THEME: Urban Programs
Can Vo-Ag Adapt?

Many urban areas have successful programs of vocational-technical education in agriculture. These programs are often not the same as those found in the rural areas. In effect, attempts have been made to adapt the programs to the educational, cultural, political, and economic environment of the urban areas.

Adaptations
Adapting means that something changes (or is changed) to better conform to the circumstances under which it exists. Several examples of how vocational agriculture has been adapted for the urban areas are described in this issue of THE AGRICULTURAL EDUCATION MAGAZINE.

Adaptations are needed in order to operate a program which was established to serve rural youth and adults. Program components and procedures which work well in rural areas may not work well in urban areas if transplanted from one to the other without making adaptations.

Adaptations must be made in the instructional program, delivery of supervised occupational experience, FFA program of activities, and adult youth adult education. Urban programs involve many of the same principles of program delivery but the details may be modified.

We must assess what is appropriate in urban programs. A good example is the role of the teacher. Vo-ag teachers in rural areas are often perceived as community and agricultural leaders. There may be considerable visibility among the clientele, whereas in urban areas, teacher visibility is often less. The teacher may be more school-based in program delivery.

The future of urban programs relates to the effectiveness of the leadership provided. The leadership will come from all levels of education — local, state, and national.

This Issue
This issue of THE AGRICULTURAL EDUCATION MAGAZINE features urban programs. Dr. Richard M. Hyton of California Polytechnic State University — Foothill has served as Theme Editor. His assistance in obtaining articles and photographs is appreciated. —

The Cover
On the corner of Lemon and Berkeley, amidst the urban sprawl, a vocational agriculture program flourishes at Fullerton (California) High School. Vocational agriculture programs in urban areas continue to meet the needs of students with interests in ag-griculture. (Photograph courtesy of Richard M. Hyton, Pomona, California)
Urban Programs: Success At Last?

As a part of the preparation in addressing a topic, a writer often gleaned the available information. Some interesting things entered my mind as I read through writings on urban programs recorded in the annals of this magazine. Some thoughts of earlier writers on urban programs include the planning and development of urban programs, the facilities required, the agricultural needs of urban areas, and the responsibilities and training of teachers for urban programs. Many other writers have cited examples of successful urban programs. Let's review some of the advice given by others on this topic.

Their Advice

Writing some 18 years ago, McClay stated in his article on "Our Future in the Urban School" that vocational education in agriculture needs to expand in at least two frontiers — in adult education and in urban schools. Other authors have addressed the problem of planning successful urban programs. Sears, writing 21 years ago in this magazine entitled "Vocational Agriculture for an Urban Area," states "considerable organization through advisory committees, school officials, cooperating enterprises, and vocational agriculture supervisors would be necessary to develop a vocational agriculture program which would fit the community needs in an urban area." Many authors have advised us on teacher responsibilities and abilities in conducting urban programs. Woods, stated in his editorial, "No Bed of Roses," that "creativity and ingenuity on the part of the teacher become especially important in dealing with the problem of securing appropriate facilities and carrying out a new and different (urban) program.

McMillion suggested that teachers involved with school farms (common in urban programs) "should be involved extensively with the laboratory facility related to their teaching" and "the teacher of the related subject must be the manager of that facility." In addressing the topic of urban facilities in 1964, one author wrote in his magazine that "a number of greenhouses as necessary facilities in teaching horticulture in urban areas. This idea has been incorporated not only in urban programs, but rural programs as well.

Tangible Results

Advice from others is only as effective as the results they produce. How far have we come in developing urban programs? Have urban programs met with success? Has vocational education in agriculture crossed the frontier? As McClay addressed in 1964? Recently, while looking for my teacher's telephone number in the California Vocational Agriculture Teacher's directory, this author noticed the following statement: "The Los Angeles City Unified School District has 70 teachers offering agriculture courses in junior and senior high schools, 4 special education programs, 2 occupational centers, and 1 magnet school.

Tangible results of the efforts of the teachers are the growth of the district's agriculture program. The program has increased in size and scope in recent years. With the addition of new facilities and equipment, the teachers are able to provide a more comprehensive education for their students.

Future Challenges

Vocational agriculture has crossed the frontier in establishing successful urban programs. Our leaders have endorsed the use of excellent advice and implemented many successful urban programs; however, the task is not complete. Many urban areas of our Nation do not have programs in vocational agriculture. While unemployment rates, especially in urban areas, are high, there is a need for more vocational agriculture programs. In order to develop these programs, the educational community must work closely with business and industry to provide the necessary resources and facilities.

Vocational education programs in urban centers in this country need to expand. Programs must be relevant to the needs of urban youth. The Vocational Agriculture Education Program must adapt to the changing needs of urban youth. This can be achieved by incorporating urban agriculture into the curriculum, providing practical experience in urban settings, and focusing on issues relevant to urban living, such as city planning and urban agriculture.
The Urban Dimension

(Continued from Page 5)

ered by small and large gasoline engines. Simple push
lawnmowers need to be adjusted to work correctly. More
complicated equipment requires the knowledge of small
engine mechanics and maintenance and repair. An owner of a
landscape maintenance business once confided to the author that
an employee who could keep equipment repaired was worth a gross
profit of more than $200 a month, who could only operate that
device. The reason is obvious. Time and downtime costs money. Many other areas of agricul-
ture also use small engines. The area of agricultural
mechanics is a must for urban programs.

Small Animal Production and Care. At this glance this
area of agricultural education appears limited in job opportuni-
ties. However, one only needs to look in a telephone direc-
tory for an urban area to see the large number of animal-related
businesses that become potential employers of the youth trained through urban vocational agriculture pro-
grams. Veterinary hospitals, pet shops, animal protective
organizations, zoos, and urban rabbiters and suppliers are
listed. Many animal care facilities are not listed because they
are units within other operations. One that came to mind is a
major radial faculty in a large urban city with over one acre of animal care operations under-
ground. The animals are part of the teaching programs for
the faculty. Medical and veterinary assistant trades and careers
are listed. Students are part of the teaching programs in that
city where animal care is part of the education.

People are needed to care for these thou-
sands of animals. Many students may find it profitable to begin raising livestock for sale to research facilities, pet stores, or other businesses dealing with animals.

Small animal production and care is a large business in
urban areas and should not be overlooked as a potential educational program.

Agricultural Products Processing. This particular area of
potential instruction has unlimited opportunities. From the
produce department of each and every supermarket to the
Railroad's Warehouseable Inspection Agency, there are oppor-
tunities for young people to be involved with the prepara-
tion of agricultural products for the ultimate consumer.
Everyone needs to eat and with the large production areas
being further and further from the ultimate consumer, there
is great need for people to grade, inspect, process, package and display the products of American agriculture.

Environmental Management. People are beginning to
realize the need for protecting our environment. Much of
the work must be done by people who understand agricul-
ture and its importance to our existence. The importance of
pure water, clean air, and non-polluted soil for produc-
tion of agricultural crops is becoming more apparent each
and every year. Solar and wind energy can also be har-
nessed in many cases to benefit the urban dweller. Voca-
tional agriculture students trained in urban programs can
work closely with industry and others to see that the envi-
ronment will be a clean, safe, and useful place for years to
come. Horticultrue. Urban offerings in horticultural areas need to be expanded to include subject areas beyond the tradi-
tional florist shop, landscape maintenance, and garden center offerings. Horticulture in urban areas includes turf
work on golf courses and in large downtown areas, forestry or
tree care for the thousands of residential homes and acres
of parks, as well as many other horticultural-type occupa-
tions. Horticulture is a valuable agricultural education tax-
one for urban areas and should be used in its entirety.

There are other agricultural endeavors that might be
worth exploring for certain urban areas. Some old mill and
factory areas which may have required water to operate may
now have canals and other water features which could be
used for fish rearing. Many older factories were
built with sky lights which could provide for natural light
for other agricultural endeavors.

The most important step in the establishment of any
type of urban program should come before funds are ex-
pe nded for facility or equipment. The first step is to deter-
mine through the use of advisory councils and area surveys
if new courses such as those previously mentioned are
needed. If it is determined that the courses are needed, then
and only then should staff be hired.

Planning Considerations

Several very important considerations should be exami-
ned at this time. The first consideration should be the type
of student that will be enrolled in the course. Urban stu-
dents have not been raised with all the appreciation for
the agricultural life that most rural youth have. Many of
the urban students have not grown up with the technical
agricultural skills that rural children have. This is not to
say that urban youth are to be considered disadvantaged
youth. Rural youth would have similar problems if they
were to be exposed to programs which might be considered urban. Urban youth would be lacking a "citywise"
mentality if transported to an urban environment.
The reverse is true for urban youth. A second considera-
tion should be to insure that the in-
structors of an urban vocational agriculture program are
also "citywise." Youths enrolling in a new program will not
wish to be called "countrypeople." They will not be
skeptical of an agricultural program in the urban area and
an unprepared instructor will only add to this skepticism.
Third, approval from the state board of education is the
common link. There must be at least approval of an urban board of education to the vocational agricul-
ture program. The program should be a year-round pro-
gram as it is in most rural areas. This may be where state
staff and teacher educators can help the most. Urban
school committees will not always see the importance of
extended service. State staff and teacher educators should
be prepared to explain the value of extended service. The
reasons for extended service in rural areas are just as valid
in urban areas and should be stressed from the very begin-
ning.

A fourth factor important to the success of an urban
program is commitment of the board of education and
local school administration to supporting the estab-
lishment of an FFA chapter. Urban youth will very quickly
point out that they do not want to be called "farmers." It is
at this stage that small-city educators are prepared to sit
with the young people and be prepared to talk and listen.
Urban youth have just as much need for the FFA as do
rural youth, but urban support of the FFA is fre-
quently less obvious if it is presented to them correctly. One key is to make sure that student leaders and opinion makers are on your side, not speaking. FFA leaders will sell the program faster than anyone else.

New FFA chapters must have activities that are of in-
terest to the urban youth. School judging contests and
public speaking contests can be a spark, because like rural
youth, urban youth thrive on competition. If an ur-
ban school system has more than one school with an FFA
program, a city-wide council should be established, similar
to city-wide student councils. Once the urban youth have developed a widespread interest in being a part of agriculture, they should begin to participate with other FFA chapters throughout the area.

Kellett in her article, "City Chapters Are Worth the Eff-
ort," uses the example of a city of 2,000 people. She
states, "Voca-
tional student organizations offer opportunities for urban students to achieve their potential as they experience personal
growth, a sense of direction, achievement, and the rewards of leadership. The ingredients for success are enthusiasm from urban vocational teachers and chapter
advisors, administrative support and encouragement, a high level of city-wide organization and coordination, and student motivation," Kellett continues, "it's working... and it is worth the effort."

A fifth and very important consideration for any urban vocational agriculture program is the need to insure that the youth enrolled participate in meaningful supervised oc-
cupational experience programs. For most urban youth this means placement for agricultural experience. Super-
markets provide placement sites for meat cutters and pro-
duce workers. Small animal workers can work for animal
protective leagues and zoos. Environmental protection agencies and water treatment plants, small engine repair
shops and small implement dealers, golf courses and tree
crewn in parks are all areas where urban youth can gain meaningful experience. This component of an urban pro-
gram, along with the concept of extended service, is neces-
sary to make the program significant to each and every student.

It would appear that if agricultural educators are going
to meet the expanding needs of the agricultural community,
the urban youth should be considered for basic vocational
agricultural programs. Our urban youth, our profession, and our country deserve no less than that commitment from us.

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BOOK REVIEW

ELLEMIARY Forestry, by B. McManus Collins, Fred M. White, Reston, Vir-

Elementary Forestry was written as an informational and semitechnical text about forestry in the United States. It is intended for an introductory text for high school students in beginning forestry seeking an understanding for basic information and an awareness of forestry. This text contains fourteen chapters of information which range from the history of the United States, to information about government assistance programs in forestry. The text covers all basic areas of forestry including silviculture, forest pathology, entomology, mensuration, logging, and fire management. Basic information is included on each subject, with enough depth in some areas. Chapters on econom-
y and recreational uses are covered in a more technical text. One chapter, "Forestry Abroad," discusses world-wide forest resources, forestry in Europe and international forestry organizations.

The authors of this text are well versed in forestry education. B. McManus Collins received his Doctorate in Education from Duke Univer-
sity. Fred M. White is Professor of Forestry and Environmental Studies at Duke University.

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Teaching Horticulture To Handicapped Students In Urban Areas

A horticulture program for handicapped students has been established at Virginia Randolph Special Education Center, a public school which serves Henrico County, Virginia, a suburb of Richmond, the capital city. The school provides educational needs as well as vocational opportunities for the trainable mentally retarded (TMR) and the severely and profoundly handicapped (SPH) population, from 5 - 22 years of age. Virginia Randolph strives to achieve a balance between academic and vocational preparation. Vocational training begins when the child first enters the facility and continues through young adulthood.

Ornamental horticulture is one of the three vocational classes offered. This program provides an opportunity to develop skills and abilities required for employment. The emphasis is on basic plant propagation, plant care, the responsibilities of a greenhouse worker, and landscape maintenance, with special attention given to safety in handling and operating hand and power tools. The course offers instruction on procedures used in applying for jobs, such as signing applications and job interview etiquette. Academic instruction is geared to practical application that may be necessary for employment in horticulture. It includes such areas as reading a thermometer or measuring volumes by spoon or cup. In addition, the students learn to punch a time clock. Reading is kept on the level of recognizing survival words such as warning or danger, or signs seen and used on streets. Do Not Enter, Dead End, No Parking Only. Upon completion of the course, the student is prepared to seek employment in various horticulture jobs.

In addition to vocational skills, instruction is provided in self-improvement, especially personal grooming, good employee attitudes, and the value of work.

Job Placement

Five steps are used to facilitate job placement. To begin the process, the student must be "staffed" in a vocational class, provided he or she is capable of being employed in a field suited to his or her interests and abilities. In the first step the student will undergo evaluation and training in his or her chosen field. The student then enters the work experience program which is a work hours a day. Part of the time is considered work experience, while in the other, the student receives monetary compensation.

The program is a cooperative effort among the vocational staff, the student, the parents, the community, and the school system. It provides in-class training and actual on-the-job experience. Virginia Randolph's staff includes a work coordinator, who acts as a liaison between these two.

The student in the work experience program is placed in a working position on campus, where his or her teacher or other school personnel acts as supervisor. When all of the people involved have agreed that the student has met the established criteria, the student is placed off campus, possibly at a nearby school or other county facility. In the fourth step, the student is adequately prepared, he or she is placed in a competitive employment in the community. A job trainer will usually accompany the student and remain until he or she is comfortable and able to complete the job duties. The fifth and final step deals with follow-up. Communication is kept open between our work coordinator and the student's employer in order to remain informed as to the student's progress or regression.

Good Employers

Good employers also play a key role in making the program successful. They must be patient, understanding, and willing to give a little extra effort in dealing with these individuals. The students become easily disoriented when confronted with making decisions, or confused when given too many instructions at one time, especially if given by more than one person. However, these individuals are gentle and conscientious workers and take pride in their jobs, regardless of how repetitious or tedious.

Transportation is the greatest obstacle we encounter. It is unlikely these individuals will ever have a driver's license, making complete independence even more difficult to achieve. We must utilize all available resources, whether it be arranging a ride with family or fellow employees, or training them to use public transportation on their own.

Success Stories

Programs like ours all have success stories. One of our successes occurred when a student, a 22-year-old from Virginia Randolph in the early '70s. Due to his mental limitations, his progress in academics was very slow. His vocational skills, however, were excellent. He enjoyed working with plants, and followed directions well, learning quickly through "hands on" experience in the classroom. As he became evident that he was ready for employment, he was placed in the work experience program as a greenhouse assistant on campus. The next year he proved himself competent and independent of the program. He was then placed at "The Greenhouse", a local horticulture business in Glen Allen, Virginia. The owners were receptive to our program and agreed to hire him as a part-time employee. He worked in the mornings and returned to school in the afternoons, transported daily by school bus. He continued as a part-time employee at "The Greenhouse" for the remaining two years at Virginia Randolph. Upon graduation from the facility in 1979, he was hired at "The Greenhouse" as a full-time employee. Transportation is no longer a problem as he is transported daily to and from work by a fellow employee. He has proved to be a faithful and reliable employee, working a day's worth of work unless it is absolutely necessary. The owners have found a loyal employee in him, and he has found a secure and rewarding position for himself.

With practical experience in the classroom and on-the-job training, Virginia Randolph is working toward its goal of successful training and placement for handicapped students. Our goal is to achieve proper job placement for retarded adults in order that they may become contributing members of society.

BOOK REVIEW


This is the third edition of a book by a highly respected author in tropical agriculture development. It updates and adds to the previous editions.

FARMING SYSTEMS IN THE TROPICS presents a comprehensive description of tropical farming systems. It describes rural life from the basis that farms are systems, that they interact with the environment in economic terms. The descriptions of the various systems stress the interactions between the technical and economic aspects of farming.

This book is a descriptive classification of tropical farming systems. Seven major systems are described: shifting cultivation, fallow systems, ley and dairy systems, permanent upland cultivation, irrigable irrigation farming systems, systems with perennial crops, and grazing systems. Each system is described and illustrated with multiple examples. The farm management data provided for the examples include labor applied, land area, yields, economic returns and productivity.

Farming systems are viewed as dynamic, changing and evolving over time. Each system is described from initial stages through sophisticated, highly evolved climax stages. Once a farming system is classified, a sense of its potential for development and future stages is provided.

This book is a helpful resource for anyone doing research in tropical agriculture development. Eugene Anderson University of Minnesota St. Paul, Minnesota
THEME

Agricultural Education in the
Los Angeles Unified School District

The pledge, "To practice brotherhood, honor rural opportunities and responsibilities, and develop those
qualities which a future Farmer should possess," was recited in the Opening Ceremony of every FFA meeting. Taken in its entirety, the objectives in the pledge are appropriate to most FFA chapters in the Nation. However, (and it may come as a surprise to many readers) Los Angeles, an urban center in the trust with a population of over three
million people, conducts an extensive and effective agricultural education program with its concomitant FFA chapters.

Production Agriculture in Los Angeles County

Los Angeles County, located in a once semi-arid basin bordered by the Pacific Ocean on one side and series of mountains ranges on the other, was transformed into a center for agricultural production in the early 1900's. The key factor was the transfer of water from the watersheds surrounding the basin, which (coupled with an ideal climate) created agricultural bonanza. Los Angeles was the leading county in agricultural production in California for many years. Such crops as citrus, fruits, berries, truck crops, and nursery stock were grown.

Following World War II, a dramatic growth of population in the area caused much prime agricultural land to be converted to industrial and residential complexes. With the influx of people and the loss of valuable agricultural land, Los Angeles County lost much of its production capabilities. However, it still ranks first in the nation in ornamental and nursery stock and horticultural crops which totaled $122,500,000 in 1980. The County ranks as the largest wholesale distribution center in the nation.

Agricultural Education

During the first half of this century, when agricultural production was a major economic factor in Southern California, production agriculture was emphasized in the Los Angeles City Schools as well as in rural areas. During that period of time, graduates of the program went to work on family farms or were employed by growers. Thus, the program served a meaningful purpose.

However, decades later, leading into the '60s, a diversity of demographic, sociological, meteorological, technological, political, and air quality factors necessitated a change in its emphasis from production agriculture to ornamental horticulture and agricultural business in concurrence with the needs of the student population and local industries.

Despite the success of some urban agriculture programs, many are facing problems. There is often a lack of awareness of the potential of vocational agriculture within the City. Since there is no established tradition of urban agriculture, recruitment of both teachers and students is difficult. The transition of rural-oriented teachers to new positions in urban areas requires great changes in concepts and techniques, and staffing in the City is often a difficult task.

Membership in the Future Farmers of America has been a continuing problem, although it has been accomplished with a high degree of success in high schools in the suburbs of Los Angeles. There are currently 21 chapters in the District with slightly more than 500 members. In the inner city, where there is a predominance of ethnic minority students, acceptance of FFA is noticeably lacking. Understandably, a Black or Hispanic teenager, who has grown up on concrete and asphalt, is unable to identify as a future "farmer." Unfortunately, it is these very young people who have the greatest difficulty in obtaining employment and are in the most urgent need of vocational training to move successfully from school into the world of work.

There is no formalized agricultural education program in the 427 elementary schools in the Los Angeles Unified School District. Enrollment of secondary students (grades 7 through 12) in the district totals 250,000 with 28 junior high schools and 26 senior high schools offering programs in agricultural education. Each agricultural unit consists of a greenhouse, propagating room, lath-house, greenhouse, soil storage bins, and from one to five acres of land for plant science activities. Some schools have facilities related to animal husbandry.

The philosophy of instruction in the junior high school is that every student enrolls in a series of short-term practical art classes (horticulture, wood, electric, drafting, cooking, sewing, etc.) for exploratory purposes. In the ninth grade, students are allowed to enroll in an elective program of horticulture or floriculture/floristry. Upon entering the senior high school, students interested in pursuing agricultural studies and possible careers in agriculture enroll in a core class entitled Introduction to Agriculture. After completing this introductory course, the students elect to concentrate their/her studies in horticulture, landscape horticulture, floriculture/floristry, agribusiness, animal science, or urban forestry. Two additional years after the introductory course is used to prepare the students with the needed proficiency in their chosen areas of emphasis to qualify for employment or for training at a higher level.

Our supervised occupational experience component has had to be modified because of limited space and residential zones. These factors restrict large production type projects or school. On-site projects are related to home landscaping and work-experience in such enterprises as nurseries, flower markets, florist shops, produce markets, pet shops, and feed stores. Although this arrangement is likely to be expanded, it still requires abilities in the basic skills related to the business principles associated with the student's project record book. This is accomplished with a project possessing practical agriculture skills.

The relationship the school has with the community agencies is important to the conduct of a viable agricultural program. Los Angeles Beautiful, a civic organization dedicated to the improvement of the City's natural beauty, has been formally involved in both the agricultural and floriculture programs. Each year since 1949, the Los Angeles School District and Los Angeles Beautiful have cooperated in a "Festival of Flowers" project which provides junior and senior high school students the opportunity to beautify their agricultural units, school campuses, homes and commercial buildings participate in this program each year. Their projects are judged by educators, community leaders, professional nurserymen and landscape experts. Awards are presented at a banquet attended by approximately 600 persons, including students, teachers, parents, school administrators and community representatives. Activities of students and teachers in this annual event have made a major contribution in developing public awareness of the need for a clean, attractive environment.

A concept unique to California is the Regional Occupational Program (ROP). This is an augmentation of the vocational agriculture program in the high school. Specialized programs such as Floral Design; Landscape Design, Installation and Maintenance; Natural Resource Management; Urban Forestry; Animal Care and Control; Small Animal Care; Professional Pet Grooming, and Veterinary Assisting are provided after school and on Saturdays. A tremendous benefit of this particular delivery system is that the training is provided at an actual site and by a person "in the trade." The training is realistic, and the more promising students often gain employment at the site where the training is completed.

The Tomorrow

Predicting the direction that education will take in the near future is impossible. With resources for the continuation of quality vocational agriculture programs being reduced at all levels, creative thinking on the part of both teachers and administrators is required in order to continue the technical training and character development of students who will be the backbone of our society. In the future, will be more important than those involved in agricultural occupations, enhancing the quality of the environment, and producing food for an expanding population? The answer is unmistakably clear.

BOOK REVIEW


The publication is designed as a comprehensive reference guide to agriculture and the world's food systems. The book is referenced in a A-Z Format. There are approximately 800 entries. In addition to the major crops and animals grown in the world, the reference includes the minor crops and animals that contribute to the diet or economy of particular countries.

The maps contained in the atlas section of the publication pinpoint the areas of production. The statistical section includes data on world yields, production and consumption of agricultural products.

The World Food Book would make a valuable addition to the agriculture library of a middle school, junior high, high school or postsecondary institution. Agriculture students and teachers will find this publication useful, well illustrated, and a valuable reference.

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Students enrolled in vocational agriculture at North Hollywood High School display recent awards attained through competition in the Los Angeles Beautiful Program. (Photograph courtesy of Richard M. Hyten, Pomona, California)
Not too many years ago, most of Orange County, California, was covered with orange groves, dairies, and crops. As the mass migration of people to this area took place, the dairies, orange groves and most of the farms moved on. However, many of the high school agriculture departments that prepared the children of those farmers remained and actively teach agriculture today in the middle of hurried city life.

The story may be different in your area, but whatever the case may be, the facts are that agriculture programs not only exist, but often flourish in urban areas. This article will address some of the basic questions concerning their purpose, success, and continued existence.

Meeting the Needs

Are urban programs successful? Can urban students find agriculture jobs without moving out of the area? Yes, they can. Let's forget, once and for all, that horiculture is becoming more and more a significant part of the agriculture picture. Quite often in urban areas you will find the integrated agribusiness, agricultural processing plants, and many acres of land devoted to crops within or very near large urban areas. Landscape design, installation and maintenance, nurseries, and florists are just a few of the successful agriculture businesses employing many people year-round, especially in urban areas.

The vast majority of young people in urban high schools have no understanding of the variety of agriculture careers available. Most of their parents, I'm sure, would agree that, "my son or daughter is going to be a lawyer, not a farmer." Do agriculture departments have anything to offer these individuals? A good lawyer should possess excellent public speaking ability, to be able to make sound judgments, and in order to get through school, he or she must be very responsible and competitive. A lawyer should also be familiar with accounting principles in order to deal with business for which he may have to keep the books. Leadership is important in order to be able to encourage others to take the right path. What program at the high school level could prepare a person in all these areas?

In my opinion the most effective program would be the vocational agriculture program. We often forget those things which our program offers to those who later choose a career other than agriculture. The record keeping skills taught our students are sufficient to run some small businesses. The FFA is one of the few areas of academic competition remaining today. The public speaking and leadership opportunities are often greater than those offered in all other campus programs combined. Each person in a successful agriculture program and participating in the FFA provides an enriching experience for many urban students.

SOE -- Urban Public Relations

Student and vocational agriculture department projects often serve as good public relation tools. Far too many urbanites think that the high cost of food is directly attributable to farmers' profits. This misunderstanding is prevalent in an urban society far removed from agricultural life. Urban agriculture programs provide the means to instruct the public in the production, marketing, and distribution of agriculture products. Consequently, this instruction makes them some of agriculture's best ambassadors.

How can students have projects in the city? Many are unaware of the successful school farms existing today and that urban land is zoned for this purpose. You may be driving down a busy boulevard and see sheep and beef grazing in a small pasture. So long as school boards because of zoning restrictions cannot raise large animals, instead, they emphasize landscape, gardening, floriculture, and small animal projects.

THE AGRICULTURAL EDUCATION MAGAZINE

By Curt Combs
(EDITOR'S NOTE: Mr. Combs is Vocational Agricultural Teacher, Buena Park High School, Buena Park, California 90621.)

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By Curt Combs
(EDITOR'S NOTE: Mr. Combs is Vocational Agricultural Teacher, Buena Park High School, Buena Park, California 90621.)

Wherever there is vacant land in the city, there is excellent money to be made from agricultural endeavors. Christmas trees are a good example. The urban market is always good for quality Christmas trees. Many urban FFA chapters can and do generate large sums of money in this way. Fresh eggs are always in demand. Some high schools are producing 400-500 dozen a week for sale to the surrounding neighborhood. Opportunities exist for profitable student projects. They are often our best profitables tools in urban areas.

A Continued Existence

The urban setting often presents many potentially dangerous alternatives to urban students. Many productive lives go down the drain each year due to lack of "opportunity." With the existence of a solid agriculture program in the area, it is conceivable that many students can be spared the loneliness and unoccupied time that can eventually lead to a life of crime and drug abuse. Yet, our greatest challenge seems to be in not only demonstrating vocational agriculture's effectiveness in urban settings, but to continue to develop these positive results.

When one considers the fate of agriculture programs in urban areas, many think that they should be the first to go in times of budget cuts. Many believe that agriculture is certainly not essential in urban areas. During a recent board meeting of the Fullerton (California) Union High School District, drastic cuts were proposed for vocational agriculture. At the board meeting, time was given to members of the public to voice their opinions. When the topic concerning the closure of agriculture departments was addressed, there were several well-planned presentations by students, parents, and FFA alumni members. The one that I found most impressive was given by an alumnus who is now a medical doctor. His comments were, "Quite often I talk with people in the county hospitals whom I feel are more intelligent than myself. Yet, they are down and out, and not succeeding in this game of life. I had to consider why this was so. When I did, I concluded the difference was my opportunities in vocational agriculture."

How did the board vote? They did not make budget cuts for the agriculture program, but actually allocated an additional $200,000 to help rebuild two vocational agriculture programs.

Does this give us concrete information as to how urban agriculture programs will fare during hard economic times? No, it does not. What this does say is that teachers in urban settings must continue to be aware of community and student needs. Educators must continue to document the positive results of vocational agriculture programs in urban areas.

What Makes an Urban Program Successful?

By Edga L. Easter
(EDITOR'S NOTE: Mr. Easter is Horticulture Teacher, Virginia Beach Vocational Technical Education Center, Virginia Beach, Virginia 23464.)

There was a time when the vocational agriculture program in our nation's secondary schools were for rural boys. There was such a time, but that time has long since passed. We are now training urban students in all areas of agriculture. This is a profile of one urban program, not meant to be totally representative of all urban programs, but one which has been successful for me.

Student Backgrounds

Let us be aware of the fact that students in the urban areas of our nation have needs, wants, and desires concerning agriculture much as those of their rural counterparts. While those in the rural setting have worked with, and felt the weight of their lives, they experience it as a common everyday occurrence. Thus, involvement in a course in vocational agriculture for them is a supplement and extend an already basic knowledge and understanding of the "workings of nature." The rural student associates with others in the rural community, and, of course, their parents' livelihood is largely dependent on agricultural practices.

Thus, rural students often enter the agricultural classroom with a vast background of knowledge in both plant and animal areas. Many understand life cycles, the effects of weather on crops, and have an interest in the economics and efficiency of the agricultural industry. To illustrate, my young daughter, Becky, at the age of five startled a parent who was visiting the school greenhouse one afternoon by asking if she should "carry the aloe plant." Consequently, it is easy to see that when people are exposed to something rather frequently, they pick up both the language and common terminologies of those with whom they associate.

To the urban student, agriculture rarely has an influence on the family lifestyle because the parents probably work in an occupation not related to the agricultural industry. In the urban situation, the family prosperity usually does not depend on whether the trees or plants were pollinated, the weather, or whether the hay has cured.

Both the urban student and the rural student have all come in contact with weeds, shrubs, and trees. The

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A common problem is how to finance student participation in supervised occupational experience. Major banks in Southern California, however, are playing a significant role in the advancement of urban programs utilizing student participation.

Institutions such as Security Pacific Bank, Wells Fargo Bank, Bank of America, and First Interstate Bank spend thousands of dollars each year to sponsor vocational agriculture project competition. Why would a bank like Security Pacific, for example, be interested in this type of youth program? Primarily, they feel that it develops citizenship, character, and good work habits. They are willing to provide urban and rural students with an extra incentive to develop outstanding supervised occupational experience programs. This is the twenty-eighth year that Security Pacific Bank has provided a helping hand with supervised occupational experience programs in Southern California. Since agriculture is the largest industry in California and the Nation, it seems wise to invest in this.

Security Pacific and the other major banks want to encourage student interest in agriculture. Agriculture is a major user of credit and other banking services. The bankers want to introduce young people to the important relationships that exist between a businessperson, banker, and successful agricultural enterprises. The banks challenge and encourage vocational agriculture students to develop excellence in their activities and occupational endeavors through project competition. Not only does this program encourage competition, but it also supports the development of leadership, personal responsibility, knowledge, diligence, and integrity developed through supervised occupational experience programs.

In order to fully understand why a bank like Security Pacific supports project competition in urban areas, we will take a closer look at the competition in Orange County, California. Every FIFA member enrolled in vocational agriculture in California can enter the competition. Security Pacific Bank provides support for student projects from the very beginning by providing low interest agricultural loans for the acquisition of livestock and other agricultural enterprises. They might include anything from a beef steer or market lamb to plants involved in a horticulture enterprise.

Competition begins at the local vocational agriculture department between members of the same chapter, and ends on a county (sectional) level with competition among members of different FIFA chapters. Competition at all levels involves two divisions. Division I includes students enrolled in their first or second year of vocational agriculture. Division II includes those students in their third and fourth years. Judging at the local level is the responsibility of the vocational agriculture teacher. In most cases, a representative of the bank's branch office will help with the judging.

Factors considered at all levels of competition include occupational objectives, technical knowledge, involvement and scope, records, persistence, and personal interview with project competition judges. The number of competitors who advance to the county level competition is dependent on the individual performance of chapter members and on the county chapter size. Awards are made at the local level for students who complete the competition.

Security Pacific Bank provides support in many areas on the final level of competition in which FHA members from several chapters compete on a county basis. The financial support is provided for student awards, the project competition awards banquet, photographs, and judge's expenses, as well as the purchase of student projects in association with county fairs. At the county level, judging is conducted by one representative from the sponsoring bank, plus one or more other judges selected by the Regional Supervisor for Agricultural Education. Approximately half of the competitors will receive gold ratings. The others will receive blue ratings. The awards banquet is the final step in the project competition program. Generally, the sponsoring bank invites student projects from the state to participate in the statewide competition.
Vo-Ag Supervisors: Generalists or Specialists?

By R. KERRY BARRICK

Editor's Note: Dr. Barrick is Assistant Professor, Department of Agricultural Education, The Ohio State University, Columbus, Ohio 43210.

For many years, a number of state departments of education have reorganized administratively for various reasons. With these changes in state-level administrative structure, teachers and supervisors of vocational agriculture have complained that vo-ag supervisors are becoming generalists, with no clear responsibility for local programs of vocational agriculture.

As a part of a 1980 study by the investigator attempted to determine what the role of the state supervisory agent in vocational agriculture is and what that role should be as perceived by state supervisors and local teachers of vocational agriculture. The 196 state supervisors in the U.S. and 504 randomly selected teachers of vocational agriculture from 19 states participated in the study. Relationships were investigated between the perceptions of the current and expected roles of state supervisors of vocational agriculture across four state-level administrative structure types.

Degree of Authority

For the study, role was defined as the degree of authority state supervisors have or should have for each of 37 statements. Respondents indicated their perceptions of whether the current degree of authority or the expected degree of authority of state supervisors is on a range scaling from one (no authority) to seven (a high degree of authority). Structure was based on the responsibilities of state supervisors, the position of agricultural education in the state education agency, and the degree of contact between state supervisors and local teachers of vocational agriculture. It was hypothesized that as structure changed from a generalist, low-contact supervision to a more traditional high-contact specialist approach, the degree of authority of state supervisors for each of 37 statements in the study would increase.

The 37 statements were categorized into four groups: administrative activities, improvement of instructional activities, and research and evaluation activities. Relationships were calculated between perceptions of teachers and supervisors for each of the four groups of activities for both current and expected roles of state supervisors and state-level administrative structure.

Low positive relationships were found between state-level administrative structure and both the current and expected roles of state supervisors as perceived by teachers. Generally, as state-level administrative structure moves from "generalist" to "specialist," respondents indicated that state supervisors of vocational agriculture do have and should have a slightly higher degree of authority for the activities included in each of the four groups. Relationships between structure and degree of authority ranged from Kendall's tau of .11 to .29 (p < .00), which are low relationships at best.

There were few differences between the perceptions of teachers and supervisors regarding the current or expected role of state supervisors. In general, supervisors rated the current and expected degree of authority of state supervisors slightly higher than teachers rated the degree of authority of state supervisors. The expected role of state supervisors was also slightly higher than the current role of state supervisors, according to the perceptions of teachers and state supervisors.

Have Others Taken Up the Slack?

A logical question at this point is why there is not a greater difference between what is and what should be? If teachers and supervisors are displeased with the current trend, why is there such a low relationship between the role of supervision and state-level administrative structure?

Some possible reasons for this are: First, there may be other groups within certain states, such as local vocational supervision, teacher educators, and local administrators, that may be performing activities in the absence of state supervision of vocational agriculture. Therefore, the majority of teachers and supervisors probably have taught and supervised in only one state. Therefore, it may be difficult to compare "what is" with "what should be" if an individual teacher has not been experienced. Thirdly, in some states, especially those with a low number of teachers, and to the extent the role and state-level administrative structure are determined by economical feasibility rather than educational standards. In summary, perhaps the role state supervisors play and the way in which state education systems are organized are not as controversial as some of us have believed. The key may be that we have not taken up what state supervision has left off, so that the issue becomes the work being done rather than who is doing the work.

Using Land Laboratories in Panama

By MARTIN B. McMillen

Editor's Note: Dr. McMillen is Associate Professor in Agricultural Education at Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061. He is a past Editor of THE AGRICULTURAL EDUCATION MAGAZINE.

Ricardo Atienza and Rogelio Rodriguez, two exchanges students from Panama, each listed on their applications that they came from a large farm with identical acreage. That was difficult to understand until it was learned that they were students at a rural high school. State inspectors knew the acreage of the school farm. Rick and Roy, as we called them, were in a typical situation for agricultural high schools in Panama. Nearly all the students are boys, and nearly all the students live in dormitories at the school. Each agricultural high school has a farm owned by the national government, which provides the students with their grazing, hay, and hay by the national government. Home projects are not used, and students gain nearly all of their occupational experience at the school.

School Farm Size

Based upon twelve school farms at agricultural high schools, the national supervisor of agricultural education said the representative, eight of twelve farms had over 100 acres. Two had over 500 acres. All schools had adequate land for teaching. An average of eight agriculture teachers per school were teaching an average of 160 students. The same teachers were the supervisors of the work experience of the students on the school farm during one-half of each school day. The teaching and the management of the farm for which they give instruction.

Common Enterprises

The common enterprises were swine, corn, vegetable gardens, poultry, rabbits, and hogs. Only one of the twelve schools had goats, but goats were being encouraged by the national supervisor. These common enterprises are those that boarding schools can use for adequate nutrition, which also happens to be those which if grown by the general population provide good nutrition.

Many of the common enterprises on school farms in Panama require little land and would be appropriate home projects for students in other countries, including the United States. Self-sufficiency in food or a degree of self-sufficiency would be welcomed by families. Civil defense authorities in this country would also be pleased if people have food available to people in case of a disruption of supplies and transportation.

Students

Part of the enterprises on the school farms were owned by the vocational youth clubs, Future Agriculturalists of Panama (FAPA). A formula had been devised to share the profits in a way that was agreeable to the students. Some unhappiness by parents had been expressed earlier about all profits going to the schools.

A plentiful supply of student labor was accompanied by considerable mechanization, Most of the schools visited had medium size tractors and machinery with them. The two-wheel Kabota tractor was available on nine of the twelve farms. A shortcoming of the agricultural programs was that agricultural mechanics was not a part of the curriculum. Repair work had to be done at a private repair shop or at a different kind of vocational school at considerable expense and inconvenience.

The idea of animal chains was being used at the national level. Private foundation money was being used to provide rabbits, goats, hogs, etc., to local FAPA chapters under an agreement to return offspring which would be given to other chapters. The animal chain idea was not being used in the local chapter to provide better stock for live-at-home students. Several years ago two schools provided a good program where a part of the occupational experience program, but no such activity existed anywhere at the time of the study.

A sound idea which was used in nearly all the schools visited was the placing of all seniors at an agricultural business (including farms) full time for at least a month near graduation time. Teachers visited these seniors on the job. All of these students returned to the school after the experience and had increased motivation and job-related to their job experience.

Adult education took the form of field trips to local farms. Farmers were invited for a program and observation. Two to three different programs were conducted by each school for all the students visited.

Commendations

An exchange of ideas between countries usually benefits both countries. This exchange of ideas was no exception. Panama and the United States of America have land laboratory ideas are:

providing a land laboratory for every student.

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Using Land Laboratories in Panama

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management of the laboratory facility by the teacher of the subject matter is necessary. placing every senior in a job at the agriculture industry on a full-time basis as part of their training.

SOME ASPECTS OF THE PROGRAM

which Panama could learn from U.S. programs are:

- The integration of agricultural mechanics in the curriculum would keep a higher percent of the machinery in running order and help with the school buildings.

- Attention to home projects for students who live at home would seem to be beneficial.

- A job market survey and associated job task-skills analysis will provide the instructor with the essential information regarding what skills are relevant to local conditions.

- A final look should be taken at any skill proposed for inclusion in the curriculum to be sure that it is representative of actual agricultural industry procedures. A typical error made here would be treating the use of power tools for a specific task when hand tools are actually used on the job (for example, use of a router and template to set door hinges, using a square, mallet, and chisel). This is especially important when deciding exactly what process to teach when several processes are used to accomplish the same task.

- The use of sound criteria in a critical decision making process will allow a vocational agriculture instructor to provide meaningful learning experience for students. The careful consideration of local conditions and use of a job-task-skill analysis, combined with specific selection criteria, is provided in the instructor's manual. A list of well defined, relevant skills that can easily be developed into teaching units. In addition, this analysis will provide the importance to group these skills into learning progressions that provide a logical learning sequence, and progress from the simple to the more complex, and from single skills to multiple skill tasks.

- Students can be identified to thinking that they have been trained for a specific job, when in reality they cannot, or will not, exist at the entry level. In addition, students may not have the educational capacity to learn the necessary skills, and waste valuable time trying to do so. time that could have been better spent on the technical level. The program is adversely affected when valuable funds and instructor time are spent on exotic topics with few measurable returns in terms of student job placements. An example of overtraining of this type would be instruction in diesel injection pump repair for begins equipment mechanics.

- Required Skills Checklist

Oxy-Acetylene Welding - Flat Position
- AC Welder
- Safety Test
- Light, Adjust, Shutknom
- Padding
- Fusion with w/o, outside tee
- Fusion with w/ro, butt
- Fusion with ro, running bead
- Fusion with w/ro, outside tee
- Fusion with w/ro, butt
- Fusion with ro, lap
- Brazeing - Flat Position
- Equipment Adjust
- Black iron sheet, lap joint
- Mild steel strip, lap joint
- Slot in mild steel tab, cracked casting
- Oxy-Acetylene Cutting - Flat Position
- Equipment Adjust
- Sheet in mild steel plate
- Bevel mild steel plate

- Arc Welding - Flat Position
- MIG Welder
- E6013, strike arc
- E6013, run bead
- E6013, single pass tee
- E6013, single pass lap
- E6011, strike arc
- E6011, run bead
- E6011, single pass tee
- E6011, single pass tee
- E7024, run bead
- E7024, single pass tee
- E7024, single pass tee
- E7024 over E6011, multi pass tee
- E7024 over E6011, multi pass
- Groove butt

- Soldering - Flat Position
- Propane, galvanized iron sheet, acid core solder
- Propane, black iron sheet, acid core solder

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Teaching Tractor Safety

Farm machinery skills and equipment repair are often emphasized in vocational agriculture programs. Some programs offer specific farm power and machinery pre-lab type courses for additional emphasis. Hands-on experience is often used. A big question is: Are we teaching safety tractor operation and upset prevention?

Agriculturalists, both young and old, operate tractors in a variety of ways with varying degrees of expertise. Nationally, about 350 people are killed each year in tractor upset! Many are more seriously injured, affecting their future livelihood in agriculture production. National studies tell us that these deaths and injuries are more likely to occur to operators under 20 years of age or over 65 years of age. (What is the average age of your vocational agriculture students, grades 9-12?) We also know that nearly 90% of all tractor extra rider-related fatalities involve youngsters 15 and under. Will these national trends involving tractor upset and related accidents affect any of your young people? A regular program of safety related to tractor operation can help diminish this worry.

Agricultural Child Labor Requirements

Amendments to the Fair Labor Standards Act which were passed in 1966 have a direct affect on vocational agriculture students and other youth under the age of 16. Basically, this legislation states that no youngsters under the age of 16 may be hired to work at jobs listed as too hazardous for this age group as defined by the legislation. Included in that list is the operation of tractors of over 20 PTO horse-power and most pieces of powered farm machinery. Youngsters between the ages of 14 and 16 may be allowed to work for hire to operate tractors and certain pieces of machinery if they have completed an approved training program on safe tractor and machinery operation conducted by either the Cooperative Extension Service or the vocational agriculture programs. This training program consists of 24 hours of instruction as outlined in the legislation. The training program should be part of every vocational agriculture curriculum. Not only would we be providing youngsters with an opportunity to go to work but we would also be providing valuable training in safe tractor and machinery operation to all youngsters in our programs.

Causes of Tractor Accidents

Many of the accidents involving tractors in machinery has been prevented. Over 90% of the accidents which occur each year are caused by operator error, carelessness, or inexperience. Young operators should understand that these accidents occur because they are not taught in the original operation they should be aware of the precautions necessary to prevent an upset. Are these principles being taught as they should be?

Tractor Upsets

There are two basic types of tractor upsets. Those of a rear overturn and those of the side overturn. These occur as a result of one of four types of forces that affect tractor operation. A combination of two or more of these usually end in an accident and tragedy! The forces reacting during the time of tractor operation are:

1. Rear axle torque
2. Leverage (on drawbar or hitch)
3. Gravity
4. Centrifugal forces

Is the theory behind these forces presented to your students for their benefit and knowledge? Are the whys being taught and shown to your students in addition to the actual operation skills?

Safe Operation

Knowledge of the tractor being operated is the main point in tractor safety. Several other points need to be emphasized.

Use your seat belt and stay alive. Only if the student's tractor has roll over protection should this be done. If the student is operating a tractor with no roll over protection, he or she should unhampered for a chance of being at least thrown clear of the overturning machine.

Only the operator alone should be in or on the tractor. Many of the tragedies that occur involving young people are those deaths or injuries where two passengers are on the vehicle.

Stay off slopes too steep for safe operation. Keeping the tractor in gear...
A Baker's Half-Dozen Ideas for Recruiting Vocational Agriculture Students

By JOHN HILLSON
(Editors note: Dr. Hillson is Associate Professor, Agricultural Education, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061)

Are you satisfied with both the quantity and quality of students enrolling in your program? There are many ways that teachers of agriculture can encourage additional students to enroll in their courses. The recruitment effort should be a year-round effort and involve many people in addition to the teacher or teachers in the department. Most of the activities can be combined with activities already conducted and, consequently, require only a minimum amount of money and time. There are at least seven (or more if a baker's half-dozen) recruitment activities which agriculture teachers can use to enhance both the quantity and quality of students enrolled.

Visit prospective students while making supervised occupational experience program visits.

Many younger brothers and sisters or neighbors of students currently enrolled in the program are prospective students. A few minutes spent with a future student can be most meaningful to that student and certainly encourage his or her enrollment in vocational agriculture.

Such a visit should emphasize the exciting and interesting activities conducted as part of the vocational agriculture program. Many younger students also have questions and concerns about high school in general. A high school teacher, such as the vocational agriculture instructor, who can answer such concerns will gain a great deal of favorable light in that student's perspective.

Invite prospective students to the department.

One of the most impressive activities which is held in many vo-ag programs is called the FFA Banquet. Many prospective students can be recruited into the program by observing such an activity. Current members could be encouraged to bring neighbors or friends, as their guests to the annual FFA banquet. An incentive system could be used which has half price tickets (if a charge is made for the banquet) or a prize division given to the member who brings the most guests. Each member bringing guests should introduce him or herself to the banquet participants. Many chapters have missed a golden opportunity for recruitment by not permitting younger brothers or sisters to attend the annual parent-member banquet when half or more of the family was already in attendance.

Have prospective students visit the department.

The Food for America program of the FFA has been very successful in bringing future vocational agriculture students to the department. The Food for America program has proven to be an excellent public information device and long-term recruitment aid. In some regions of the state, this activity alone has increased the number of members recruited to the program.


The authors state that the purpose of this book is to furnish a comprehensive list of activities in swine production which interest and stimulate young people to find out more about raising swine, including information as to how they should be performed. It includes eleven chapters on such topics as opportunities in raising swine; selecting and managing the breeding herd; caring for the sow and litter; feeding swine; controlling diseases and parasites; marketing; keeping and analyzing records; breeding swine; artificial insemination; butchering and curing pork; and essential skills for raising swine. In addition an appendix includes a complete directory for obtaining information along with a list of resources and a glossary of useful terms.

The book is well illustrated with photographs and drawings. It also includes information in the form of charts and graphs. Those teachers who have used previous editions of this book will find that the illustrations have been changed to keep up with changes in the swine industry. Information is given in a concise form. The book is well organized and making it simple for the reader to find information. In addition, all references will be provided to give a deeper understanding of the subject. This is an excellent "how-to-do-it" book.

A good feature of this book is it is well designed for the college undergraduate majoring in animal or dairy science. It is a complete overview of animal reproductive processes. Filled with tables and figures and written with clarity, the authors are experienced faculty members in Dairy Science at Virginia Polytechnic Institute and State University. This book is a comprehensive reference. It is an excellent book to use in college courses and is a valuable reference for their students. The authors have done a good job of revising this excellent text.

J. Robert Leonard
Mingo Community School
Mingo, Iowa

BOOK REVIEW


This book is intended for the college undergraduate majoring in animal or dairy science. It is a comprehensive overview of animal reproductive processes. Filled with tables and figures and written with clarity, the authors are experienced faculty members in Dairy Science at Virginia Polytechnic Institute and State University. This book is a comprehensive reference. It is an excellent book to use in college courses and is a valuable reference for their students. The authors have done a good job of revising this excellent text.

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Mingo Community School
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Stories in Pictures

From the classroom to job location, urban vocational programs meet the job market demands of urban employers. Current employment trends in agriculture for urban areas include the need for employees with skills in horticulture and small animal care, as shown in these photographs.