Stories in Pictures

ROBERT W. WALKER
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Agricultural Education

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INSTRUCTIONAL PROGRAMS IN AGRICULTURAL PRODUCTS
Agricultural Education in the City

Guest Editor...

A New Goal: Providing Food for People

Agriculture is food—and food is first. Food generally receives heavy emphasis in agricultural instruction. In vocational instructional programs, traditionally, emphasis is given to food production. Food production is a valuable tool to have in a world where the need for food is real and agricultural education will continue to contribute to this end.

The modern world finds many groups contributing to efficiency in food production and to other functions involved in providing food for people. Indeed, vocational education in agriculture is moving toward the acceptance of the more comprehensive goal of efficiency in providing food for people.

The more comprehensive goal, as one of those which are being offered, is to provide education in agricultural instruction, as well as other life conditions. Schools at different levels can plan instructional programs to contribute to this goal, whether serving an urban or rural community. Instruction for any given group can be given tailored from farm production of food to the distribution of peas to milk distribution in market areas. Yet, in each instance instructors and learners can identify with a goal to which they are contributing.

W. Howard Martin is Professor of Education, University of Connecticut, Storrs.

‘Providing food for people’ is a goal of broad appeal. There is much evidence that even in America, the land of agricultural surplus, that we have not yet to do in providing food for people.

This type of goal is compatible with the new look in vocational education. The instructional concerns cover all functions and can include the best possible use of talents from

(Continued on next page)
Instruction for Employment in Agribusiness

ELEANOR Gilmer and ELVIN WALKER
Georgia Department of Education

Themes for Future Issues

March Instructional Programs in Forestry
April Instructional Programs in Agricultural Production
May General and Practical Arts Education in Agriculture
June Evaluation in Agricultural Education
July Agricultural Education in Post-Secondary Schools
August Adult Education in Agriculture
September FFA: Past – Present – Future
October Ideas for Effective Teaching
November Research in Agricultural Education
December Innovations in Agricultural Education

Recent studies of Georgia's agricultural industry reveal that agriculture provides two-thirds of the total income in the State. Agribusiness firms comprise 66 per cent of all manufacturing firms in the State, 62 per cent of Georgia's payrolls, and 61 per cent of the expenditures for new plants and equipment.

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B. J. Allen, teacher of the courses, indicates that there are a number of good agricultural courses available to agribusiness-student. Products of farms and ranches move to processors and through to markets. Farmers and ranchers maintain仅仅是化学, 农业机械, livestock and disease and agricultural mechanization. Approximately half of the student's time is devoted to subjects of an agricultural nature and half to courses relating to business and marketing. The second year offers further business subjects and seminars relating to decision-making to lead to mid-management position in sales and distribution. 

Job Opportunities

Agricultural Marketing

In 1960 a course in agricultural marketing was added to the curriculum of the Valdosta Area Vocational Technical School in Valdosta, Georgia. The curriculum for this course, a two-year course is composed of 24 instructional units and includes business organization, marketing, management of distribution, wholeship, credit, and collection.

THE COVER PICTURE

Students in the food processing technology curriculum at the New York State University Agricultural and Technical College of Morrisville receive a strong background in science and mathematics related to food processing. (Photo by Gale N. Ostrovn, Agricultural and Technical College, Morrisville, New York)

POST-SECONDARY EDUCATION IN AGRICULTURAL MARKETING

The Parkland College Agri-Marketing program is designed to prepare students to enter mid-management positions in the grain business after two years of preparation. Most of the graduates will work for local grain elevators in mid-management or management positions. Some graduates will have other interests such as growing and harvesting, grains processing, or other aspects of the handling, processing or marketing of grain. The first class graduated June 1969 and are now working in various positions at salaries ranging from $7,000 to $8,500.

Instruction

The program of instruction includes courses in agricultural economics, agricultural marketing, accounting, finance, and business administration. The program emphasizes the management and principles of agricultural business management during the freshman year. During the sophomore year the program takes courses from other areas of the college in modern business mathematics, accounting and bookkeeping, and communications skills. During the sophomore year general training is provided in the social sciences and business communications areas. Specialized courses are provided in the use and understanding of agriculture credits, grain futures as a hedging tool, grain grading, and the principles of grain storage and transportation. One course that is popular with the students and encourages competition is teaching the students about the principles of agricultural marketing problems. This course makes use of the College’s IBM computer and the Purdue Farm Supply Business Management Games. The students feel that these games help them to apply all the principles of economics, accounting, bookkeeping, management, and accounting which they have previously studied.

Students are divided into teams which include a general manager, a credit manager, and other management positions. Each team makes decisions as to the number of tons of bulk or bag feed and fertilizer they wish to sell and at what price. Complementary decisions must also be made concerning labor, transportation, storage space, credit, and money for investment. All of these decisions and others are then fed into the computer and the results are printed out for all teams. If a team over--expanded in any area, it is hurt financially; if it didn’t have enough labor or facilities, it is charged overtime labor and a high rental fee for facilities; if its prices are too high or credit policy too strict, sales are reduced. The goal is to be the team with the highest net worth. The real reward, however, is understanding practical applications of sound business management principles.

Laboratory Experience

A significant part of many of the courses is the laboratory. Freshmen are kept in the classroom for training during the sophomore year with several laboratory trips are taken to local grain elevators, grain terminals, grain inspection centers, grain buying offices, the Chicago Board of Trade, the Chicago Mercantile Exchange, and equipment designers and equipment manufacturers. Students also attend various conferences such as the Agricultural Industries Forum and the Grain Conditioning Conference as well as the annual meetings of the Illinois Grain and Feed Industry Association and the Farmers Grain Dealers Association.

Employment Experience

The real test of a student’s capabilities comes when he is placed in a grain elevator during the spring quarter of the sophomore year for actual on-the-job experience. Students work in all phases of the grain elevator business—from the farm to the Texas house and from grain sampling to bookkeeping.

While they are on-the-job, a bi-weekly visit is made by the college supervisor who consults with the student and the supervisor, usually the grain elevator manager, and evaluates the student’s progress. On alternate weeks when the supervisor is not making visits, students return to the College one evening a week for a seminar in which all students participate in a discussion of mutual impressions and problem-solving.

At the end of the on-the-job training period several evaluations are made. The college supervisor gives the student his evaluation of the student’s performance; the student evaluates the training station and the entire agri-marketing program suggesting ways that it can be improved; and the on-the-job supervisor evaluates the student and the College program. In several instances, students have remained with the business as a permanent employee. The majority of students is now employed full-time in the grain business.

Advisory Committee

An agricultural advisory committee is often consulted regarding the agri-marketing program as well as an agricultural supply program designed to prepare for employment in the fertilizer and agrochemical industry. Advisory committee members represent various levels of management and expertise in this industry, including grain elevator managers, grain buyers, district and state representatives of grain and agrochemical companies, and a grain marketing specialist from the University of Illinois.

One highlight of the 1969 program was a presentation by each member of the graduating class on some aspect of the College’s program and his evaluation of it to the agricultural advisory committee. This was presented at a dinner given in honor of the graduates. Members of the committee listened attentively, took notes, and asked questions of the class. The entire proceedings were recorded on videotape for later evaluation. Several changes have already been considered and completed as a result of that evaluation.

The program has received outstanding support by industry. Three scholarships were awarded during 1969-70 and two more were awarded this year by the Illinois Grain Dealers Association. The scholarships are presented to students in the agri-marketing program who have demonstrated academic achievement and have shown promise of development in the field.

Much advice and encouragement has also been received from the Illinois Grain and Feed Association as well as other agricultural groups.

BOOK REVIEW


This book is divided into seven parts that adequately cover the pork industry. It is brief enough to hold the attention of the reader. Part one deals with marketing and consumer acceptance of pork. Chapter one directs attention to the four major areas that will help one better understand the problem faced by the pork industry. The concluding chapters present the views of the major segments involved in merchandising pork products.

Part two depicts future roles in supplying protein requirements such as relationships of supply, demand, prices, and price; efficiency of grain conversion; and non-meat products. The nutritive value of high-quality pork is discussed in part three.

Diseases problems such as health maintenance, outbreaks of disease, disease control, and role of disease research are explored in part four. The importance of selection and breeding changes, and the role of nutrition on muscle quality are reviewed in part five. Part six provides the reader with information as to how physiological stress is related to production practices and muscle quality. The concluding part deals with labor problems pertinent to the producer and the meat packing industry.

The author is well qualified by training and experience, and distinguished himself as an author, teacher, scholar, researcher, and business executive. The book is written in such a manner as to attract the attention of the producer, students in technical agricultural programs, and students in junior and senior colleges. This book should be available as a reference book to students of animal science and广东省 pork is produced.

O. R. Regulatory

Arkansas A.M. and N. College

February, 1970
Building Comprehensive Instructional Programs in Agriculture

GLENN Z. STEVENS, Teacher Education
The Pennsylvania State University

Teachers of agriculture all over the nation currently are involved in assisting local active agricultural literature in writing annual and long-range plans for occupational education. A 1969 publication issued jointly by the U.S. Office of Education and the Department of Labor titled "Occupational Education and Occupations" is a valuable resource. It lists U.S.O.E. code numbers and content descriptions for courses in the seven instruction areas in agriculture. In other columns there are Dictionary of Occupational Titles (D.O.T.) codes for appropriate jobs and references to worker traits required.

An Illustration
To illustrate, 01.00 is an Office of Education code number. The 01. means Agriculture, 01.01 is Agricultural Production, and 01.01.05 is the Farm Business Management part of the instructional program.

An occupation for which this unit of study is appropriate is Manager, Farm (agric.) which is designated by the D.O.T. code 01.01.05. The 01.05 represents the occupational category of Farming, Fishing, Forestry, and related occupations. The 05 specifies the occupational division of Plant Growing, and 400 means that the occupational group is not elsewhere classified (n.a.e.).

To continue, the second three-digit set of numbers indicates the degree of relationship to data, people, and things. The 1 means that a farm manager coordinates data (the highly complex relationship) in agriculture. The 6 specifies a relatively simple speaking-signaling interaction with people, and the 0 refers to no significant relationship with things (as a manager the farmer is not using his hands). The worker traits required are described under headings for physical demands, working conditions, and training time.

Planning Programs
What has all this to do with planning instructional programs? Very much, indeed! If students are to have access to vocational education that is purposeful, continuing, individualized, practical, and attainable, the school must offer courses that are relevant to a worthwhile occupational objective of each student. Agriculture teachers are familiar with the illustration given above. Farm business management instruction is for farm managers and for high school students preparing to become farm managers. Do teachers, counselors, the employment service, and industry personnel managers know what units of instruction in agricultural supplies are needed by a grain processor or fertilizer salesmen? Do placement personnel know the many jobs open to graduates of programs in horticultural or agricultural mechanics? The Bureau of Labor Statistics manpower projections have been consulted and regional goals set?

Comprehensive Programs
The charts accompanying this article present a comprehensive program of courses in agriculture for high schools. While prepared for Pennsylvania communities in other states will find that the structure of courses can be adapted. There are four basic courses in agriculture which may be taught with as much, or a little, emphasis on agricultural production as is needed by rural students and the ability of teachers will support.

Four basic courses in agricultural mechanics can provide comprehensive skill training. If each course is elective, and on a semester basis, an opportunity is offered for students to individualize their programs by electing only the units that contribute to their specific occupational goal.

Courses can be structured so that the six courses named here are added to the instructional areas of agricultural supplies, agricultural mechanics, agricultural marketing, ornamental horticulture, agricultural resources, and forestry. The subject matter and learning experiences in each are outlined and defined in detail in U.S. Office of Education, Standard Terminology for Curriculum and Instruction In Local and State School Systems, State Records and Reports Series: Handbook VI, Washington, 1969. Every school district that decides to build new instructional programs in agriculture to serve the needs of large numbers of students interested in growth occupations of the future will find the three publications discussed in this article to be of invaluable assistance.

Attitude, Program, and Money
The first Annual Report of the National Advisory Council for Vocational Education (July 1969) states that "agriculture as an occupation has not yet adequately provided public school occupational education for millions of disadvantaged, handicapped and under-employed young people are attitude, program, and money. Through activities such as the FHA and supervised occupational experiences, teachers of agriculture have demonstrated a model for success in creating proper attitude toward career development.

Within high schools the student should have multiple choices. A separate vocational track may not best fit these students opportunities to train for urban jobs, since many of them are bound for the city.

You can adapt the comprehensive outline of courses presented here to meet the needs of boys and girls in your community. When you accept the challenge that young, adult men and women also should have access to continuing, individualized counseling, placement, and instruction you will have a variable, relevant occupational education system.
Preparing Technicians for the Food Processing Industry

HAROLD D. SIMPSON
Willis Community College
Wilkesboro, North Carolina

In recent years the southeastern states have taken a leading role in the food processing industry. North Carolina has become as involved in food processing that a former governor stated that it was one of the state’s fastest growing industries.

Because of the growth of this industry and the increasing demand for trained personnel, the Community College System approved a two-year Food Processing Technology Degree at Wilkes Community College, Wilkesboro, North Carolina. The purpose of the program is to give students an understanding of the fundamentals of food science, the tests, skills, and techniques essential for successful employment and advancement in the food processing industry.

Students

Students entering the food processing curriculum should have a better than average high school background in science and mathematics, biology, chemistry, and two years of algebra are preferred. The student should be one who is not afraid to get his hands dirty in the processing plant. The term used for this type of student is “not a “nutshell” or one who has both technical and practical knowledge of the food industry.

The Program

During the first year, students will visit food processing plants and become acquainted with the flow-lines of dairy product processing, poultry processing, meat processing, and vegetable processing. During the second year, students will undergo a summer internship at a food processing firm.

Students in the food processing technology program work in the College’s quality control laboratory.

Grades

In the summer of 1979, students were involved in laboratory analysis because they tend to be magicians in their work. Boys frequently have the knack of being able to take a bunch of data and get results.

Graduates

Grads of the food processing program find employment in production management, production supervision, quality control, sales, marketing, and administration, and distribution of food products.

In order to be successful, the graduates must be able to work as part of a team. They must have the ability to communicate effectively.

Wayne D. Kode, Agricultural Coordinator, Fond du Lac Technical Institute, Fond du Lac, Wisconsin

A Post-High School Program in Food Processing

Wisconsin has traditionally been known as America’s Dairyland. In fact, this is the slogan printed on all Wisconsin automobile license plates.

This claim can easily be justified by the fact that the state leads the nation in the production of fluid milk, cheese, dry milk, milk巴 peel powder, and sweetened condensed milk. Wisconsin ranks second in butter, unsweetened condensed milk, and dry skin milk.

Leather buyers, and sheep farmers, for example.

Students studying from the program receive an Associate Degree. They are qualified for mid-management positions in food industries such as quality control technicians, laboratory supervisors, personnel supervisors, financial, raw product supervisors, fieldmen, salesmen, inspectors, and graders.

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Food Processing Curriculum

It is obvious that the demand for technicians in the food processing industry in Wisconsin is especially acute. To meet the needs of the industry, a two-year post-high school curriculum in food manufacturing was begun at the Fond du Lac Technical Institute in Fond du Lac, Wisconsin. The program began in 1967. The program is a part of the educational program of the Board of Vocational, Technical and Adult Education—District 10 of which the Fond du Lac Technical Institute is a member school. District 10 was chosen among the eight vocational districts in Wisconsin to conduct the program because of its proximity to the geographical center of the state’s food processing industries.

Students in the food manufacturing technology curriculum have a choice of two major areas of specialization: dairy industry and canning-freezing industry. Students in both majors are required to take courses in general chemistry, food chemistry, food plant sanitation, food plant equipment operation and maintenance, quality control for food industries, survey of the food industry, communication skills, business math, economics, psychology, American institutions, and personnel management.

Specialized training is given to the dairy majors in dairy microbiology, dairy marketing, and advanced dairy product processing. Canning-freezing majors take courses in food microbiology, water and its uses, and advanced food preservation techniques. Both groups have opportunities to take elective credits in other academic areas such as advertising, marketing, welding, and student services department, business law, and public speaking.

A popular elective is the summer work experience internship. Students receive credits for participating in the program by working in a food industry during the summer between their first and second year. The minimum requirement is 40 total hours of work that is supervised by the employer and a school representative.

(Continued on page 2011)
TEACHING ABOUT OCCUPATIONS AND QUALITY CONTROL IN MEAT PROCESSING

DONALD E. McCREIGHT, Teacher Educator
University of Rhode Island

This article is based on Dr. McCreight's Ph.D. dissertation, "A Vocational Teaching Experiment on Occupations and Quality Control in the Processing of Meat," which was completed at The Pennsylvania State University in 1969. Glenn Z. Stevens, Professor of Agricultural Education at The Pennsylvania State University, was Dr. McCreight's major advisor.

Meaningful Instruction
In traditional agricultural production programs, students are taught to identify breeds of livestock, to judge meat quality, and to process meat. Why does instruction stop at this point? Can meaningful instruction be provided to high school students in processing meat and meat products?

In a curriculum in food handling and distribution developed at the University of Connecticut, the authors proposed a need for experiences which aid secondary and post-secondary students in acquiring a broad knowledge of food products and quality control. It was concluded that teachers of agriculture should be involved in providing this instruction to prepare students for food handling and distribution occupations.

McCreight analyzed occupational titles and competencies in twenty-five agricultural food products processing plants in Pennsylvania. The study included five of the largest meat processing plants in Pennsylvania. Each personnel director rated the competency levels needed to enter and to advance for all occupational titles in the meat processing plant. Meaningful occupational title groups and competency groups were determined for the processing of meat and meat products.

An Experiment
Using this information two student resource units, one on occupations and one on quality control in the processing of meat were developed and tested. Four hundred high school students in twenty-four Pennsylvania schools were in the vocational teaching experiment. The accompanying chart illustrates the course outline for occupations and quality control in processing of meat.

A teacher's guide was developed to aid advance teacher preparation and increase the use of instructional resources. The guide included student objectives, key questions, suggested references, suggested resource materials, suggested field trips, and procedures for use of the student exercises. The use of the teacher's guide increased student achievement.

A set of colored slides and script was developed to depict occupations in the processing of meat and meat products. One-half of the students in the experiment used the slides and student resource unit on occupations in the processing of meat, but did not receive formal instruction. The other students received formal class instruction by the teacher of agriculture using the colored slides and the unit on occupations in the processing of meat.

A Course for Teachers
In the summer of 1969, the third in a series of courses to prepare teachers for instruction in Agricultural Food Products was conducted. Teachers who had been in the teaching experiment, retesting the need for more knowledge and skill, enrolled in the course.

Twenty teachers of agriculture participated in a one-week, credit course on meat animal evaluation offered by the Department of Food Technology in cooperation with the Departments of Agricultural Education and Animal Science at the Pennsylvania State University.

A Post-High School Program in Food Processing
(Continued from page 193)

Advisory Committee
Extensive use is made of two advisory committees for the program. A state food distribution advisory committee, meeting once per semester, recommends changes in curriculum, course content, and instructional emphasis. The other committee, a local advisory group, deals primarily with equipment recommendations and project planning.

Teaching Staff
The teaching staff in the Food Manufacturing Department is comprised of two full-time instructors and two instructors with part-time teaching responsibilities. Appointments are made on the basis of teaching to the local high schools.

Advisory Committee
Teachers of agriculture can provide meaningful instruction in the processing of meat and meat products and the processing of other agricultural food products.
A New Approach to Vocational Agriculture in India

LOWELL B. HODGES
Coordinator of Curriculum Development and Instruction
Ohio Local Schools
Marion, Ohio

Babu Lal has completed his first year in vocational agriculture at the Demonstration School, Regional College of Education, Ajmer, India. He plans to continue in the vocational agriculture program and enter farming with his father and older brother at the village of Ratidang, Babu Lal has a farming program which includes a twenty-acre hybrid White Leghorn hens that are in full production, along with a 20' by 20' plot of land that he uses for growing Hybrid Mexican wheat.

Babu Lal (second from left) and his father are shown by the teachers of agriculture during a home visit.

It is toward this kind of student that the new vocational agriculture program in India is aimed. Babu Lal is representative of thousands of boys who have terminated their education for various reasons who are now working on farms with their families and are most likely to become Indian farmers in India, approximately 62 per cent of students drop out of school before they are fourteen years old.

To break the long-standing cycle of inefficient, unproductive, "traditional" agriculture, it is necessary that these prospective farmers be trained to provide adequately for themselves and their families and to make a contribution to the community, state, and nation as competent rural citizens.

- A Teacher Offers Help

I had the experience of assisting the Regional College of Education at Ajmer develop educational programs that would help solve this problem. After teaching vocational agriculture in Ohio for ten years, I found that two years in India to be one of the most interesting and challenging experiences of my teaching career.

The five-man Indian Agriculture Education staff at Ajmer was an effective and energetic group. They were trained in India and dedicated to the development of productive agricultural education in India. My contribution was primarily in the areas of planning and procedures and in adapting some of the successful concepts of agricultural education in the United States to the Indian conditions.

- A New Approach

Indian teachers of agriculture enrolled in a summer workshop in 1966 conducted by the four Regional Colleges of Education examined agricultural education programs in their secondary schools and arrived at this conclusion: "The main defect of the present education (system) in agriculture is that it is narrowly conceived, laying too much emphasis on bookish knowledge, overworked with insignificant details, insufficiently adapted to individual differences, dominated by examinations, and out of time with life. It is more subject-centered. The main defect being imparted in agriculture is so theoretical and divorced from the practical application that it does not serve any useful purpose." They concluded that an agricultural education program needed to be directed to the community, state, and nation as competent rural citizens.

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Indian teachers of agriculture enrolled in a summer workshop in 1966 conducted by the four Regional Colleges of Education examined agricultural education programs in their secondary schools and arrived at this conclusion: "The main defect of the present education (system) in agriculture is that it is narrowly conceived, laying too much emphasis on bookish knowledge, overworked with insignificant details, insufficiently adapted to individual differences, dominated by examinations, and out of time with life. It is more subject-centered. The main defect being imparted in agriculture is so theoretical and divorced from the practical application that it does not serve any useful purpose."

They concluded that an agricultural education program needed to be directed to the community, state, and nation as competent rural citizens.

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Educational Programs for Laboratory Animal Caretakers and Meat Inspectors

LEON A. MAYER and LLOYD J. PHIPPS
University of Illinois

Agricultural educators need to give more attention to manpower needs that are not related to farming. There has been a tendency in broadening the scope of vocational education away from agriculture to include all occupations requiring knowledge and skill in agriculture to give priority to farm-related occupations. The time has arrived, however, to study and develop educational programs for persons in occupations requiring knowledge and skill in agricultural subjects that are not ordinarily considered agricultural occupations.

The applied animal science occupational category includes many agriculturists, such as applied animal science occupations are typical farm or non-farm occupations which are basically production oriented. Included in the applied animal science occupational category, however, is a significant number of non-production oriented occupations. Both the non-production and the production oriented jobs in the applied animal science occupational category require knowledge and skill in applied animal science for effective job performance.

Two applied animal science occupations analyzed in a study conducted at the University of Illinois were the occupations of meat inspector and the laboratory animal caretaker. These occupations are typical of those production oriented and non-production oriented animal science occupations. The research project involved a field study of manpower needs and competencies required by workers in animal laboratories and in meat inspection agencies.

Meatpacker Needs

The study revealed that approximately 250 animal laboratories in the United States employ an estimated 5,000 laboratory animal caretakers, and that the demand for these personnel will probably double by 1975. There is an urgent need for and a national concern for increasing the technical competence of laboratory animal caretakers. The demand for trained workers will increase even more in the future because of the development and use of special research animals in intensively sophisticated research programs.

On a regional basis, the thirty animal laboratories surveyed within a thirty-county area of northern Illinois employed a total of 354 animal caretakers at four job levels. These laboratories estimated that 492 additional animal caretakers would be needed to hire during the next five years, with about 80 percent of this number needed at the beginning-worker job level. The study revealed that approximately 51,700 persons were employed as federal meat and poultry inspectors in the United States. Federal officials anticipated that approximately 260 meat and poultry inspectors would need to be hired each year during the next five years. In the thirty counties and thirty northern Illinois area surveyed, federal and state meat and poultry inspection agencies currently employ approximately 232 meat and poultry inspectors. Approximately 215 additional meat and poultry inspectors will be hired during the next five years at the new-worker job level.

Animal Laboratory Caretakers and Meat Inspectors

This article reports the findings of Dr. Mayer's Ed. D., dissertation, "Occupational Education for Meat Inspectors and Laboratory Caretaker Jobs," which was completed at the University of Illinois. Leon A. Mayer and Lloyd J. Phipps are Chairs of the Departments of Vocational and Technical Education, University of Illinois and the University of Illinois, Urbana-Champaign.

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THE AGRICULTURAL EDUCATION MAGAZINE

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VOCA TIONAL AGRICULTURE AND THE CHALLENGE OF RURAL POVERTY

HENRY E. SCHMIDT, Teaching Associate The Ohio State University

Amidst the richest nation known to mankind is a shocking fact that one out of every six Americans are poor. A high proportion of these are destitute to the extent that families receive a mere 800 calories per day, compared to an average intake of 3,100 calories per day. Pellegrina, rickets, and scurvy, diseases supposedly nonexistent in this country, are commonplace among the rural poor. Even worse tragic is the human degradation of children possessing chronic sores of the upper lip, distended stomachs, large eyes and extreme malnutrition, all trademarks of serious malnutrition.

Programs of vocational agriculture have served rural America for over 50 years. In many rural high schools, agricultural education is the only vocational program available for students, young farmers and adults. Here our selection, curriculum, and program planning criteria was designed to meet with the needs of the rural poor? What can be done through agricultural education programs to help alleviate this paradox facing millions in rural America?

A Commitment

There is a commitment in America today, possibly greater in our own kind, to agricultural education as an instrument in assisting the rural poor. Legislation has extended funds in program development, training and retraining, and providing people with opportunities (for gainful) employment. The Vocational Education Amendments of 1968 authorize funds for persons who have academic, vocacultural, or other handicaps that prevent them from succeeding in the regular vocational programs.

The dimensions of chronic poverty in rural America are well known. Former Secretary of Agriculture Freeman asserts that rural poverty consists of too little of everything—job, income, services, education, and a continuing one-way exodus of people from country to city, which is damaging to country and city alike.

Education in rural America is also at least two years behind urban America. This gap may increase drastically by 1980. It may be surprising to most Americans, as pointed out by the 1967 President’s National Advisory Commission on Rural Poverty,1 that there are more than 700,000 adults in rural areas in 1960 who had never enrolled in school. About 3.1 million had less than five years of schooling. More important is the fact that 1.6 million poverty families are engaged in production families, 6 million farm operators under 18 age represent potentially the genesis for millions of new poverty families in the United States. This is the source of our discontent.

This pool of adults with low levels of educational achievement is being fed by a continuous stream of rural youth. More than 2.5 million rural youth aged 14 through 24 dropped out of school before graduation in 1960. About 8.7 percent of the same 199,000 completed less than five years of schooling. Poverty begets poverty.

Propertinently, there is more poverty in rural America than in cities. In metropolitan areas, for example, one person in eight is poor, in the suburbs the ratio is one in fifteen. Strikingly, rural areas one of every four persons is poor.


Overcoming Obstacles

Technical agricultural education must become increasingly cognizant of the age in which programs for the rural poor are to be developed. For the "knowledge industry" has resulted in influencing the requirements needed by rural people in making wise economic, social, and political decisions. Second, agricultural education has provided the "knowledge" to enhance educational, legal, advanced, thus requiring progresively less human labor in producing food and fiber for domestic needs, foreign markets, and substantial overseas donations. And third, the civil and human rights movement is changing the social order and perhaps the goals of agricultural education and the school and non-school environments.

Needed Developments

Programs of vocational agriculture can assist in providing the impetus necessary for an ammable solution to rural poverty. However, vocational agriculture alone is not the panacea for combating this serious problem, but a joint effort is required by all within the school organization.

In view of the magnitude, costs, and impact of rural poverty in America, vital program adjustments in vocational agriculture are needed. The following guidelines are suggested.

One of the foremost goals of agricultural education should be to provide for the rural poor. Re-examination and changes in current school policies at the local level are imperative. Additional time, flexibility, differential staffing, smaller class loads and a focus on learning as a lifelong continuous process are needed.

Realistic career objectives for the rural poor must serve as a goal for classroom and occupational experiences. Related career instruction should receive increasing attention for personification of vocational skills (reading, writing, and arithmetic) needed for job accession, careers, and entry into the world of work. Occupational experiences programs should be consistent with the interests, abilities, understandings and aspirations of the clientele to be served.

Coordination and cooperation with other school specialists is necessary. Pre-vocational experiences and vocational guidance and counseling are needed to assist students in making educational and occupational choices. Intrusive motivational elements, self-perception, and positive attitudes toward school, learning, and the world of work must be perpetuated.

A genuine effort must be made for parental involvement in the education of their children.

Specially prepared agricultural education teachers in Clinical, Diagnostic laboratories, both on-campus and off-campus, are needed for agricultural education teachers. Cultural backgrounds, life conditions, and the total environmental setting requires understanding if teachers are to feel empathy, and support educational programs for the rural poor.

A Fallacy

The conception that "pockets of poverty" exist throughout this nation is a fallacy. Poverty refuses to remain in pockets, but can be found in all rural areas throughout the United States. Teachers of vocational agriculture, regardless of geographical location, can find poverty within their communities.

However, it cannot be denied that heavy areas of concentration occur in the South. Outside of the South, Indian reservations in the Southwest and the upper Great Plains contain distinct concentrations of rural poor, along with New England and the upper Great Lakes regions. Severe rural poverty can be found in the Appalachian region, in the Great Plain to the east, the Okras to the west; and the Mexican-American segment along the southern border.

Vocational agriculture teachers are faced with the task of providing educational opportunities for a vast array of rural poor. Contrary to popular opinion, the majority of rural poor are white Americans. Although the percentage of two-whites living in poverty is greater than the percentage of whites, 11 of the 14 million rural poor are white. Also sharing in this perplexed dilemma are Indian Americans and Negro Americans.

NEW EDITION OF AGDEX

A new edition of AGDEX, the filing and coding system for agricultural publications, is now available from the Publications Department of The American Vocational Association. The system, which includes a spiral bound filing guide and 1,128 printed filing labels, uses the same filing system as the first edition. Additional sections now provide for filing professional materials and materials relating to off-farm agricultural occupations. An open section is included as well as new and simplified directions for use.

This new edition of AGDEX resulted from action of the Professional Information Committee of the Agricultural Education Division of A.V.A., who found AGDEX being used in 30 states and provinces in the United States and Canada. The committee determined needed changes and improvements and the Agricultural Education Division endorsed the use of this filing system in all of the states.

The AGDEX Filing System sells at $6.00 per copy and may be ordered from the American Vocational Association, 1310 H Street, N. W., Washington, D. C. 20005. Orders not accompanied by payment will have postage and handling charges added to the bill.

The Time Is Now

The fact that millions of American rural people have been left behind by an affluent society should be reason enough for immediate action. Vocational agriculture has served well the needs of rural Americans—its major concern has been well-being of rural people with a focus on their occupational life. The winds of change have certainly occurred in agricultural education programs; however, the rural poor can no longer be avoided. Is the profession ready to meet the challenge?
Pilot Program in Agricultural Products for High School Students

WILLIAM T. ROMDINSON
Teacher of Agriculture
Rosholt, Wisconsin

The work "education" has many meanings. To some it is textbooks and problems; to others it is providing experiences which assist youth in developing a better perspective of self. In vocational programs the series of educational experiences help the student gain understandings of self as they are related to the world of work. Most graduates of Rosholt (Wisconsin) High School would like to remain in that community where the deer are plentiful and where they find trout in a babbling brook. Most of the students would like here if jobs and suitable education for those jobs were available.

Program Revision

After reviewing the vocational agriculture program at Rosholt High School, it was decided that a revision should be made for providing more experiences for students. Upon further study, it was decided that not only should more experiences be provided, but experience in an area that would provide training for work areas that would keep students in the community or close by. There is a high level of interest in the vocational agriculture program as indicated by an enrollment of 55 students in high school classes for 1967-68. Total high school enrollment was 92, for that year was 253.

An "Agriculture Industry" program submitted by officials at Rosholt High School was one of the pilot programs approved by the Wisconsin Vocational Agriculture Pilot Programs Committee. The program started in July, 1963. We are now in our second year of operation. The program deals basically with meats and the meat industry.

Agriculture Industry Program

The Agriculture Industry program covers the processing of meat, meat grading, pricing, and merchandising with the objectives of the course being two-fold. First of all, we are interested in giving students training whereby they can gain employment after high school with a definite skill. Second, we know that not all students are going to be employed or will want to be, but they can be better consumers because of this course.

In trying to achieve these objectives we give students the experience of processing meat animals, both in live and carcass form. They start out with utility grade animals and work up to the higher grades, so that not only do they have the experiences of processing but gain a knowledge of quality meats. Students are also taught that the meat industry is more than processing. For example, they do a unit on advertising and merchandising.

The school's laboratory facilities are small and enrollment is limited to 12-14 students. The students are mostly who show an interest in meats. Enrollment is limited to 12. Several girls are enrolled. The guidance department has cooperated very well in enrolling students.

Activities

Students work both in the meats laboratory and at the local abattoiry two to three days a week. Students work with the local protein processors learning some of the basic fundamentals of slaughtering. A local processing plant permits students to work with their regular employees.

During the course, which runs for the entire school year, the following topics are studied:

-Introduction to meats
-How to select meat
-Dissection

Students in the Agricultural Industry Program at Rosholt High School study the wholesale cuts of beef.

-Flavor testing
-Meat cutting which includes actual process followed all the way from slaughterhouse to break-down into retail cuts; wrapping and sausage making.

Advertising

From the basic course we find that the experience that young people have gotten will enable some of them to take their place in the community with gainful employment. This past year six students were placed with super-markets and slaughtering plants, but many more could have been placed. There were three jobs for every student graduating from the course.

When high school graduates look ahead to post-high school education, many fail to consider or overlook an interesting, challenging, and rewarding area — food processing technology. It's an easy matter to speculate as to the reasons for this lack of interest — low pay, long hours, more glamorous areas, need for greater preparation and more information by colleges, lack of industry support, and so on. But this specialization is comprehensible. What is productive and what is known is this: the industry is a dynamic one; opportunities for two- and four-year college graduates in food processing technology are substantial; and, the industry is in very short supply of college prepared employees.

The Curriculum

The food processing curriculum at the State University College at Morrisville, New York, was first offered in 1945. This was the result of cooperation and work by the College and the New York State Packer and Processors Association, now the Associated New York State Food Processors, Inc. Post World War II emphasis was placed on quality control of food and increased need for technicians led the Associated Food Processors, Inc. to survey two-year colleges in New York State for the purpose of establishing a program in food processing. Morrisville was selected as the first class was graduated in 1947. The Education Committee of the Association continues to serve as advisor to the College's food processing department which contributes to a changing and thoroughly modern curriculum reflecting changes in the industry.

The purposes of the program are two-fold: to serve the individual student and the food processing industry. The curriculum provides industry with personnel who have completed two years of technical training. These young men and women are provided a background in theory of the conventional and newer methods of food preservation as well as strong practical experience gained in a modern pilot plant and in summer work with food processing companies. The food processing curriculum is not research oriented, but the student does learn the "why" as well as the "how" of food preservation. Two-year food processing graduates enter the industry at the "grass roots" level in food processing plants, as supervisors in production and maintenance, technicians in quality control, salesmen, and so on.

The curriculum is so designed that many students with strong preparation in high school mathematics and science, who perform well during their two years at Morrisville, transfer to a four-year college to pursue a baccalaureate program in food science. A number of these students continue with graduate programs.

The food processing curriculum includes the sequence of required and elective courses indicated in the accompanying chart. Students also receive credit for summer cooperative work experience between the first and second year. Food processing electives include meat processing, packaging, food plant maintenance and equipment, pilot plant supervision, and quality control. All food processing and closely related courses include laboratory work as well as lecture.

Laboratory experience in food processing courses is provided in a modern pilot plant which utilizes industrial size equipment. Some pieces of the laboratory equipment have been gifts of industry. In addition to actual processing (Continued on next page)

List of Courses

Food Processing Curriculum

FIRST YEAR

First Semester
Language and Composition
Microbiology
Ground Cover
Mathematics
Food Preservation

Second Semester
Social Science (elective)
Food Plant Sanitation
Quality Control
Physical Education
Food Processing Electives

SECOND YEAR

First Semester
Social Science (elective)
Food Plant Sanitation
Quality Control
Physical Education
Food Processing Electives

Second Semester
Social Science (elective)
Production Administration
Food Preservation (canning)
Physical Education
Biological Sciences
Students in food processing technology programs spend a great deal of time learning about the production and processing of agricultural products. This is also recommended as a personal reference to agriculturists, cattlemen, and feedlot operators.

Keith R. Fleen
Washington State University


This book presents practical information in non-technical language about the causes and methods of preventing the deterioration of stored grains and seeds. The authors emphasize the role of fungi but information is included on problems with insects, moths, and rodents.

The book will be of special interest to grain merchants and processors, elevator managers and operators, grain inspectors, and others concerned with food processing.

Clyde M. Christensen is a Professor of Plant Pathology at the University of Minnesota. Henry H. Kaufman is the Manager of the Grain Research Laboratory of Cargill, Inc., Minneapolis, Minnesota.

This book is valuable to those mentioned above plus post-high school students studying the grain business or agribusiness industry dealing with stored grain. High school students working in the stored grain industry or food processing would also profit from reading this book.

Lynn Bousher
Ohio State University

BOOK REVIEWS
GERALD R. FULLER, Special Editor
University of Vermont


Beef Cattle Science is a modern beef production text. It covers all areas of beef cattle production. This book reflects the technological advancements and improved practices necessary for modern beef production. It contains several new and revised sections which reflect the modernization process. A new chapter has been added to cover the business aspects of beef production.

One graduate was complimented via radio by astronaut Neil Armstrong on the moon-lading Apollo 11 voyage for the excellence of the specialty prepared, specially processed beef. Others, not so widely recognized, have worked in the supervisory or middle management positions where they started to positions in top management.

It should be pointed out that problems do exist in the two-year food-processing program. The most pressing is in the recruitment of students. It is no longer possible to rely solely on the efforts of the College's admissions counselors to recruit students for twenty-eight curricula. Food processing department staff members visit a number of high schools and speak to service clubs and other organizations. Attractive literature describing the program is widely distributed. However, of particular significance is the trend toward industry cooperation in training students. In addition to recruiting help, more than twenty industry-sponsored scholarships make the food processing curriculum more attractive to high school students.

The demand for our graduates will far exceed the supply. Solving this basic problem is the continuing job of the colleges and the industry they serve.

This chapter (XIV) includes capital needs and sources, guidelines relative to facility and equipment costs, management, incentive bases for hired labor, budgets, computers, credit, owned feedlots, custom (contract) feeding, how to analyze the cow-calf and cattle feedlot business, predicting what is ahead, beef futures trading, and income tax.

Revised sections of Beef Cattle Science include Section I of the appendix. This section includes the glossary and abbreviation of energy terms, NRC (nutrient to calorie ratio) nomenclature, feed term abbreviations, and more detailed data pertaining to the composition of foods; Section IV, Comparison of Metric and Avondalea Systems of Weight and Measures, is also an addition to the appendix. Chapter VI was revised to include hormonal control of estrus in cows. Chapter VII was expanded to include how to balance a ration by the computer and methods and measures of energy content. Chapter XII added a section which included a cattle feeding and grain and forage control program. Chapter XIII was rewritten to include the applied production technology and management to each system of beef production. A section on feedlot operation and management was added to this chapter.

Dr. Raemiker served for twenty-one years as chairman of the Animal Science Department, Washington State University. Prior to that he served on the staff of the University of Massachusetts, the University of Minnesota, and the U. S. Department of Agriculture. Currently, Dr. Raemiker is the Distinguished Professor, Wisconsin State University. Dr. Raemiker is also the Co-Author of The Stockman's Handbook, Sheep and Wool Science, Swine Science, and Horses and Horsemanship.

Beef Cattle Science is an excellent text and reference for secondary, post-secondary, and college classes studying practical and scientific methods of beef cattle production. It is also recommended as a personal reference to agriculturists, cattlemen, and feedlot operators.

JAMES WALL
Executive Secretary


One copy of this publication should be available to all teachers in a school. A total of 262 titles available from 98 different series. Agricultural educators will find this guide an excellent reference for use in agricultural education.

REFLECTIONS ON COMMUNITY DEVELOPMENT EDUCATION by Arvyn E. Bennett. Oregon State University, 1970, 101 pp. $5.00.

This is a publication of the Northwest Regional Extension Public Affairs Committee and was sponsored by The Farm Foundation. Content includes: Educators' Role in Community Development; The Story of Community Development: The Practice of Community Development; Role of the Educator; The Problem-Solving Process; Boar's Eye View: A Community Development Education: Growth of the Community Development Education.

February, 1970

THE AGRICULTURAL EDUCATION MAGAZINE

News and Views of NVATA

JAMES WALL
Executive Secretary


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Lynn Bousher
Ohio State University

FEBRUARY, 1970

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Since 1953, FFA members in Minnesota have contributed over $206,000 in physically handicapped campers. The funds have been used to build a speech therapy building and greenhouses on the Camp Courage grounds. (Photo by W. J. Korteavel, Minnesota FFA Executive Secretary)

Instructional programs in forestry have been provided through the past two summers. Discussing a project made in the 1969 session are (left to right) Jesse Clark, Vocational Agriculture Teacher at Gentry, Minnesota; John D. Todd, Assistant Professor at Agricultural Education, University of Tennessee; and Henry O. Wileman, West Tennessee Supervisor of Vocational Agriculture; Dr. William R. Bell, East Tennessee Supervisor of Vocational Agriculture; and John R. T. Todd, Assistant Professor of Agricultural Education, University of Tennessee. (Photo by A. B. Foster)