Opportunities For Youth In A Changing Agriculture

Editor's note: The following is a speech given before a recent Banker's convention by M. Hayne Folk, Jr. Dean of Agriculture at Louisiana Polytechnic Institute.

We are living in an era of many and remarkable changes. These changes are taking place in all of man's activities and influence his social, family and economic life. There are changes in politics and government, science and medicine, business and industry and — believe it or not — in agriculture.

The old days, when a farmer needed only a strong back and a weak mind to make a success on his land, are gone forever. In the old days the farmer was a jack-of-all trades who did everything connected with growing crops and raising livestock, with marketing his products and in some cases did a limited amount of processing of the products of his land. Today that is all changed and agriculture embraces a great number of separate and specialized activities, vocations and professions. The young man or woman who looks to agriculture as a career can expect to find employment in any number of vocations, very few of which will actually keep him down on the farm to till the soil or raise domestic animals. Agriculture has changed, and as a vocation it offers a wide choice of many interesting and well paid opportunities for employment in business, industry, the professions and last but not least a chance to live on a farm and work it scientifically as a business enterprise.

It has been estimated that more than 500 distinct and separate occupations are open in the major fields of agriculture. These major fields may be classified for purposes of discussion as follows: U. S. Department of Agriculture; Research; Industry; Business; Conservation; Communications; Teaching; Agricultural Engineering; Rural Sociology; Veterinary Medicine; Home Economics; Farming and Ranching.

The greatest opportunity for employment is offered by the United States Department of Agriculture with bureaus and agencies in 4,000 locations throughout the United States and in foreign lands. More than 85,000 men and women are employed by the Department of Agriculture and new jobs are being created every year. Employment with the Department of Agriculture can be a lifetime career that offers job satisfaction, security, chances for advancement and good working conditions.

The interests, activities, responsibilities and duties of the Department of Agriculture are so varied and cover such a multitude of needs and services that any person with agricultural training of any kind whatsoever should be able to find suitable and satisfactory employment with the government. Working conditions are good. Employees of the Department have a 40-hour work-week, usually Monday through Friday, with additional pay or compensatory time off in case extra hours of work are required. Salaries compare well with earnings in private industry and promotions are provided for those who prove satisfactory in their work.

Annual vacations are provided and increase to as much as 26 days a year for those who are with the Department 15 or more years. Military leave is permitted and young men in the reserve are granted 15 days of military leave with pay each year. Sick leave of 13 days a year accumulates if not used. Financial benefits are available through credit unions, payroll savings plan, a retirement system and low cost group life insurance. The Department provides for honor and cash awards when superior and exceptional work is done.

The work of the Department of Agriculture is divided into groups known as agencies. A brief summary of these agencies and their principal duties will give young people some idea of the opportunities which exist for them in the changing agriculture — from the simple vocation of farmer to a trained expert in fields which farmers of a generation ago regard as completely foreign and outside the realm of agriculture.

The research service employs trained workers to conduct studies and carry on investigation for the control of diseases, pests and the like. It is also in charge of animal quarantines, meat inspection and related programs.

The Department carries on a conservation program to prevent erosion, improvement of farm woodland, better use of agricultural water and protection of established vegetative cover. The Forest Service has many opportunities for employment in the work of conserving our forest lands and making better use of water and other natural resources. The soil conservation program helps the farmer and rancher and works with them in many ways. It also has the responsibility for administering the Department's up-stream flood-prevention and watershed-protection programs.

Other agencies of the Department of Agriculture are involved in what could be described as allied agricultural vocations. They are vocations directly concerned with agriculture but training must first be obtained in some other business, industrial or professional field. To run over these quickly I would mention the agricultural marketing service which administers programs related to marketing research, outlook, and related statistical and economic research; crop and livestock estimates; marketing services, including market news, standardization, grading, inspection and classing of farm products; freight rate services; marketing regulatory programs; marketing agreements and orders; surplus removal, export and diversion programs, and

the National School Lunch Program.

The Commodity Exchange Authority and Commodity Stabilization Service deal with price manipulation, brokers and various trading activities. The Stabilization Service supervises production adjustments, acreage allotments, marketing quotas, and the many details connected with procurement, handling, payment, drought emergency feed program and related programs.

There is an office of the general counsel, which employs people with legal training; the Farmers Home Administration needs special trained men and women who are qualified to help farmers with loans for assistance, for more efficient operation, as well as emergency funds needed as a result of drought, floods, tornado or similar disasters. The Federal Crop Insurance Corporation operates a plan of insurance protection against loss of investment in crops from unavoidable causes such as adverse weather conditions, insect infestation and plant diseases. The Rural Electrification Administration conducts two loan programs: one is for rural electrification facilities and the other for the extension and improvement of rural telephone service.

The Department of Agriculture maintains extensive services for purposes of information, education and cooperation with farmers. The Department has an office of information and a library with more than a million volumes on agriculture and related sciences, technology and economics. The Farmer Cooperative Service performs research, educational, and service work of assistance to three out of every five farmers of this country who belong to agricultural marketing, purchasing and service cooperatives. The Service conducts research studies and service activities on problems of management, financing, organization, policies, merchandising, product quality improvement, costs, efficiency, and membership.

This should give you some idea of the scope and extent of the Department of Agriculture activities and its constant need for men and women trained in many different vocations directly or indirectly associated with farming and agriculture. Young people are urged to consider a career which will lead them to employment with the Department of Agriculture where they can serve thir country and especially the farm population of the nation.

In order to encourage more young people to prepare themselves for a career with the Department of Agriculture, the government is now making a number of attractive offers and inducements to youth. The Student Trainee programs offer an opportunity for students who are interested in summer employment leading to a career in agriculture to gain training in the fields of soil conservation, soil science, statistics, range conservation, agricultural engineering, civil engineering and economics.

Most of these positions are in field locations throughout the United States, so that the student trainee can usually find a location which is most desirable for him. These trainees work under professional guidance in a program which includes on-the-job training, alternating with scholastic training in appropriate subject-matter fields at a college or university. While employed during summer vacations, student trainees are paid as regular Federal employees. They receive payment on the basis of $2,960 to $3,415 a year, depending upon the portion of college work completed.

When they complete their training as students and finish with their college education they are ready for the examination which will lead to the first step toward an excellent and satisfying career with the Department. This is the Junior Agricultural Assistant examination.

The successful completion of this examination can lead to a most satisfactory career in one of nearly 30 different specializations, all directly related to the field of agriculture. Of particular interest to young people should be the opportunity presented by the Management Intern portion of the Federal Service Entrance Examination. The young person who has had agricultural experience and training is in a fortunate position to advance to an executive position in management through the training which is available for those who complete in a satisfactory manner the Management Intern examination. Our fathers and grandfathers certainly would regard it as strange indeed for a person who seeks work in the field of agriculture to find it in an air conditioned building, sitting at a polished desk and wearing the white shirt, dark tie and coat of the management executive. Nevertheless, this career is open to students of agriculture and offers a splendid example of the new opportunities in the changing field of agriculture.

I have been discussing up to now the employment opportunities in the Department of Agriculture. I have devoted all of this time to the Department because it is the one really big employer of agricultural workers and offers the greatest opportunity to get started easily upon a career under the most pleasant and satisfactory working conditions. However, the opportunities for youth in a changing agriculture are by no means limited to the Department of Agriculture. The demand for trained and skilled workers in many different fields directly concerned with agriculture or related to it is so great that the well qualified individual does not have to worry about what he will do or how permanent his employment will be once he completes his course of education and training.

The great changes which have come about in agriculture offer almost unlimited possibilities for employment and a career that should be suitable to the likes and preferences of anyone who basically is interested in farm life and some phase of agricultural work or activity. At first glance, it might seem that the opportunities in the field of agriculture have been greatly reduced since the beginning of our nation when agriculture was the chief form of employment. In fact, up to one century ago fully one-half of the working population of the United States was engaged in farm

work. Nevertheless, the changing field of agriculture has become so broad that there are today actually more people earning a living from some agriculturally related occupation than there are people working on farms. This may be hard to believe but it is true.

When we talk about agriculture today as a means of employment we do not confine ourselves to the actual production of crops and meat and dairy products. Great industries have sprung up to process and merchandise food — factories which use the products of the farm to convert them into materials for purposes other than food, and business and industrial enterprises which supply the farmer with materials and equipment. Then there are the many service enterprises and professions which assist the farmer in some way with his work.

I am not going to discuss in detail all of the different vocations in some way related to agriculture or associated with it, such as veterinary medicine, engineering, sociology, forestry, home economics, research and laboratory testing and many more. However, as an example I would like to take a minute or two to touch upon a field which should be familiar to all of you in my audience. This is the field of communication, education and Extension Services. It is a field which brings the agricultural worker into direct contact with the farmer through 4-H work, the radio, television, publications of all sorts and school classroom work. More than 11,000 teachers, offer courses in vocational agriculture in about 10,000 high schools around the country. People who like to write or who speak well will find a career awaiting them in communications, since the radio, television, newspapers, magazines and any number of commercial publications and information services need qualified writers and speakers who understand the subject of agriculture and are familiar with the needs and problems of the farmer. The county and home agents begin their contact with the farm family through children as well as adults. The extension worker is concerned with community development, production and marketing problems and child training. The 4-H program is an outstanding mark of success along these lines.

Finally I get to a consideration of the opportunities in agriculture which exist on land—the farmer and the rancher. At one time this would be the only vocation I would discuss if I undertook to talk about work opportunities in agriculture. Today we recognize it as basic and fundamental but by no means the only opportunity in agriculture. Nevertheless, it is the very foundation of agriculture as a vocation and it is the foundation on which everything else related to agriculture is built. Then we must take into consideration the fact that there are a great many people who love living on land and working land, raising domestic animals and being a farmer. To them this is not only an opportunity for profitable employment but also an opportunity for a way of life which gives them the greatest satisfaction and happiness. However, a young man doesn't go into farming today just because he happens to like it and would enjoy living and working on a farm. Successful farming today is a matter of large capital investment, careful business management and knowledge of present day conditions not only in the field of agriculture but political, economic, social and other conditions as well. Like everything else today, successful farming is becoming big business and the bigger the business usually the more successful it is. This should not discourage young people with limited financial means from seriously considering a career as a self-employed farmer on a relatively small farm. Good management pays off on the small farm just as good management pays off on large scale agricultural enterprises. Good management is based on knowledge, experience, training and proper preparation. The young man today who looks forward to a career as farmer or rancher must prepare himself for that career and get all of the education and practical training and experience possible before he makes the big step and takes the gamble of investing his money and his time in a project which carries with it certain risks and dangers as well as an opportunity for profit and a happy way of life.

Now that I have discussed in some detail the different types of vocations open for men and women who have a background in agriculture and want to work as a farmer, rancher or in some agriculture related vocation, I would like to go on to give you a picture of how an agriculture related industry works and why men and women with a knowledge and background of agriculture and training in this field can serve best in these industries.

Let us take, for example, the dairy industry. One of the fundamental rules of higher mathematics learned by students in their high school days is that things which are equal to the same thing are equal to each other. This is a very good rule in mathematics but it doesn't hold true in the dairy industry when dealing with milk and milk products.

Milk which is equal to the same thing—financially and in market demand—is not necessarily equal to each other. There are different grades and standards of milk which are for the protection and guidance of the consumer, but oftentimes these different grades and standards become meaningless because it frequently happens—especially during the times of scarcity or for economic reasons —a person takes what he can get. Also the consumer knows so little about milk grades and standards that he does not seek to familiarize himself with the product he buys for his table.

When we discuss milk standards we should understand at the outset that this is not the same thing as grades. The first standards set up for the dairy industry were those related to fluid milk, market milk or bottled milk. Fluid or market milk consisted of many different qualities and grades

but generally produced under conditions subject to inspection and therefore expected to have a better sanitation record. People who bought the milk from producers in those early days of inspection and introduction of better sanitation methods could become pretty familiar with conditions under which milk was produced on the various farms and surrounding territory. This was especially true because the source of supply was located close to the market. A city was served by closely located farms, all of which were within easy access to the city. By reverse rule, the city buyers had easy access to the farms where they could inspect conditions and satisfy themselves that sanitation rules were being observed.

The modernization of transportation and refrigerator cars changed this condition around. Good highways, fast rail lines, tank trucks and refrigeration methods have expanded distances between the producer and consumer of milk. Not only is milk purchased for a city or for a processor in different parts of the state—where the consumer may not conveniently visit the region—but it is becoming more and more the general rule that milk may be purchased from a different state and a far distant region of the nation. This means that the milk comes from places where the consumer cannot either visit the source of supply, or be familiar with the laws and regulations under which the milk is produced and handled.

The dairy industry protects the consumer because it stands between the producer of fluid milk and the final consumer of the product. Milk reaches the consumer in many forms besides that of milk itself, particularly butter, cheese, ice cream, and in canned and powdered forms. The dairy industry offers a wide variety of vocations to purchase, process, develop and market these products. In many of these vocations associated with the dairy industry a background of knowledge, education and training in agriculture is helpful or even essential.

Then let us take up the subject of feed products—which is a big industry in itself and also directly related to agriculture. The feed products industry has a direct connection with the farmers who work the soil and those who raise various types of animals. These men on the farms view their problems intelligently and scientifically. In order to meet the farmer on his own level, the person engaged in feed products industry must know and understand his products and also possess a complete undertanding of their purposes and merits and how the use of these feed products will be of value to the man on the farm.

The modern farmer not only has an intelligent and scientific view of his work but he is proud of his farm and proud of the products which he raises there. It is through the farmer's pride in his products that better types of feed could be introduced. The farmer has been quick to respond to any innovation which will improve the quality of his products. This explains the amazing growth of the feed products industry. Less than a half-century ago this industry centered in a few small mills which started with the owner making little trips in the surrounding territory. When he had enough orders to keep his mill running, he would return and assist in mixing the feed he had sold. The machinery used for this purpose consisted of little more than a clean floor and some shovels.

Today there are many big, massive modern mills and elevators. Instead of a handful of employees for this industry, the feed business now employs thousands in plants, offices and in the fields. There are big experimental farms, expensive laboratories, huge mixing mills and processing plants and facilities for distribution.

There are two explanations for the remarkable growth of the feed industry. One is the efforts made by companies to improve their products and provide the best possible feed for stock. The other factor involved in this development was the farmer's pride in his products. Because of this pride he was quick and eager to take up with anything which would improve those products. Pullets were laying more eggs. Cows began milking much more than they had in the past. Steers were putting on pounds with amazing rapidity, and pork going to the market in months less time. In all of these amazing changes better feed has played a part.

The feed industry offers employment to many men and women trained in agriculture who have the knowledge, education, training and intelligence to contribute to this progressive industry. However, the great development of farm production cannot be credited to the feed industry alone. There is the mechanization of farm equipment and greater knowledge about the soil. We have learned that we cannot go on with a process of exploitation and removal from the earth of its necessary fertile contents.

The danger of land deterioration is always present where man tills the soil. On this basis, our country is worth less today than when the Declaration of Independence was signed. We have exploited our soil, minerals and other natural products, destroyed millions of acres through unscientific farm practice and allowed valuable farm lands to deteriorate. There is no excuse to justify this situation. We know that it is possible to maintain and increase soil fertility. We know also that it is possible to obtain greater yields from the same amount of land. The farmer without sufficient education or financial means has difficulty maintaining the fertility of his land because he doesn't realize enough from his products to plow back into the land sufficient fertilizer and minerals to replace what is taken out yearly by the crops. Continuous cropping depletes land of its fertility. Also trees are stripped from the ground before they are

ready and also before provision has been made for other trees to protect the soil from erosion.

Lower fertility means fewer crops and less production per acre. Fewer crops and less production mean less income for the farmer. Less income for the farmer means that he can buy less, and means—too—that he will skimp on fertilizer to revitalize his land if necessities of life must be obtained for his family.

Thus the farmer is caught in a most vicious circle from which there is no escape seemingly. The only hope for solution is through education. We must try to understand these confusing problems and put an end—if possible—to vicious circles which lead to waste of human and natural resources. Our schools are concerned about problems of soil conservation and land use as a long-term project to build the health, the wealth and continuous prosperity of our nation. Our schools are vitally interested in current problems of conservation of human and natural resources—problems which affect all of us today.

The solution of these problems must come through education and the cooperation of farmers working with men and women trained in agricultural education. This combined program of education and cooperation calls to my mind a short story which I once read and was, I believe, called "Pollen".

The story centered around a farmer whose one aim and ambition in life was to grow prize winning corn. He worked and studied and improved his product until finally he was able to raise the finest corn in his State. However, this farmer noticed that the corn in his field that bordered on the field of a neighbor was always below standard.

He studied the problem and finally the truth dawned upon him. The pollen from his neighbor's corn was blowing into his field. He packed a sack of his best prize winning corn seed and went over to his neighbor to tell him all he knew about raising prize corn, because this farmer realized that he could not raise good corn unless his neighbors around him raised good corn. He could not keep the pollen from his neighbors' field from blowing into his own fields, but he could provide the neighbor with good pollen.

This story is a lesson in the need for education and cooperation. It shows us that farmers can learn from each other and can progress only as they stick together and cooperate. Farmers must cooperate also with other groups who are seeking to help them and also with science, which is opening new fields and new uses for farm products. The alliance of science and agriculture will make possible greater use of farm products for purposes other than food.

Agriculture will benefit from this partnership with science and industry. Familiar offsprings of this alliance are plastics, artificial wool, substitutes for sheet steel, ethyl alcohol, lubricants, and many other products. The pioneering George Washington Carver developed 300 items from the lowly peanut, including soap, plastic paper, axle grease and metal polish.

The work of the farmer and jobs he must do are no longer simple ones, such as they used to be. Farming in the old days was hard work but also it was easy going with plenty of time for farm families to visit back and forth and for group activity—like threshing time—that made a game out of some of the hard work. In time of sickness or tragedy, neighbors always rushed over to give a hand and be of help. Today we have combines and there is no excitement or social activity centered around threshing time. Most of the farm work has been mechanized to increase production and simplify jobs which called for a great deal of hard work. This is true also inside the farm house where appliances of all kinds simplify housework and provide the conveniences of modern refrigeration, modern cooking, modern heating, modern laundry and even suitable entertainment in the form of radio and television. Good roads and automobiles have served to link the farm with the neighboring city and provide the farm family with equal opportunities for good schools, convenience to a church of their choice and social advantages for all members of the family.

Most old farm houses have been remodeled to include all modern conveniences—from a modern bath room to a sparkling kitchen equipped with dish washer and disposal. Many farm houses are all new and resemble in every detail the most modern homes in our large cities. Many farmers today plan long trips with their families during the winter months. If they can find a time when their children can go, they include them, otherwise they arrange to leave them behind with adequate supervision.

The farm itself is better and a more efficiently worked piece of land, and living on the farm has become a better way of life. However, the individual farmer will have to continue to work hard as his machines will not run it all by themselves. If they did, it would not be long before the entire country would be dominated by the big corporation type of farm, which would become so mechanized that it would drive out the small farmer entirely. The individual farmer will continue to exist because he farms his own land and there is no substitute for ownership to provide the incentive to do a good job, to work long hours and sacrifice comforts when necessary to make a success on his own.

As for the farm family, you may be sure that life will continue to get better for it as it keeps getting better for everyone else. All of the advantages, benefits and opportunities of our advancing civilization which come to the people who live in cities will come also to those who dwell upon the farm. In fact, the way many cities are spreading out, it will not be long before farm living and suburban country living will be so much the same it will be difficult to make any distinction.