Sarna, Interstate, 1979, 118 pp., $4.95.

If you feel qualified to review one of these books and desire to do so, write the Book Review Editor and he will send the book for review. Once reviewed, the book becomes the property of the reviewer. — John Hillison, Book Review Editor, Ag. Educ. Program, Virginia Polytechnic Institute and S.U., Blacksburg, Virginia 24061.

STORIES IN PICTURES

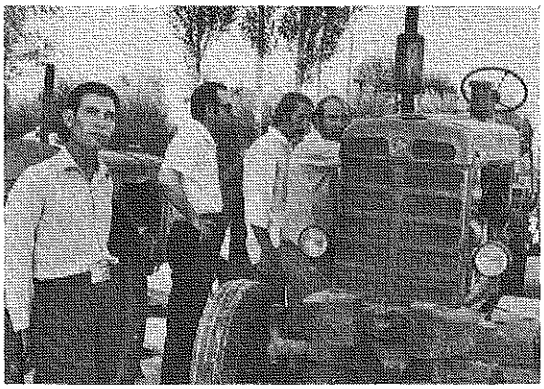
by Joe Sabol

Since W.A. Davidson took over the leadership of Guyana School of Agriculture in 1965, the institution has grown from a small program in one building, to a modern, residential campus with an exemplary teaching farm. (Photo courtesy Burton E. Swanson, Univ. of Illinois.)



Leon Brooks graduated last year from the Jamaica School of Agriculture. Now he is on the staff at JSA and is in charge of the poultry unit, which includes 2500 layers and 1500 broilers. (Photo courtesy Burton E. Swanson, Univ. of Illinois.)

Hugo Flores, a Venezuelan horticultural extension agent, explains the production of tropical plants in Venezuela to David Howell (left) and Ray Morton (center) of Penn State. (Photo courtesy of Bill Lindley, Penn State University.)



Instruction by American Peace Corps Volunteers in Iran is a vital part of the Agricultrical Mechanics training in developing countries. (Photo courtesy of Len Harzman, Western Illinois (University.)

Ideas Unlimited! Vocational Agriculture teachers are full of good ideas and the N.V.A.T.A. and Ruritan National sponsor an annual contest to reward those teachers who are willing to share their great ideas. The 1978 winners are (left to right): Jim Cooney, Elko, Nevada; Myron Sonne, Letcher, South Dakota; Jack Wise, Winchester, Kentucky; Ross Smith, Athens, Alabama; Peter Woolcott, Colchester, Connecticut; Philip Fuss, Keota, Oklahoma (National Winner); Curtis Graham, Ruritan National, Dublin, Virginia. (Photo courtesy of Sam Stenzel, N.V.A.T.A., Lincoln, Nebraska)