DEVELOPING AN EFFECTIVE PROGRAM FOR USE OF OUTLOOK INFORMATION BY OKLAHOMA FARMERS

By

HOUSTON EVERETT WARD

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

1935

Submitted to the faculty of the Graduate School of
the Oklahoma State University
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE
August, 1959

DEVELOPING AN EFFECTIVE PROGRAM FOR USE OF OUTLOOK
INFORMATION BY OKLAHOMA FARMERS

Thesis Approved:

James S. Plaxico
Thesis Adviser

L. F. Miller

Robert MacVicar
Dean of the Graduate School

ACKNOWLEDGEMENT

I wish to express my gratitude for the consideration, patience and understanding exhibited by the faculty members who helped me in this course of study.

Special appreciation is due Professor James S. Plaxico for his guidance in the selection and outline of the study. Thanks are extended to Professors Leonard Miller and Kenneth Boggs for reading the manuscript and offering helpful suggestions. I am indebted to the administration of the Agricultural Extension Service for making the study possible. Thanks are due the county agents of Oklahoma for their cooperation in applying the suggested program resulting from this study.

Thanks are due to Mrs. Judy Mullins for an excellent job of typing the manuscript.

Finally, I wish to acknowledge my appreciation for the encouragement given and sacrifices made by my wife (Mable) and children that enabled me to complete this study.

Houston Everett Ward

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I

INTRODUCTION

FARMER PROBLEMS

The rate of change in agriculture has been so rapid in recent years that keeping abreast of the times has been difficult for many farmers. Oklahoma agriculture is probably undergoing more drastic changes than agriculture in the remainder of the country. The number of farms has declined in the state as the size of individual units has increased. Livestock enterprises have gained in importance with a decreased acreage devoted to cash crops. The problems arising out of this dynamic situation have made Oklahoma farmers more desirous of obtaining information concerning future economic trends.

Economic outlook information compiled by appropriate branches of the Department of Agriculture has been available to farmers for a number of years. How extensively farmers have used this information in making or changing their plans cannot be precisely measured. There are many problems that confront the farmer who attempts to adjust his operations in light of economic indications. Many times the farmer cannot make changes in response to change. Nevertheless there is a question as to whether the Oklahoma farmer has had access to outlook information designed to meet his needs.

Farmers are confronted with decisions in terms of short-run adjust-

ments, and they must know what to expect in the longer period ahead. Decisions are not always confined to farm operations as off-farm opportunities are often available. Economic gains from making wise decisions are not confined to the individual farmer. Both the agricultural and general economy of the state will be strengthened as a consequence of increased efficiency in resource use. If farmers are supplied with correct and usable outlook information at the proper time, then they will be better able to make adjustments to meet indicated changes in production and demand.

Problems in Program Development

Assuming that Oklahoma farmers need and desire an effective program of economic outlook information, the immediate problem is developing methods for supplying this material. Oklahoma State University is the logical source of this kind of information. Agricultural economists at this institution possess, or can obtain, the necessary material for the program. To make the most effective use of these resources in developing and continuing an outlook program, there must be a system of coordination. It is with this problem that the writer is specifically concerned.

In the past, Oklahoma outlook material has been presented in terms of present commodity situations and prospects for next year's crop. Generally this is referred to as "annual outlook" and has been presented around the first of the year with situation reports periodically throughout the year. To be most useful to farmers in making decisions, information should come at a time when they are evaluating their plans. This time is likely to vary among the various enterprises. Thus a need

exists for a "continuing" type of information, covering one or two items, but different ones in each publication.

Brief outlines, whether written or spoken, serve a purpose and for some people and some subjects this may be all that is needed. However, these briefs many times merely create a desire for more details and the problem becomes one of presenting a complete but concise analysis. There is a problem of determining the degree of thoroughness necessary for best communication with farmers and others using the material. There is no basis for expecting each user of outlook to spend enough time studying the comprehensive commodity situation reports released by the USDA. These reports are valuable to economists who are engaged in studying, teaching, or writing about outlook. But their completeness of detail presents the economic outlook writer with the problem of condensing or summarizing the situation in terms of area adaptation and interest to the individual farmers within that area. In order for the writer to plan the time and text of material to be presented, he needs to know how and when the farmer can use the information in carrying out his operations.

With supply and price situation for a particular enterprise available, the farmer may be in a position to change his production plans. Not only might this mean the shifting of output by realigning enterprises, but could just as well influence his outlays for production resources. Capital investments are even more dependent upon the outlook situation since they cover a longer period in the future.

Outlook information may also influence the pattern of marketing of farm products. With loan programs and the use of economic information, the farmer is in a better position to distribute his marketings over

time. Even commodities without support prices can be scheduled for timely marketing, which may avoid periods of heavy supplies. There is general belief that market prices can be stabilized with orderly marketings as a result of outlook. It is, however, the desire of farmers to sell at the most opportune time that is likely to result in the misuse of outlook information. Outlook should be so handled that it furnishes the farmer with information helpful in decision making rather than as sure fire "dope" that might result in "playing the market." There is also the danger that instead of using the information as a guide, many farmers might think of it as the final answer without regard to influences which could alter the situation.

Outlook material should include interpretations of structural changes taking place in agricultural production and marketing. The farmer needs to understand how changes in consumer preferences affect the demand for the products concerned. These structural changes are important in short term predictions as well as long time projections.

Private agencies and commodity groups issue outlook information to their customers. In the case of private releases, oftentimes the same general application may not clear local questions. Commodity groups may be inclined to select only the parts of outlook that point out optimistic viewpoints without mention of the counter factors. Even if releases from these sources do meet the needs of farmers, they are not received by the majority of farmers. Thus there is a need for wider distribution of material condensed and summarized from USDA reports by Oklahoma economists.

This points up a problem as to distribution of outlook material. If the author of outlook information is far removed or unknown to the

farmer, the reader may not make any effort to clear confusion which might develop. If there is a local clearing place that has close contact with the writer, then the farmer is more likely to seek further information.

There are a number of limitations in developing solutions to this problem. Of primary concern is the difficulty of measuring results. Inferences cannot easily be made in light of individual experiences. If adjustments should be made in terms of an ideal concept of outlook information use, the aggregate actions might contradict the original predictions or projections. Then too, there is an uncertainty attached to making economic forecasts. However, outlook information may set in motion the actions necessary to alter predictions. This may result in desirable ends.

History of Outlook Work

Outlook work was started by the U. S. Department of Agriculture in 1923. The following statement was included in the report of Secretary Wallace for that year:

> Producers need information to guide them in making proper adjustments between the acreage planted to the various crops. The department began last spring to furnish this information..... A group of well-known economists and statisticians were invited to meet in Washington on April 20.....to prepare a statement on the general factors now underlying the agricultural situation with a view to furnishing all possible bases for intelligent adjustments of production to demand. This committee drafted a concise statement on the general economic outlook which it is believed has been of material aid to all agricultural interests. This statement in the first outlook report was limited to a discussion of domestic demand, foreign demand, wheat, cotton, tobacco, corn and hogs. It was issued in mimeographed form together with the "intentions-to-plant" report, and later was printed in Weather, Crops and Markets. No further effort was made to bring it to the attention of farmers.[1]

---

[1] H. R. Tolley, "History and Objectives of Outlook Work," Journal of Farm Economics, Vol. XIII, October, 1931, p. 527.

In the earlier reports, both federal and state, much general advice was given concerning increases and decreases in acreage of crops and numbers of livestock, and farmers in general were often urged to contract or expand some line of production.[2]

Much credit for the development of agricultural outlook work is due to the efforts of H. C. Taylor, first chief of the B.A.E. He had urged that such service be made available to farmers for a number of years prior to its inception by the Department. After the 1923 report he had this to say:

> Fortunately, those in charge of the extension service in Washington and in the states caught the vision at once and in 1924 entered with enthusiasm and courage upon the task of holding state and county meetings of farmers at which the outlook report was presented and the meaning of it discussed. The purpose was to find out what farmers of a given locality could do to best advantage in readjusting their farming to meet the situation arising out of changes which had taken place and changes which were anticipated in market prices.[3]

The Idaho Agricultural Experiment Station took seriously the question of agricultural adjustment in the light of prospective market prices and competition in other areas. From 1927 to 1932 a series of bulletins on adjusting production to marketing prospects was published by that station.[4] California and a number of other states made local outlook studies.

In general, the series of local market studies was disappointing from the standpoint of finding opportunities for readjustment in production that would turn energies toward producing for the local market and relieve the market for the major staples of agriculture from burdensome surpluses which had depressed prices. Local market studies were, as a

---

[2] Ibid, p. 531.

[3] H. C. Taylor, The Story of Agricultural Economics, (Ames, 1952), p. 452.

[4] Ibid, p. 467.

rule, too narrow in outlook, and too rarely showed the relative profits to be obtained from the proposed new ventures when compared with the old. Perhaps the most useful of the studies were those of northern Indiana and South Carolina. They considered prospective costs, prices and relative profitableness. Perhaps it was because farmers knew their local markets and had already made the profitable adjustment to local market demand that the economists found so little to recommend. It is regarding distant markets which must be reached through middlemen that farmers especially need information. The experiment in local market studies soon gave way to other lines of research.[5]

The 1926 outlook report contained statements on thirty-one different commodities, the domestic and foreign demand situation, agricultural credit, farm labor and equipment. This report was more detailed than those for previous years. Representatives from twelve of the State Colleges assisted with this report during February, 1926. Two hundred thousand copies were mailed to farm correspondents of the Department within ten days after completion of the report. All newspapers and radio stations were supplied copies. Extension Services in some states also used the report in meetings and publications.

About this time four state colleges--Missouri, Kansas, Minnesota, and Cornell--began the preparation of outlook statements and holding outlook meetings among farmers. Kansas State College issued monthly statements including price forecasts. These were printed and mailed to a list of farmers in the state. The Agricultural Economics Department at Oklahoma State University (the Oklahoma A & M College) began issuing Current Farm Economics in 1927. This publication reviewed the situation

---

[5]Ibid, p. 477.

for agriculture and for specific crops and contained historical price information.

Three representatives of Oklahoma State University attended the first regional outlook conference in 1930 in Atlanta, Georgia. Regional Conferences were abandoned after two or three years in favor of a resumption of the National Conference. In recent years the National Outlook Conference has been held in November. It is attended by Extension Economists and others from all states as well as many Department officials and agricultural representatives from foreign countries.

Outlook work in Oklahoma has been done by various methods in past years. During the latter thirties and early forties mimeographed publications were issued around the first of the year. Talks on outlook were presented at the annual Extension Conference of county agents, usually held in the fall at the University.

About 1950, outlook statements were presented by economists to county workers at district meetings over the state. Later county agents were encouraged to hold county meetings of workers and leading farmers at which the economists reviewed the outlook. These meetings were usually held in December.

In 1956, state extension workers were divided into four teams (one woman and one man) to work in each of the four extension districts. About four sub-district meetings were held in each district, and county workers were given a review of the outlook for the coming year. These meetings were held in August. County workers were urged to hold meetings for farmers in their respective counties. A project was activated by the Agricultural Extension Service of the University in August of 1956 which required full time of one employee on outlook work.

CHAPTER II

CONCEPTUAL DEVELOPMENT OF AN OUTLOOK PROGRAM

The needs and objectives for agricultural outlook information were clearly set out by H. C. Taylor in 1921. Speaking to Extension workers on "What Farmers Can Do to Solve Their Price Problem," he said:

> If he is to act intelligently in the management of his farm, with a view to the right adjustment of supply to demand, the farmer must be provided with adequate knowledge of the world's probable needs and the production of the various parts of the world to meet these needs. He must know not only the quantities produced in the various countries, but the comparative costs of production in each of the competing regions of the world, including the cost of putting the product on the common market. He needs to know not only the present condition of production and consumption throughout the world, but he needs to know and be able to interpret the changes which are taking place in production and consumption in order that he may be in a position to adjust his farming to changes which affect prices and profits in given lines of production...[1]

In 1924, Taylor wrote as follows:

> Inasmuch as orderly production is a necessary preliminary to orderly marketing, the well-informed farmer must keep himself posted, months in advance, concerning the probable production of various kinds of livestock during the coming season, as well as concerning the probable requirements of the market.[2]

In 1931 Tolley not only emphasized an objective, but suggested the proper approach to the problem when he said:

> One of the primary objectives of outlook work has been, and probably will continue to be, to obtain and make available to farmers information that will be helpful to them in planning their production programs

---

[1] H. C. Taylor, The Story of Agricultural Economics, (Ames, 1952), p. 448.

[2] Ibid, p. 452.

so as to obtain the greatest returns for their efforts and resources.... Production programs, and changes and adjustments in production programs, are made by individual farmers for their individual farms, and if we are to determine what changes and adjustments will result in larger incomes, we must approach the problem from the standpoint of the individual farmer.[3]

Farm managers essentially make tentative marketing decisions when they decide on production plans. The marketing system cannot do what the producer fails to do--adjust supply to demand. Both these statements imply the same thing as Taylor's statement that "orderly production is a necessary preliminary to orderly marketing." These statements suggest the economic frame of reference for outlook information and its use.

It is not intended to give a complete discourse here on the economic theory concerned with the relationship of farmers and outlook information. Instead a brief sketch of certain principles will be presented to show how economic theory assists in prediction, choice and control. To do this, such concepts as supply, demand, price, inelastic demand, market, short-run, long-run, production factors, and production alternatives will be briefly explored. From this it is hoped to derive a general theory relationship explaining the response behavior of farmers to price and production outlook information.

Some Basic Theory

Theory has been developed to explain the above empirical observations and statements. This theory not only clarifies the needs and objectives but opens the door to problems and limitations in developing outlook programs.

---

[3]Tolley, p. 523.

Many references are made to "the law of supply and demand." Sometimes these references are made without a full understanding of supply and demand nor the implications to farmers. How does this "law" affect farmers and what can they do about it? Relating supply and demand with price shows how it affects farmers and suggests possible courses of action.

Supply is defined as a schedule of quantities of a product which will be offered in the market at various prices, other things equal. Demand is a schedule of quantities of a product which will be taken by consumers at various prices, other things equal. Both definitions apply to a particular unit of time. Each of the schedules can be charted on a curve such as SS and DD in Figure 1.

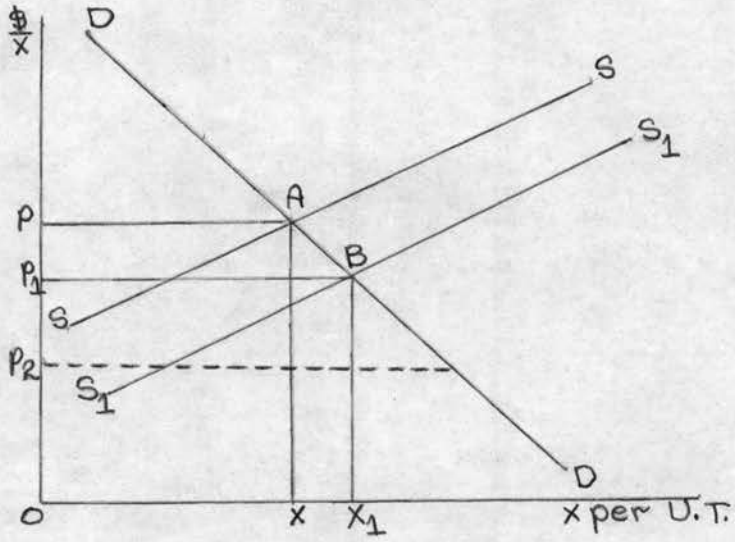


FIGURE I

The price at which the curves intersect is the equilibrium price. This gives meaning to the supply and demand relationship and is the market price. There are many circumstances under which this price may change. A change in supply without a change in demand or vice versa

results in price changes. Both supply and demand can change in the same or opposite directions with resultant price changes. At price p, a quantity such as X will be taken by consumers and is the same quantity that sellers are willing to place on the market. Point A is the only significant point on the SS schedule with the demand DD given. If greater quantities are offered on the market at price p, or the same quantity at a lower price, then a new supply schedule S_1S_1 becomes effective. A new equilibrium price p_1 is established and quantity X_1 is now taken by consumers and point B becomes significant on DD. In a similar fashion this reasoning would apply to a change in the quantity taken by the buyers.

To better understand the supply demand relationship facing the farmer we may assume pure competition. Under this assumption, no buyer or seller is large enough to influence price changes; no artificial restrictions exist; and, there is mobility of resources and goods and services in the economy. A fourth condition, complete knowledge of the economy, would make for perfect competition. Despite the absence of the above described conditions in the economy, agriculture does possess characteristics that approach the situation. At least the assumption gives a logical guide for economic analysis.

Under pure competition the price is determined by the industry relationship of supply and demand. The individual farmer as one firm in the agricultural industry faces a horizontal demand curve (perfectly elastic) since he can sell all his product for the market price at the particular time. This is illustrated. The farmer faces the demand dd and the aggregate demand for the product is DD or the industry demand curve.

If the aggregate quantity put on the market at price p is greater than X_1 for the industry, then a new supply schedule S_1S_1 becomes

effective. The new market price becomes P_1. This is often the case in the agricultural industry. Thus at the time in question the farmer can only get price p_1 even though his production plans might have been based on an expected price of p.

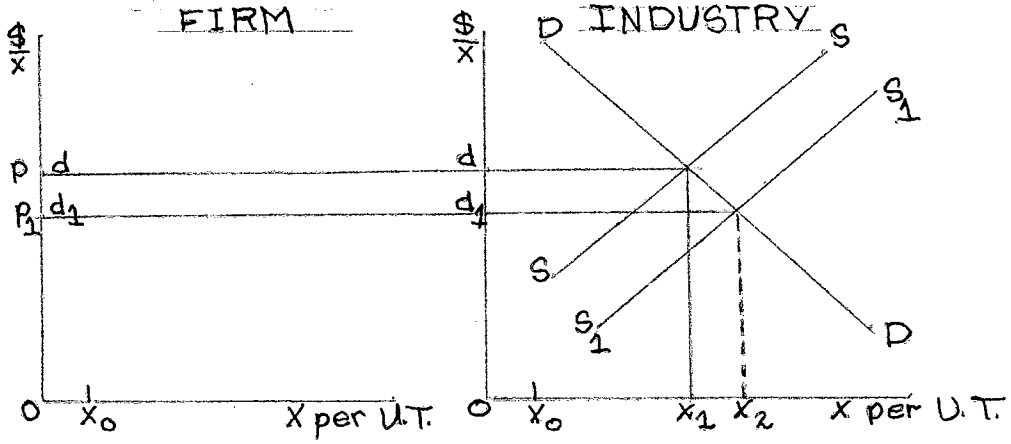
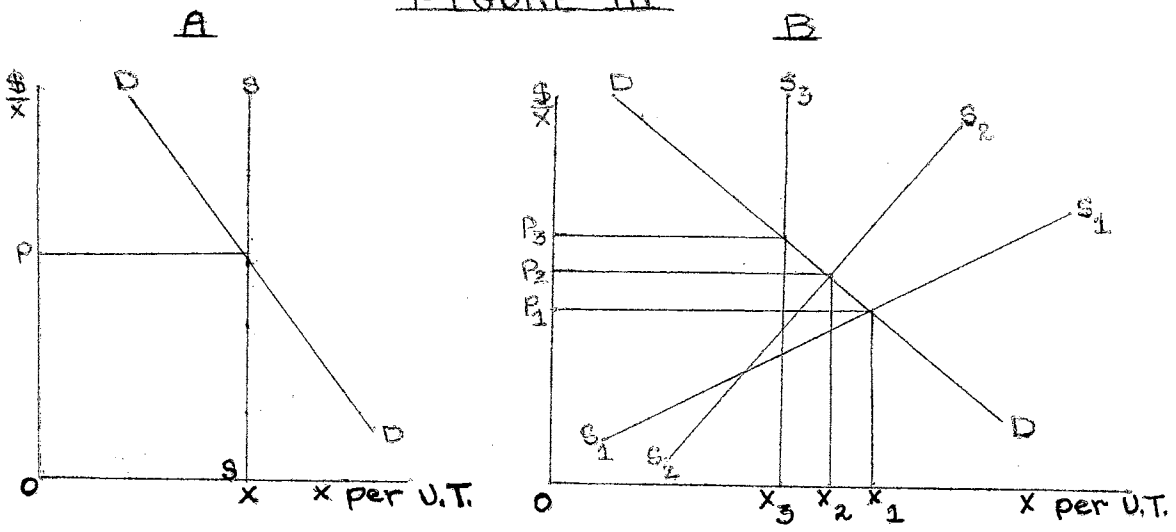


FIGURE II

Many farm products are seasonal in production which fixes an available supply for a certain period of time. This would result in a vertical supply curve as shown in Figure III-A. By withholding part of the supply and releasing it at intervals, the supply relationship as shown in Figure III-B results. Only the last period supply is fixed as illustrated by S_3S_3. Some economists refer to this relationship as reservation demand. This serves to ration the short run supply over time and unless demand is decreased, usually results in higher prices.

FIGURE III



Price elasticity of demand measures how responsive quantity taken is to changes in the price of a commodity given the demand curve. When the percentage change in price is relatively larger than the percentage change in quantity taken the demand is inelastic to price changes. Sufficient studies have been made to establish the fact that the demand for most food products is inelastic to price as well as income changes. Some food products are more inelastic than others to price changes. Factors influencing the degree of elasticity are (1) the availability and prices of good substitutes, (2) the number of uses for the product and (3) the price of the commodity relative to consumer income. Of importance to the farmer is the fact that increased supplies of products with inelastic demand results in lower receipts for the seller. Likewise decreased supplies result in larger total receipts.

The term market is used quite often in outlook work. Sometimes it refers to the particular outlet available to a farmer for the product being sold at the time. Again it will be referred to in a general reference, signifying price determination. Cochrane sets out the present concept of a market as some sphere, or space, where (a) the forces of demand and supply are at work (b) to determine or modify price (c) as the ownership of some quantity of a good or service is transferred, and (d) certain physical and institutional arrangements may be in evidence.[4] He further states that the physical facilities of the market have no meaning in terms of the boundary limits of the forces of supply and demand.

---

[4] W. W. Cochrane, "The Market as a Unit of Inquiry," Journal of Farm Economics, Vol. XXXIX, February, 1957, pp. 21-22.

The above definition explains why the term market has different meanings but it gives little help in distinguishing the application in everyday usage. When we read or hear "the cattle market is steady today" it is necessary to assume that it refers to the price of all classes of cattle. "There was a large supply on the market today" might refer to a particular market place or to all the places in the country for the product in question. "A farmer takes his wheat to market" usually infers a particular place of sale. The forces of supply and demand for the entire industry, however, determine the price but the local market conditions might modify the general price.

Price is the mechanism that regulates the supply and demand relationship. To the farmer it is what he receives per unit for the particular product he is selling at the time. Since it is apparent that the farmer is interested in getting the price he expected or a higher one, then the principles of supply control need to be examined. Of course this is only one of the facets in the price determinations, but the farmer can do little on the demand side.

If the farmer accepts demand as given he must use some basis for anticipating supply and resulting price. Economists differ in their findings and opinions as to how the farmer anticipates price and his application to adjusting his supply in terms of production plans. According to Nerlove, studies by Smith, Bean, Walsh, Kohls, and Paarlberg suggest that farmers respond very little to price in planning their acreage.[5] For the present it will be accepted that farmers do anticipate price when they undertake production plans. The limitations involved will be discussed later.

---

[5]Marc Nerlove, "Estimates of the Elasticities of Supply of Selected Agricultural Commodities," Journal of Farm Economics, Vol. XXXVIII, May, 1956, p. 496.

With a knowledge of past demand-supply relationships for a particular product the farmer has some price expectation for the commodity considered in his production plans. Since under the assumptions used, the farmer desires to maximize returns and since lower prices mean less return for increased output, adjustment to higher price is the accepted aim. If last year's prices were lower than marginal cost, then the farmer who is acting rationally will try to adjust this condition for the commodity in question. A brief summary of the procedure of adjustment will help explain the use of price and other outlook information. Thus, it is assumed that the fourth condition of perfect knowledge for perfect competition does exist to some extent.

To simplify the process, it will be further assumed that the product in question is produced with two factors of production. The function is expressed as $Y=f(X_1X_2)$, where Y is the product and X_1, X_2 are the factors of production. It is assumed that the factors substitute for each other at diminishing rates. The expected cost or price of each factor is known or anticipated. The farmer can either adjust his factor costs so that the same or greater output of the product may be made profitably or a lower output can be made. In this process the farmer is interested in minimizing cost.

The principle of cost minimization is: <u>If two or more factors are employed in production of a single product, cost is at a minimum when the ratio of factor prices is inversely equal to the marginal rate of substitution of the factors</u>. This can be expressed in equation form as:

$$\frac{dX_1}{dX_2} = \frac{Px_2}{Px_1}$$

The left side of the equation refers to the marginal rate of substitution of factor X_1 for X_2. The right side refers to the price per unit of the two factors. If the right side is less than the left side, costs can be reduced by using more X_2 and less X_1.

If the farmer is unable to accomplish desired adjustments by minimizing costs, the next step is to allocate resources between the product in question and some alternate enterprise. Assuming that the factors transform at the same ratio as the alternate product Y_2, the adjustment can be made by reaching the equilibrium position expressed as:

$$\frac{dY_1}{dY_2} = \frac{PY_2}{PY_1}$$

If the price ratio is less than the substitution ratio, more Y_2 should be produced.

Under conditions of unequal transformation the combined equation expressing an equilibrium of maximizing returns is more useful. It is expressed as:

$$\frac{\frac{dY_1}{dX_1} PY_1}{PX_1} = \frac{\frac{dY_1}{dX_2} PY_1}{PX_2} = K = 1$$

The K value is the opportunity cost ratio of producing Y_1 say instead of Y_2. If the value is less than 1, then it pays to allocate some resources to the production of Y_2.

Farmers may not actually go through the calculations outlined above, but this is the generalized method of explaining what they are trying to do when they plan production in terms of expected prices which includes

the price of the factors used in production.

Tompkin[6] concludes from a study in Ohio that farmers use theoretical considerations in their production adjustments even though they do not have a formal notion of the concepts. His suggestion that extension economists teach formal static marginal analysis to farmers may be questionable as pointed out by Plaxico.[7] Perhaps the results obtained from this study approach the requirement for simplification of the handling of production functions which link theory to empirical observation as set forth by Nesius[8] in 1950. It is encouraging that empirical observations seem to indicate an increased understanding and use of economic principles. At the same time these observations tend to point out the need for further teaching by extension economists.

The theory outlined above is by no means all that is useful in prediction and production planning. Other choice guides both static and dynamic have been developed and refinement continues to improve the tools of analysis available to the economist. As pointed out above it may not be practical to teach farmers how to use all economic principles. However, extension economists can use theory in providing farmers with information that will guide them in the process of decision making.

The Theory of Knowledge and Management

The farm (or business firm) manager is the decision-maker for his individual firm. Many of the present day concepts of management rely on

---

[6]J. R. Tompkin, "Response of the Farm Production Unit as a Whole to Prices," Journal of Farm Economics, Vol. XL, December, 1958, pp. 1115-1128.

[7]Ibid, p. 1130.

[8]Ernest J. Nesius, "Joint Use of Theory and Empirical Data," Journal of Farm Economics, Vol. XXXII, December, 1950, pp. 1169-1181.

the earlier work of Knight[9] who argued that management is needed because of imperfect knowledge resulting from change. This involves the process of learning and Knight noted that (1) perception of a situation and (2) inference or prediction of future outcomes were connected with conscious behavior. Thus the process of decision-making involves a determination of the present, the future, and the ability to deal with likely changes in the future. Deductive and inductive reasoning are necessary mental tools for managers in analyzing situations and deciding alternative courses of action.

Johnson[10] reports two types of error developed by statistical theorists as possibilities in choosing between alternatives. Consider the case of two alternatives. If one is best, but is not accepted, a type-I error is made. If this alternative is worse but is accepted, a second type error is made. Avoiding these errors is a challenge to the ability of the manager. The better his knowledge, the more accurate his decisions are likely to be.

Five different knowledge situations are set out by Johnson.

1. Perfect knowledge or at least the conviction that knowledge is nearly enough perfect to act as if it were perfect.
2. The risk situation in which a manager feels that his present knowledge is good enough for him to take either positive or negative action and that additional knowledge is not worth the cost of learning it.

---

[9]Frank H. Knight, Risk, Uncertainty and Profit, (Boston and New York, 1921), pp. 197-232.

[10]Glenn L. Johnson, Managerial Concepts for Agriculturalists, Kentucky Agricultural Experiment Station, Bulletin 619, (Lexington, 1954), pp. 10-12.

3. The learning situation in which action is postponed until more is learned as the cost of learning is less than the worth.
4. The inactive situation results from insufficient knowledge for positive action and the cost of learning is considered to cost more than its worth, the manager neither acts or tries to learn.
5. Forced action situations arise when outside influences force action even though present knowledge is considered inadequate and more could be learned at less cost than its value.

Imperfect knowledge is involved in the last four situations. In order to complete his decision-making process the manager must perform five recognized tasks of management. Briefly these five tasks are: (1) observation of known facts and trials of others; (2) analysis of these observations in terms of his particular set of conditions; (3) decision as to the best alternative course of action; (4) take action on the selected course; and (5) accept the responsibility for the outcome of the action.

Outlook information is among the observations made by farm managers. Likewise it is, or could be, useful in all five of the knowledge situations outlined above. An understanding of the concepts of management and the learning process is essential to preparation of economic outlook information.

The theory sketched in the preceding part of this section offers a conception of the framework in which individual and firm decisions concerning supply of farm products are made. Little attention has been

given to the demand side since this study is directed toward adjustments farmers may make in supply to meet changing demand situations. The decisions made by a farm manager, within limits of variables beyond his control, determine the output of his unit. The summation of individual decisions for farm production gives an aggregate supply relation for agriculture. Consumer decisions may be summated into an aggregate demand relation. The shifts of these two aggregates when subjected to analysis explain fluctuations in the farm product price level.

How Farmers Use Outlook Information

Possibilities

The farmer produces and markets in a dynamic economy rather than a static sense as followed by theory. Adjustment to uncertainties and discounting expectations plays a part in the farmer's plans. The large assortment of variable factors places certain limitations on the desired accomplishments within the economic framework under which management decisions are made. However, theoretical concepts and outlook information developed within the framework find practical use in farm production and marketing.

Miller[11] outlined four areas in which outlook information could be helpful. Briefly stated they are:

1. Short-run problems of timing sales of output and purchase of supplies, or "market outlook."
2. Problems dealing with alternative use of existing resources.

---

[11] L. F. Miller, "Outlook and Farm Management," Journal of Farm Economics, Vol. XXXI, February, 1949, pp. 642-645.

3. Cyclical and longer-run problems dealing with adjustments in the basic organization and size of operations of the business.
4. Development of a sound financial program for the farm family.

Perhaps more use of outlook has been made in the first area. The use of outlook information in the second and third area could probably be expanded by increased understanding through better educational programs. The fourth area as set out above may be more logically a result of accomplishments in the other three.

Once the farmer has the product ready for market his costs of production have no meaning in terms of price received. Certain things such as delayed marketing, storage or processing may return more than immediate sale. These and other functions may or may not be done by the farmer, but they have a bearing on the price of the product not only at the time, but in the future. To better understand these influences the farmer needs outlook information which will not only help determine marketing time, but the best use for the product. Some products may go directly to market or they may be an intermediate product used as a production factor for another product. These are examples of use under the first area.

Individual farmers differ in their method of using the "planning process," but operators must allocate their resources between enterprises. Expected prices may play a part in this allocation. Nerlove[12] concludes that individual farmers can and do shift when conditions make a shift profitable. He cited the work of Beneke and Howell with Iowa

---

[12]Nerlove, pp. 496-512.

farmers not participating in the corn allotment program. These farmers increased corn acreage at the expense of soybeans and other crops. Nerlove presumed these farmers shifted because they could anticipate that a combination of corn support prices and allotments would make it profitable to do so.

Heady[13] observes that agriculture has a strong tendency to maintain its short-run output even as short-run price-cost ratios vary widely. He cites fixed short-run costs and limited capital as the two main reasons for agriculture's slowness to adjust to changing economic conditions.

It is in the third area described above that the use of outlook information is most needed because adjustments to longer-run problems involve more changes in use of resources. These problems are concerned with cyclical changes in the general price level as well as longer-run secular changes in the demand and supply pictures for specific products rather than from short-run and intermediate shifts in relative prices. The adjustments made by farmers in meeting these changes are likely to be different in case of a falling price level as contrasted with a period of rising prices. Hart[14] et al. list twelve adjustments for farm managers in meeting a falling price level and only five for rising prices. A similar discussion of adjustments is made by Johnson and associates.[15] In recent work Johnson points to the need for these

---

[13]Earl O. Heady, "Uncertainty in Market Relationships and Resource Allocation in the Short-Run," Journal of Farm Economics, Vol. XXXII, May 1950, pp. 240 - 257.

[14]V. B. Hart, M. C. Bond and L. C. Cunningham, Farm Management and Marketing, New York, 1942, pp. 384-388.

[15]Sherman Johnson et al., Managing a Farm, (New York, 1946) pp. 338-346.

adjustments in the immediate future as well as needed research and extension education to facilitate them.[16]

From the west-central Ohio study Tomkin[17] found that farmers attempted adjustments to price changes although they tended to wait until an up or down trend was obvious. As a group, they adjusted more to past price changes than their own expectations. They were apparently more willing to take positive adjustment action with the reassurance of forward pricing afforded by support programs. Tomkin concluded that income could be increased through resource adjustment with knowledge of price relationships and suggests this as a challenge to outlook and extension personnel. Plaxico[18] pointed out that these observed responses might be due to changes in other variables.

How farmers use outlook information in relation to theory can best be understood by tracing the steps followed in a hypothetical example. Actual observations and questions experienced by this writer and others indicate this type of situation is a common occurrence, rather than a possibility. Suppose a farmer finds himself harvesting a bumper crop of grain sorghum with cash market price much below what was expected. As a result of prior outlook information, the farmer is aware of large holdings already in stock. Therefore, he can see little advantage to storing for future sale. Since the farmer has experience in feeding cattle he considers this as an alternative use for the grain. He has the

---

[16]Sherman Johnson, "Present and Future Surpluses--Trends and Solutions from Standpoint of Supply," Increasing Understanding of Public Problems and Policies, (Chicago, 1956), Farm Foundation, pp. 43-48.

[17]Tompkin, p. 1128.

[18]Ibid, p. 1129.

technical information needed and knows about what it would cost him to produce gains on different types of beef animals. Based on supply-demand relationships he decides to feed the grain rather than sell.

The next move is to decide whether to feed calves or yearlings, steers or heifers, and medium or better quality animals. Current market prices may determine which is the best buy at the time. But the farmer must decide to sell six months or more in advance. The supply and price outlook for finished cattle during the relevant periods ahead must become a part of the calculations along with the cost of the feeder cattle, the feed and other items. The farmer either has a source of information in which he has confidence or he inquires from one or more sources and arrives at an expected price. Unless the farmer is partial to a certain type of feeding operation, he will choose the type of feeder cattle that promises the best profit. Feeding plans and marketing periods are then adjusted to this choice.

It might be pointed out here that the product, grain, now becomes a factor of production as does the purchased feeder animal. The farmer now combines these with inputs of additional feed, labor, machinery and equipment to produce beef.

The farmer may alter his plans as the operation is carried out. He may decide to sell the animals sooner than anticipated because prevailing prices might be better than future expectations. Or he might decide to feed to heavier weights because future prices indicate this would be profitable. Although technical procedures such as rate of gain may cause some adjustments in plans, economic information plays the big role in decision making.

The farmer in the example cited has followed the general outline of

theory developed earlier. In addition this illustrates the adaptation of outlook to the first two areas of use described earlier. If the farmer in this case decided to invest in permanent equipment to continue the feeding operation then these adjustments would entail use of outlook in the longer-run and would illustrate the use in the other two areas. The process could be applied to a decision to feed hogs instead of cattle or in combination with them. The choice guides would be the same.

A study among Ohio farmers who feed cattle each year showed many of the same considerations as described above.[19] The survey was made in April of 1953 and rechecked the following December for results and changes from original plans. Prices of feeder cattle were considered along with expected prices for finished cattle. No change in plans were made by 36% while 31% sold less and 32% made increased sales. However, 70% were within 10% of original sales plans. Both prices and technical reasons entered into changed plans. Athearn[20] concluded from this survey that the "expectation" given by a farmer in response to a question sometime before action may be quite different from the "expectation" on which he ultimately bases his action.

The need for a better understanding of farmer reactions was pointed out by Tolley[21] in 1931. He stated that a knowledge of how different classes of farmers "react" to changes in prices, costs, and non-economic factors would help outlook workers in serving farmers better.

---

[19] James L. Athearn, "Price Expectations, Plans and Decision Making Among Ohio Commercial Cattle Feeders," Journal of Farm Economics, Vol. XXXVIII, February, 1956, p. 126-143.

[20] Ibid.

[21] Tolley, p. 524.

The Increasing Importance of Outlook Information to Farmers

Relation to General Economy

The continual decline in total number as well as percentage of people employed on farms has changed drastically the relationship of agriculture to the rest of the economy. The number of farm residents dropped from 23% of total populations in 1940 to 12% in 1958. This is even more significant when changes in number of people earning their principal income from sources off the farm are considered. Farm income has not kept pace with the rise in non-farm income. Income per person has been maintained in recent years only by the decline in farm population. Per capita income for non-farm people has averaged slightly more than twice that of farm people. An increasing proportion of the income of farm residents is coming from non-farm sources.[22]

Another significant relationship to the rest of the economy is revealed in the growth of agribusiness in recent years. Non-farm inputs (all inputs except labor, land and buildings) increased from 29% of the total in 1940 to 51% in 1957.[23] Increased specialization in farming has resulted in more processing and marketing functions performed in off-farm locations. The growing super market system has brought on many changes in the distribution of food products.

The growth in investment requirements for farming tends to cast farm operators more and more in the role of business executives. The average investment in a commercial family operated wheat farm in the

---

[22] Agricultural Outlook Charts, USDA, Washington, D.C., 1958, pp. 8, 26.

[23] Kenneth L. Bachman, "Prospective Changes in the Structure of Farming," presented at the 36th Annual National Agricultural Outlook Conference, November, 1958, Washington D. C., p. 15.

Southern Plains was $17,000 in 1940 compared with $81,000 in 1958.[24] The average investment of all commercial farms in the U. S. for 1954 was about $34,000. Projections to 1975 indicate this investment in land, buildings, machinery and livestock to be about twice this amount in 1954 prices.[25]

The changes in crop acreages and shifts from region to region in recent years is another factor in the importance of outlook information to farmers. The movement of cotton from the southeast to the west is an example. In Oklahoma, farming systems have changed since the end of World War II. These changes have implications in the relationship of farmers to the non-farm economy as well as internal structural changes in farm operations.

The changing in farm family living patterns in relation to urban families is an important consideration. The effect of institutional factors such as Social Security is an example of closer relationship with the general economy. Cromarty[26] traces these relationship changes under these sections: (1) production processes, (2) consumption processes, (3) political activities and (4) attitudes toward political and institutional factors.

Recent developments in the agribusiness economy tend to raise doubt as to future implications of changing relationships between farm and non-farm sectors of the economy. In this respect the growth of vertical integration has raised questions as to the future of the family operated

---

[24] Agricultural Outlook Charts, p. 17.

[25] Bachman, p. 11.

[26] William A. Cromarty, "Changing Relationships Between Agriculture and the National Economy," Journal of Farm Economics, Vol. XL, December, 1958, pp. 1568-1578.

farm. Concern is expressed over the possibility of management being transferred to off-farm business firms. Economic outlook information is important to farmers as a source of knowledge concerning this situation since it adds to the list of problems requiring decisions from the farm manager.

In Relation to Technical Advance

Technology development has been at a rapid rate since 1940. The farm output per man hour has doubled during that time. As a result one farm worker now produces enough to support twenty-three other people compared to eleven in 1940 and only seven in 1910.[27]

With technology increasing so rapidly, outlook information becomes of greater importance to the farmer because of adjustments to changes. Heady attaches two general properties to technical improvement.[28] First is the development of a new production function with greater output of product from a given total input of resources as shown in Figure A. Adoption of the innovation enables the farmer to either increase output or decrease inputs. This should result in lower costs and increased profits in the short run. The second universal property of innovations in agriculture is the altering of the production surface. The marginal physical rates of substitution (the elasticity of substitution) are always altered in favor of one factor by specific innovations. This is illustrated in Figure B. An iso-product line F, representative of the new technique has a greater slope toward one input than the old technique line E. The substitution rate is measured geometrically by the two

---

[27] Agricultural Outlook Charts, p. 21.

[28] E. O. Heady, Economics of Agricultural Production and Resource Use, (New York, 1952), p. 802.

triangles. In the lower contour the same change in capital offsets a larger change in labor.

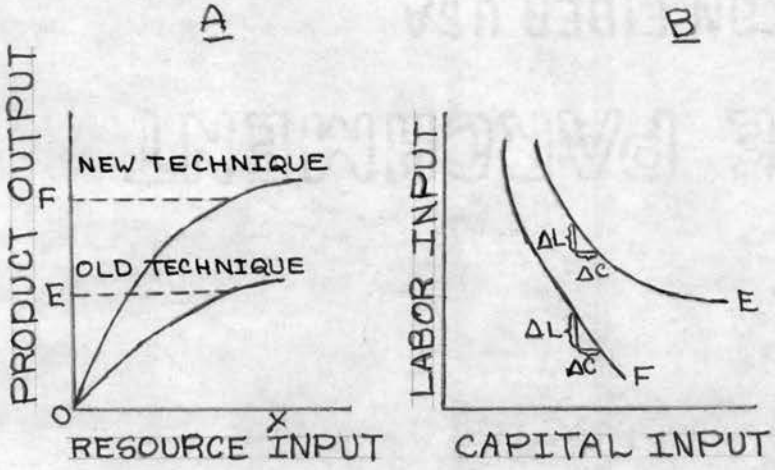


FIGURE IV

In a broad sense technological changes have revolutionized rural living as well as developing specialized commercial farming. Such improvements as electricity, modern transportation, and new communication methods have changed rural living although not as fast nor complete as mechanization has production methods. Johnson[29] in 1950 made note of almost complete transformation of production in areas most affected by technological change. The wide disparities of adoption at the time, especially between areas, prompted him to suggest a desirable structure of agriculture for an environment of progress. Six goals were prescribed dealing with economic equality, transfer of resources, off-farm employment and other adjustments. He also suggested means of implementing the selected ends.

---

[29]Sherman E. Johnson, "Technological Changes and the Future of Rural Life," Journal of Farm Economics, Vol. XXXII, May and August, 1950, pp. 225-239 and 485, respectively.

Later, in discussing technological research and education, Johnson and Barton,[30] take a somewhat different approach. In this report it was apparently assumed that society had benefited as well as some individual farmers and groups of farmers, but the effect on non-adopters and late adopters of innovations was minimized. At any rate this seemed to differ with some of the inferences drawn from the earlier report. Plaxico[31] takes a more conventional approach in discussing the long-term effects of technology. He shows that the differential rate of technological development benefits areas or commodities where development is more rapid at the expense of those where development has been slower. The early adopter also benefits at the expense of the late adopter in the same manner. Long-run benefits of technical development accrue to farmers as consuming members of society. Cochrane[32] views technological advance as the only real shifter of the supply function and as permeating much, or all, decision-making in American agriculture. Regardless of the views accepted one must concede that technical advance is of prime importance in farm production changes. The present development in the poultry industry is but one example of this. Outlook information can play a helpful role in adjusting to future technical developments. In fact, probable changes in technology may be more important considerations in certain investment decisions than price or demand prospects.

---

[30]Sherman E. Johnson and Glen T. Barton, "Effects of Technological Research and Education," Agricultural Adjustment Problems in a Growing Economy, ed. Heady et al., (Ames, 1958), pp. 39-58.

[31]Ibid.

[32]Willard W. Cochrane, "Additional Views on Demand and Supply," Agricultural Adjustment Problems in a Growing Economy, ed. Heady et al., (Ames, 1958), pp. 94-106.

The increasing importance of outlook information is emphasized by Heady[33] in reporting expressed needs of Iowa farmers. In a sample survey 64% desired more outlook information while 94% needed various kinds of economic information. This contrasted with only 43% expressing need for additional cropping information. In relation to the general economy the need for outlook information by farmers is becoming more important. McNeal[34] makes this clear in commenting on the growth of industry's use of forecasting. He states that industry makes more practical use of outlook and forecasts than any other group. The information is used in planning actions to eliminate or minimize risks.

Limitations and Problems

Outlook information is not without limitations as to application and expected results from its use. Theory is limited by assumptions which disregard many variables experienced in the real world. Even with certain allowances for these in practical use of outlook information developments may not approximate the predictions. Imperfections arise because of manipulations by the human element and uncertainties of other elements including weather. Perhaps the most important limitation is imposed by the lack of balance achieved by the aggregate actions of farmers in making individual decisions and plans. The major limitations along with particular related problems require more consideration.

---

[33] E. O. Heady, "Implications of North Central Managerial Study," Journal of Farm Economics, Vol.XXXVII, December, 1955, pp. 1122-1125.

[34] Dean McNeal, "The Development Use of Economic Information and Forecasts by Industry," Journal of Farm Economics, Vol. XXXI, February, 1949, pp. 646-650.

Accuracy and Reliability

Probably the first question raised concerning forecasts concerns their accuracy. The use made of outlook information depends upon the confidence of those it is intended to help. Baker and Paarlberg[35] made a study of USDA forecasts to determine how accurate the forecasts were. They developed a method of scoring on the basis of assigned values that rated the accuracy of the forecast with the actual outcome. The study covered selected series of forecasts made in the period 1923-50. Briefly their findings showed that:

1. General economic forecasts had an accuracy evaluation score of 75 compared to zero if they had been completely wrong and 100 if perfect. Theoretically a score of 50 could have resulted over time purely from guessing.
2. Price predictions were not as accurate as other series--scoring only 60 compared to 77 and 78 for Industrial Production, Demand and Farm Income.
3. Forecasts of annual averages had a slightly higher score than for monthly predictions and were appreciably higher in some series.
4. The likelihood of successfully predicting a directional change was greater for the forecasts averaged over longer periods; the likelihood of a prediction close to the actual level of the variable was greater for short-time averages.

---

[35] John D. Baker, Jr. and Don Paarlberg, "How Accurate is Outlook?", Journal of Farm Economics, Vol. XXXIV, November, 1952, pp. 509-519.

5. The accuracy of specific forecasts was considerably better than non-specific predictions. Since more predictions of specific figures were made for the Farm Income series these forecasts scored higher than others.
6. Large variations in accuracy and skill occurred each year during the study.
7. The naming of major turning points in the course of economic events is the most difficult phase of forecasting but it is the most important.
8. Errors in general economic forecasts were reflected in commodity forecasts when general predictions were used as a basis for the specific reports.

The last point made above is important in developing state outlook programs. Since most of the basic outlook information originates in USDA, any error in the general framework may be carried into the local forecasts. The question arises as to the possibility of state economists being able to detect errors and avoid some of the errors. Ability to fit local information into the general situation might help in this connection but there is also danger of lessening the accuracy.

The reliability of USDA forecasts are sometimes questioned as to political implications. The study cited above showed no evidence of forecasts being more optimistic in election years than at other times. However, in 1956 when the National Outlook Conference was shifted from October to November, charges were made that it was to avoid a pessimistic forecast just prior to election. Possibly a danger is hidden in the trend away from the use of state economists in assisting with the preparation of outlook statements. This does not mean that the organi-

zation and procedure now used isn't satisfactory. But with the influence of national farm programs there might be a tendency for certain factors to be minimized and others to be emphasized. Even with the freedom to modify or revise the reports for state use, state economists cannot be as effective as they were in the earlier days when they helped make the statements.

The Problem of Aggregation

In discussing decision making it was pointed out that individual managers do not respond to economic and other stimuli in the same manner. This creates quite a problem in estimating the supply relationships for farm products. Plaxico[36] describes this problem and three alternative methods of estimating supply--(1) structural estimates based on time series data, (2) statistical projection of variables based on time series data, (3) aggregated firm responses based on cross sectional data. Managers determine individual firm supply relationships largely by deductions from aggregate data. Economists, in estimating industry supply relationships for individual products as well as the total supply of all products, must translate the expected individual supply responses into aggregate terms. Variables in each instance may cause the actual in each case to be different from the indications.

Plaxico[37] also presents an approach to better understanding individual farm supply responses. He uses the concepts of aquisition and salvage value of production factors in connection with asset fixity to explain firm supply response to price changes. Basic theory concerning

---

[36]James S. Plaxico, "Aggregation of Supply Concepts and Firm Supply Functions," Southern Cooperative Series Bulletin No. 56, (Stillwater, 1958), pp. 76-91.

[37]Ibid.

supply presented earlier indicates reversibility of supply functions, that is, after response of increased supply to higher prices that response to lower prices would move down the old supply function. However, shifts in farm supply functions are not reversible. Johnson[38] states that once individual farmers have expanded their production capacity, they are not likely to increase their net incomes by reducing farm output.

The problems connected with supply response and relationships are generally recognized by economists and recently more attention has been devoted to development of techniques that will be useful in solving these problems.

The Human Element

Differences in reactions of individuals to various stimuli cannot be over emphasized. The behavior of individuals has important implications for economists in developing and presenting outlook information. In studying attitudes of farmers toward price expectations Williams[39] found that farmers preferred sure-chance to uncertainty of higher returns with possible lower returns. More farmers would take chances when the higher income depended on their knowledge. However, farmers in this study would not contract to sell corn in advance at a price equal to that which they expressed as most likely.

Individual managers apparently use value judgments that result in different actions from those which economists consider rational.

---

[38]Sherman E. Johnson, "A Mid-Century Look at U. S. Agriculture," Journal of Farm Economics, Vol. XXXIII, November, 1951, pp. 649-662.

[39]D. B. Williams, "Price Expectations of Illinois Farmers," Journal of Farm Economics, Vol. XXXIII, February, 1951, pp. 20-39.

Reiss[40] says that predictions of human behavior are usually based upon the degree of relationship between the criterion (a measure of success in the activity) and one or more of three main types of predictive factors: (1) previous performance, (2) proficiency tests and (3) personal characteristics. Outlook economists must consider at least the first and third factor in connection with forecasting but only the first may be useful. At any rate human behavior is an important variable in developing and using outlook information. If outlook information accomplishes desired aggregate adjustments, individual behavior is the necessary force for achievement.

Types of Information

In view of the problems and limitations described, brief consideration will be given to the types of information needed to meet the conceptual requirements for an effective outlook information program. Careful selection of information is important because without the proper kinds of material, good methods of preparation and presentation may be fruitless.

Short Run and Long Run

These terms are used somewhat loosely in economics--sometimes to describe time periods and at other to describe the lapse of time between making a forecast and the time period in which it occurs. Marshall[41] used three time periods: (1) The market period, referring to a single day or few days in which supply was limited to that in sight. (2) The

---

[40] F. J. Reiss, "Measuring the Management Factor," Journal of Farm Economics, Vol. XXXI, November, 1949, pp. 1065-1072.

[41] Alfred Marshall, Principles of Economics, (8th edition), ed. Macmillan and Co. Ltd., (London, 1920), Book 5, Chapter 5-8.

short period, is long enough for the rate of supply of a commodity to be changed but too short for adjustments to change output. (3) The long period is a time long enough for changes in numbers and kinds of firms, etc. to take place. Used in these definitions the time periods will vary for different commodities. For purposes of outlook work a convenient usage is to use short run or short term to refer to any period up to one year. Beyond one year is a long run or long term period. For particular situations these periods could be used more specifically.

As to the lapse of time between a forecast and the time of occurrence these should probably be called short range and long range. Baker[42] and Paarlberg grouped forecasts into: (1) Short-term which consisted of monthly forecasts made three months or less ahead and annual forecasts made after December 31. (2) Long-term which consisted of monthly forecasts made more than three months ahead and annual forecasts made before January 1. These uses are purely arbitrary and may be varied to fit any situation but the terms should not be confused with the time period described above.

The usefulness of outlook information for the short period has been discussed in general terms earlier. Too often many people think the primary function of outlook is to regulate marketing activities by predicting buying and selling times. Farmers should not rely too heavily on short run market forecasting but should consider them as one factor in making individual decisions. Perhaps most outlook programs have emphasized the short period and neglected the longer run periods. Farmers need information concerning all possible periods of forecasting but should base decisions upon the relative values. Therefore outlook

---

[42] Baker, p. 513

information should not only contain forecasts for short and long run but should relate them in comparative terms so that they may be weighed properly in decision making. Heady[43] stated that education needs to focus more on the long-run outlook in order that transfers of resources will be facilitated and fewer persons will make wrong judgments in their earlier flexible years.

All the periods described are important and the extension economists should properly balance the amount of time and space given to each. The longer-run or secular period, in which underlying economic factors such as population, capital requirements and other conditions may change, is also very important in agricultural outlook. Keeping farmers informed as to changes requires careful selection and use of information concerning time periods. Previous forecasts should also be corrected to reflect current developments.

General and Specific

Outlook information can be generalized in several ways or developed specifically for each commodity or for different localities. General agricultural information is useful to farmers, but is not sufficient to meet the needs of most of them either in planning or marketing. The over-all picture enables the farmer to put his situation in perspective but specific commodity information is needed for him to chart a rational course of action. General information refers to national level figures on such items as gross income, net income, and production expenses. Prices can also be expressed in general terms of being higher or lower, and may refer to aggregate level. The farmer needs information on specific items.

---

[43] E. O. Heady, "Adjustments in Production to a Growing Economy," Journal of Farm Economics, Vol. XXXVII, December, 1955, pp. 1065-1069.

A statement that farm income will be down next year gets the attention of the farmer but he would like to know about how much lower. Then he'd like to know the specific reasons for the lowered income, whether due to an expected drop in prices or production. He is also interested in the expected general level of costs for production items. But this general information must be followed by outlook material as applied to particular commodities, specific time periods, and localities, if possible.

Even when the information is slanted toward the particular, there arises a need for more detail. For instance the statement that hog prices will be low next year does not give enough information to enable the farmer to make a rational decision. To evaluate his own situation and determine his possibilities of choice he needs to know about how low prices will go and why. The period or periods of expected low prices may be the decisive factor in his particular situation. Without specific information the farmer cannot be expected to adjust production in an orderly fashion.

Production and Consumption

Knowledge of production for specific crops during the current year and expected supplies for the coming year is not enough on which to judge alternative future plans. The farmer is interested in the growing investment requirements for farms in general and his in particular. The cost of capital is of concern, but more emphasis is placed on the availability of the capital. Combining economic information with technical processes to improve output is a definite aim of efficient farm managers. Achieving higher yields and lower cost production is not sufficient. Information related to consumption must also be considered in the combi-

nation of skills and knowledge going into the production process.

If the per capita consumption for a particular farm product is decreasing each year, the farmer needs to know why. In one case this could signify a change in preference by consumers. In another instance it might be due to a failure of technology development to keep pace so that the product could remain competitive. Wheat is a good example of the first case while sheep production might be placed in the second situation. If consumers are using a substitute for some farm produced item then the producers of it need information as to the preference change. Synthetic fiber use compared to cotton illustrates this situation. The farmer needs to know the reasons behind the change and the possibility of future developments. These play an important part in his selection of enterprises for his production plans.

In general it may be stated that outlook information should be made available on all farm products. The individual farmer is not interested in all commodities, but his interest should not be confined to just the products he grows. This is evident when consideration is given to an alternative enterprise not currently produced on his farm. Another important consideration is the matter of substitute products. A farmer definitely needs to know the situation and outlook for competitive substitutes. Another angle is the development techniques in production and marketing of some product that may have a future influence on some other products. For instance the highly efficient operation of the poultry industry with a steady increase in per capita consumption should receive very deliberate consideration by the producers of other meat animals.

Taylor briefly described the general types of information needed when he said:

> Farming is a forward looking business.... To decide wisely what prices to use in estimating future receipts requires a thorough knowledge of production trends, consumer demand, price trends, and market outlook; that is, knowledge of the forces which make prices.[44]

The information needs to be on a broad scale but emphasis should be placed in line with specific needs of farmers in a local area. The outlook program for any particular area must include methods for accomplishing this end.

---

[44] Taylor, p. 468.

CHAPTER III

CURRENT OUTLOOK PROGRAMS

The Agricultural Extension Service in each state has some type of outlook program. The degree of importance attached to the work and the methods of handling the program varies among the states. Some programs consist mainly of preparing annual outlook statements. These statements usually cover major enterprises as well as a resume of business conditions affecting agriculture. These statements may be distributed by mail or at meetings. Other programs are more intensively organized and outlook information is handled on a continuing basis throughout the year. Some states have regular outlook publications while in others the outlook material is included as a part of a general agricultural or economic organ of the institution.

States differ considerably in the methods employed in the preparation of economic material to be used in printed form. The job of selecting and summarizing applicable information may be done entirely by the extension service in one instance, while in another, the research staff is charged with this responsibility. In other cases the material is prepared through joint efforts. Some states have extension personnel assigned specifically to outlook work. Others operate through committees assigned the job of coordinating the outlook program in addition to other project activities.

The sources of information have a greater degree of similarity in

the states' programs than do the methods of procedure in carrying on the work. Information issued by the USDA is the universal source of material. State reports and experiment station reports are also used.

Oklahoma Program in 1956

A brief history of the outlook work in Oklahoma was presented in the first chapter of this manuscript. More detail concerning the procedures for collecting and disseminating information will be helpful at this point. Outlook for the year 1956 was presented in several counties by a state extension economist during December, 1955. A brief summary leaflet was also made available for distribution. Most of the farm commodities were briefly covered in each of these meetings which were attended by agricultural leaders and farmers invited by the local county agent. This approach reached few farmers and the complexity of the material prevented effective results.

In the summer of 1956 individuals or committees in the extension service were assigned the task of preparing 1957 outlook material for specific commodities or areas. These specialists obtained assistance from research economists and others. After each commodity report was prepared by the assigned personnel, a committee was charged with the job of editing and briefing the material. The material was condensed for the purpose of mimeographed pamphlets to be used by state and county extension staffs. A more condensed version in leaflet form was also prepared for distribution to farmers.

The committee responsible for coordinating the work reviewed the material with a group of workers selected to present the information to county extension workers. Four men and four women specialists were

selected to work as teams of two in each of the four extension districts. Color slides of USDA charts were used in presenting this material to the agents. Following these meetings county agents were urged to hold outlook meetings by the first of January. The material presented was strictly of a short-term nature, dealing only with next year's production and price outlook. Outlook information for 1957 was carried in the December issue of Current Farm Economics.

On August 1, 1956, a project in the agricultural extension service was activated which provided a full-time employee to do agricultural outlook work. This was an Agricultural Marketing Act project which provided funds on a matching basis for the purpose of increasing emphasis on outlook and market information. Oklahoma became one of 12 states, at that time, participating in this type of project. The Director of Extension and the Head of the Department of Agricultural Economics decided the project offered the best solution for increased use of outlook information and a better understanding of economic conditions necessitating farm adjustments.

The writer was assigned the task, under the supervision of the Assistant Director of Extension and the Head of the Agricultural Economics Department, of developing an outlook information program to be used in Oklahoma. The first year's assignment was to learn as much as possible about the methods and procedures used in other states in developing and presenting outlook material. Specimens of publications were collected, reviewed and appraised from the standpoint of fitting into Oklahoma needs. The final preparation in developing the program consisted of a visit to Kansas State College and personally interviewing those concerned with the preparation and dissemination of outlook

information in that state. Kansas had been under an AMA project for some time and the Oklahoma project was patterned after it.

Workers from three selected states were interviewed at the National Outlook Conference in November of 1957 relative to the methods employed in their respective states. Two of these states, Iowa and Washington, operated under AMA outlook projects--the third state, North Carolina, had a different type of program. A six-page interview guide was prepared prior to the outlook conference so that comparisons would be consistent and also to insure complete coverage of desired information. Each of these state programs, along with that of Kansas, will be briefly reviewed and then appraised from the standpoint of meeting considered needs for Oklahoma conditions.

Kansas Program in 1957

The Kansas outlook program, which is an AMA project, consisted mainly of issuing three regular publications. One, Kansas Market Comments, is issued weekly which gives the short-run price outlook in brief form, and contains one detailed article in each issue. It is an $8\frac{1}{2}$" x 11" sheet mimeographed on both sides. The weekly sheet is sent primarily to county agents and other agricultural leaders. A monthly publication of the four page folded sheet form was produced by offset print. This leaflet contained timely detailed articles on marketing information. The subjects were scheduled a year in advance and county agents ordered the number of each issue that he desired in advance of publication. The publication was distributed to farmers by the agent. Another publication has been prepared monthly for many years, The Kansas Agricultural Situation. It is issued on a bulletin size leaflet and briefly reviews the

current situation for each of the major agricultural commodities produced in the State.

An extension economist is assigned the responsibility of coordinating and preparing the outlook information. He works closely with the research economists, who are organized on a commodity basis, in preparing the material. Articles are written by the different economists concerning their particular field. Although occasionally a longer-term forecast is written about a particular commodity, the major interest is on short-time production and price predictions. Outlook information may be presented at farmer meetings, but an intensive training program for extension personnel was not a part of the program. Effective use is made of other channels of communication.

North Carolina Program in 1957

In planning for the 1958 outlook work, the North Carolina Agricultural Extension Service was planning to follow about the same procedure as used in the previous year. Economists in the Department of Agricultural Economics were responsible for coordinating the material for the annual statement. Extension economists assisted with the final summary which consisted of about 16 pages of mimeographed information. This was distributed by county agents. In addition, the December and June issues of the Tar-Heel Economist carried about four pages of outlook information. The State extension staff, charged with training county personnel, devoted one day to rehearsal prior to district meetings of agents. The training meetings for agents were held in December and workers from about five counties attended each district meeting. The manner of presentation to farmers was left to the discretion of each individual county

agent. The usual procedure was to present it as part of other programs at group meetings.

No extension specialist devoted full time to outlook work. Farm management and marketing specialists devoted about 10% of their time to preparation and dissemination of outlook information. Most of the emphasis was on short-run forecasts; however, a special long-range outlook program had been presented during the previous year.

Washington Program in 1957

The outlook program used in the State of Washington was handled with about the same procedures as had been used during the last ten years. The present program was started in 1948. With the exception of a short period during the early '50's, the program had been supervised continuously by the extension economist who initiated the program.

The outlook program in Washington is concentrated around publications. A weekly multilithed letter is issued to county agents and extension staff members. These letters are often concerned only with a brief statement of the short-run and/or long-run outlook for each commodity produced in the State. At other times the information is more detailed for fewer commodities and may be concerned with items related to agricultural outlook. A monthly printed release is issued consisting of two pages of printed information. Individual commodities are treated more in detail and at timely intervals in this publication. It is mailed to about 8,000 farmers in the State.

Every two years, outlook training meetings are held for county agents in the State. The county agents usually present outlook information in connection with other programs at farm meetings. The State

Specialist presents information at special farm meetings and some commodity association meetings. Regular use is made of radio, TV and newspaper channels.

Iowa Program in 1957

The agricultural outlook program in Iowa has been operated with about the same procedures for over 25 years. Of course, improvements in various techniques have been made as the program has progressed. Two extension workers devote full time to the preparation and dissemination of outlook information. The project leader has been in charge of the work since 1939. Data is collected and analyzed by the two workers in preparation of outlook material. Contacts are maintained with marketing and processing firms and production and marketing trends are kept up to date.

Two publications are used to carry outlook information to farmers. A weekly mimeographed sheet is issued dealing with one or two short-time price and production forecasts. The analysis is usually thorough, but brief and to the point. Charts are used to illustrate the analysis presented. About 2500 copies of this material are distributed each week, most of them going to farmers who subscribe for the service at a rate of $1.00 per year. A more general type of outlook information is printed each month in Iowa Farm Science, a magazine published by the Experiment Station and Agricultural Extension Service, and distributed to 35,000 farm families in the State who request the service. From two to six pages may be devoted to outlook depending upon the time of the year. A minimum number of subjects are covered in each issue and the information may be of the short-run, intermediate, or long-time nature. The Iowa

Extension Service has also presented programs to farmers concerning long-time trends and adjustments in agriculture.

An annual statement consisting of about 25 mimeographed pages is prepared for the use of county and state staff members only. The State Extension staff is presented with outlook information during December. In January, the material is presented to county agents. Some county agents hold meetings at which outlook is presented. Iowa has seven district economists who meet with farmers from September through February, at which time outlook for the coming year is presented along with other economic information. These seven specialists devote about 25% of their time to the presentation of outlook material. They receive their training in August from the State Specialist. Francis Kutish, the project leader in outlook information, expressed the opinion that the presentation methods in Iowa had progressed about as far as possible and that their need was for improved techniques of analysis. Farmers have asked that the forecasts be more specific.

Conditions for Measuring Effectiveness

There may be justification for wide differences among states as to methods and procedures used in preparing and disseminating outlook information. Commendable features of some state programs should certainly justify their continued use. Sound reasons may be advanced for not altering the procedures in other states. But the overall objectives and general importance of outlook information to farmers should receive the same degree of emphasis in all states. Sufficient references have already been cited in this manuscript to establish this fact. Then some basis is needed to determine how well outlook programs approach the conceptual objectives and needs heretofore described.

In order to do this a set of conditions have been developed to broadly cover the desirable features of an effective outlook program. Six proposed conditions for this measurement process will be described. Later the programs used in the five states discussed earlier will be appraised as to effectiveness in meeting these requirements.

An Optimum Outlook Program

1. Provides the types of information needed by farmers to make production and marketing decisions. This requires adequate long-time forecasts as to production and consumption trends. Information must be complete and clear enough to guide the farmer in his individual process of adjustment.

2. Supplies information relating economic conditions outside of farming that may affect agricultural outlook or the individual farmer's position. This not only involves a general summary of business conditions, but changes that may be taking place which may alter the relationship of farming and the non-farming sectors of the economy. Future trends indicating the degree of likely change in this relationship needs to be a part of the information. To this extent economic education must be a part of the outlook program because if handled separately the farmer may not attach significance to the relationship. This combination of economic outlook and economic education will better enable the farmer to consider alternatives outside farming in his planning procedure. This may be more important to the preparation of farm youth for future careers than to a change in the farmer's personal position.

3. Has responsibility designated to one person for coordinating subject matter and timing of releases and activities throughout the year.

Unless outlook material is presented on a continuing basis it is not effective. As has been pointed out previously, farmers are more likely to make use of material received during the time they are making decisions for a particular enterprise. Different enterprises are considered during various periods throughout the year. Two or more might be considered together but the next period of decision may concern one of the previous problems along with a different undertaking. Thus timely distribution of material is important to production planning.

The person responsible for coordinating may and should seek assistance from other extension workers and research economists. Any material prepared by others to be sent to farmers should be checked by the coordinating individual. This does not mean that viewpoints other than those of the outlook specialist should not be expressed but should be properly verified and timed. The amount of subject matter devoted to each enterprise should be controlled not only for the sake of reader interest, but to avoid too much information on relatively minor enterprises.

Coordinating the program through a central figure provides regularity of information and prevents delays that might occur due to other pressing responsibilities of individuals under a divisional system of coordination. Emphasis can also be given to attractiveness of the periodical and maintaining reader interest.

4. Makes use of all available channels of communication in dissemination of information. Regular publications must be the first means of getting information to farmers. At least one letter or other material should go to farmers each month. Special material should also be supplied to staff members as needed. Some type of regular radio and

TV program should be provided. Newspaper articles may be taken from regular releases or special material should be written. Emphasis should be on channeling most of the information direct to the farmer or others concerned with agricultural outlook.

5. Provides a convenient local contact for relay of farmer needs and desires for information. Relatively few farmers in a state have occasion to talk firsthand with an economist writing outlook information. Writing in to inquire for particulars may be done by even fewer farmers. As farmers read or hear outlook information they may have problems that require additional information or need clarification on some issue. Distributing published material through the local county agent is the best means available to accomplish this. This will also afford an opportunity for the county agent to become more informed as to the economic needs of farmers. The county agent can relay these needs to the extension economist. This may not occur under a more formal institutional distribution.

6. Provides administrative coordination for efficient use of University resources. Any good program must have administrative support. If the function of the Extension Division is recognized as carrying research and other information to people, then an economic outlook program needs a designated place in the extension program. Extension activities in economic outlook information need to be coordinated with the teaching and research staff. If the Agricultural Economics Department is recognized as responsible for agricultural economic information for the institution then the extension outlook activity may become the official program of the University.

If such coordination is desirable it may be obtained by either the

Extension Program Director or the Department Head guiding the administrative movement of the agricultural outlook program. It may be that under some administrative organizations a designated person in Extension shares the responsibility with the Department Head. Modifications may be made to fit any type of organization, but administrative coordination is essential to an effective outlook program.

Provision for training of Extension staff members and others in use of outlook information is a part of administrative coordination. Designating the proper place and emphasis of outlook information in other programs is also an administrative responsibility.

Types of Information

Generally all five states were including the desired types of information, but emphasis was mostly on short-run situations. Iowa, Washington, and Kansas are apparently getting more information of all types to farmers than Oklahoma and North Carolina. Information needed to develop long-time plans is perhaps supplied more fully in Iowa. Washington State includes considerable intermediate and long-term information in a weekly letter going to staff members but to a less extent in the publication mailed to farmers. The use of long-time information was not as evident in the Kansas material, but when used it was well connected with the short-run outlook. All five state programs could be improved with more frequent use of long-time forecasts.

Related Economic Information

Here again all state programs contained general short-run statements, but extension services have usually been reluctant to play up advantages that may develop in the non-farm economy. The program in Washington State uses more general business information than the other

four states. Aside from their once a year approach, Oklahoma and North Carolina had a good supply of general business information. But none presented the information in a manner that offered the farmer a means of comparing his economic position with opportunities in the non-farm sector. Iowa and Kansas being more typical farming states were perhaps more lacking in this respect than the other three. Economic education was not a major part of the programs.

Technical Coordination

Three states--Kansas, Iowa, and Washington--had one person in charge of the technical coordination, but varied in the degree of accomplishing desired features of coordination. Oklahoma and North Carolina did not meet this requirement.

This is not intended as a comparison of the individuals concerned, but to judge the effectiveness of the programs as measured against the conditions to be met. The three programs that provided technical coordination were apparently satisfactory to officials in each instance. Iowa and Washington coordinators operated with less institutional requirements than was evident at Kansas where editing sessions and subjects were scheduled in advance. Flexibility to the extent of changing material from original plans to meet immediate situations is desirable.

Distribution Channels

All five states made use of publications, but the nature, content and methods of distribution varied. Only three had publications issued at least once a month and they each had weekly releases in addition. Washington State did not channel as much information directly to the farmer as desired, especially for long-run and business related items. Kansas channeled the information to farmers, but carried considerable

duplication as the Kansas Agricultural Situation was apparently continued for traditional reasons. Indications were that Iowa publications reached the farmers more effectively than that of other states.

All states made use of other means of communication, but only Kansas, Iowa and Washington with systematic regularity. These three were doing so well that no attempt will be made to select the most outstanding. Oklahoma and North Carolina programs were limited because of a lack of regularity and constant effort.

Local Contact

All five programs were handled by the Extension Service and the county extension program was used as a focal point. The condition can be met only if the local agent feels that he has a part in the whole outlook program, not just the times it is presented at meetings. Material mailed direct from the University may not always leave this impression. Kansas provided for county agent participation in mailing material to farmers. Washington State supplied more information for agents' use only, which may keep them interested. Iowa perhaps met the situation with the use of the seven district economists. But no state seemed to have an approach that encouraged more activity by the county agent.

Administration

In North Carolina the Department of Agricultural Economics coordinated the preparation of the annual statement and the Extension Economists presented the material to county extension workers. Kansas methods are similar in that the research economists either write or approve the material of the economic information specialist. All outlook material in Kansas is distributed by a departmentalized extension service except individual writings by some of the research economists. In Oklahoma research economists assisted with material used by extension economists

and some prepared material for the bi-monthly Current Farm Economics. The extension service made limited distribution of this bulletin.

The Iowa and Washington programs were apparently administratively oriented in the Extension Division. Three research economists at Washington State College spent about two hours each month assisting the Extension Specialist with the monthly publication. At Iowa research economists assisted in preparation of general business statements. Strong administrative support for this relationship exists from both the Department and Extension.

Perhaps the administrative coordination has been a guiding factor that developed the outlook program in each of these states. Iowa comes nearest of the states studied to meeting all the conditions set out. Washington and Kansas follow closely in that order. North Carolina and Oklahoma programs were similar in nature and both scored low in meeting the specified conditions.

It should be pointed out that these conditions were framed with Oklahoma needs in mind. Other states might have somewhat different criteria for judging effectiveness. A program for Oklahoma to meet these conditions will be suggested in the next chapter.

CHAPTER IV

A SUGGESTED AGRICULTURAL OUTLOOK INFORMATION PROGRAM FOR OKLAHOMA

It will be assumed that general administrative coordination was decided on prior to establishing the AMA project in the Extension Division at Oklahoma State University. Other details connected with this condition are likely to develop in time. This section will be devoted to formulating a program to meet the other requirements for an effective outlook program.

Publications

A four-page letter type publication issued once a month should be used in the initial development. It should be identified with an attractive heading, such as Oklahoma Agricultural Outlook. The University name and extension division should be appropriately set out in the heading. The letter should be designed as a "self-mailer" to facilitate handling. To begin with the letter can be duplicated by multilith and as distribution increases the material can be printed. Printed form would consist of a seventeen inch by twenty-two inch sheet folded to make four pages. Two columns are to be used for each page.

The content should consist of a regular brief summary of the next month's price outlook for the major farm commodities on one-half the front page. From two to five articles can be used for the remaining space. At least three charts should be used in each issue, one being on the back to attract attention. The best procedure is to have one

thorough article beginning on the first page and fill the other space with shorter subjects. This feature article may be a complete outlook picture including long-time forecasts for some commodity, or it can be an article designed for economic education. All subjects should be brief with only essential details and require a minimum of reading effort.

Trends should be discussed from short-time and long-term viewpoints. Economic and technical changes in farming should be subjects quite often. Information needed in planning should be distributed before the decisions are made by farmers, but not so far ahead that information may be laid aside and forgotten. A knowledge of farm production procedures is necessary, but not sufficient to achieve this. An understanding of when and how farmers go through various "planning processes" is also needed by the writer.

Printing in color will help in getting reader attention. Using different colors periodically adds variety. Need may develop for supplemental publications as the program progresses.

Distribution

County agents should be introduced to the letter and offered an opportunity to select a mailing list to receive it. The number required can then be sent to the agent for mailing to farmers and other leaders in the county. This gives the agent an opportunity to follow through with personal contacts. It also serves to keep him more alert to outlook information throughout the year. This system also affords an opportunity to expand the outlook program as well as evaluate response and progress. Readers' comments will serve to accomplish this end.

Preparation

The project leader charged with responsibility of the outlook pro-

gram should work closely with other economists in research and extension in developing the material to be used. This may consist of assistance by other economists in editing material prepared by the leader or actual writing of material. Articles written or major contributions by others should be appropriately identified. Suggestions may be made by state or county staff members concerning needed information for coming issues. Coordination in preparing material should result in the use of rigorous analysis and considered judgments in the development of predictions and forecasts.

The outlook writer must interpret USDA data and predictions in terms of Oklahoma conditions and needs. State data may be available from sources other than USDA reports. Research results in production and economics can be useful in constructing outlook information because indications of future trends may be evident from these findings. Development of new technology is likely to have economic implications and require analysis from that standpoint. This affords an opportunity for use of all departments of the University in the outlook program. The increasing importance of Agribusiness in the farming economy necessitates the use of sources of information closely related to business.

Current reports and other material should be read before actual writing. Considerable thought may be given to the subjects in advance of preparation for coming issues. A thorough study of the situation concerning the topic should proceed up to the final editing which should be not more than two weeks before publication date. In case of multilith publication, less time should be allowed between editing and final production. Weekly issues if used should be distributed within two days of writing.

Throughout this manuscript reference has been made to timely releases from the standpoint of coinciding with planning periods. In preparing and releasing material, it is not expected that the information can fit every commodity and individual situation. But releasing poultry and egg outlook material during or just ahead of the "booking season" for baby chicks is useful in planning short-run operations. Longer run information may be useful at the moment or plans may have been made by some individuals based on prior predictions.

Timing of wheat information falls principally in two periods. Production planning information needs to follow harvest because farmers are preparing land and laying plans for the coming crop. The other period of concern comes shortly after the first of the year as crop conditions are closely watched for production possibilities as well as marketing developments. Interest in marketing and price forecasts continue until harvest is complete. Long-time outlook is needed anytime machinery or land purchases are considered.

Livestock production patterns vary from farm to farm but decision-making periods for different types of operations usually coincide. The trend toward distribution of marketings throughout the year, for certain classes of livestock production, tends to make information timely at any period. However, interest in various kinds of information perhaps follows a seasonal pattern. Each phase of livestock production has certain characteristics that determine the chief period of decision making which may vary under different circumstances.

Production of some speciality crops, supplemental or temporary crops depend more upon outlook information than customary ones. Outlook articles released when public interest is centered on certain crops or

related issues are apt to receive more consideration. To this extent a flexible scheduling of subjects can be most useful. A definite predetermined timing of subject matter may not be desirable, but constant attention and exercise of sound judgments in determining time of releases is necessary to effectiveness of the outlook program.

Use of Other Channels

Oklahoma State University prepares "tape libraries" on agricultural subjects to be distributed to local radio stations over the state. Certain types of outlook information, especially of a long-run nature, can be distributed in this way. This should be carefully coordinated with the written materials since these are likely to be used by local stations. In this connection it is advisable to send the outlook letter to radio stations a few days after mailing to county agents. This allows time for the agent to develop radio programs of his own from the material. Special radio and TV programs can be made for the larger stations in the state. Such programs could very well be timed each month to come at the mid-point between publication dates of the letter. This would afford more frequent use of outlook material and keep it current.

Under the procedures outlined for the Oklahoma outlook program, opportunities exist for each local county agent to make use of the information in newspapers. The agent can either prepare the story or pass the letter on to the editor. Need for special news articles may develop from other state publications and should be fulfilled. Any movement of this kind should be handled so that it supplements the county oriented program.

Color charts on 2" x 2" slides presenting basic data are developed each year by the Agricultural Marketing Service of USDA. These can be

effectively employed in presenting outlook information to group meetings or for training staff members. These slides can be grouped for a general agricultural outlook story or they may be arranged to tell a detailed story of a particular commodity or related commodities. The important things in the use of slides are selection and arrangement so that they make the subject come alive. The person discussing the charts should know the subject matter to insure full vitality from the presentation. A limited number of slides can be effectively used on TV programs.

Participation and Training of Other Staff Members

All Extension staff members need to be currently informed on outlook situations. This is necessary not only to help guide their individual projects, but to add strength to the overall extension program. This relationship to programs will be discussed more fully later. Production specialists do not need to be trained to present outlook material, but they can be familiar with conditions concerning their particular area. So informed they may make reference to certain economic implications when presenting subject matter to farm people. In order that they have complete information, the outlook project leader should give them an oral summary of the outlook as well as supplying them with written material.

County agents should be presented a general summary of outlook information soon after the National Outlook Conference. This is most effective in smaller groups and color chart slides should be used. The presentation should be complete, but not detailed. One hour and a half including questions should be sufficient. The same program should be presented to state staff members and in addition individual conferences

used when necessary. The organization and operation of this type program should result in continuing outlook information, assist farmers in planning and better inform the public of trends in the agricultural economy.

Methods of Presentation

Mention has been made of the use of charts in preparation of material. Certain techniques are applicable in presenting economic outlook information regardless of the channel used. First of all the economist needs to have a clear understanding of the subject to be discussed and the length of time or space to be used. Then data, charts and other materials need to be selected to fit the subject within the time and space limits. Next, the materials should be organized in a manner that relates the story which is appropriate for the occasion. Each chart and piece of data need to make the subject come to life, so fitted that the audience can follow the trend of thought. Needless to say that relation of economic principles and information should be in terms understandable by laymen. Over-simplification of detail should be avoided unless an intensive lesson is intended.

In presenting economic principles along with outlook information care should be taken to prevent complications that may cause the relevant materials to become ineffective. Ogg[1] suggests that a useful technique is to state the relevant principles as simply and clearly as possible, then relate all the illustrative materials to the principles. This is an alternative to the method of using illustrative materials to present the subject without mentioning the economic principles involved.

---

[1]Wallace Ogg, "Useful Techniques in an Extension Program in Economic Principles as Applied to Agriculture," Journal of Farm Economics, Vol. XXXI, February, 1949, p. 697.

Perhaps a better technique is to use illustrations first and bring out the principles later since the audience can be conditioned to receive the more abstract principle. Bottom[2] points out improved methods available to economists for teaching various economic subjects and suggests using more detailed explanations. He describes the job of presenting outlook as supplying farmers with economic facts, teaching the use of the facts, and going through the process of analysis with the farmer at the given time. It may not always be feasible to follow this procedure except in individual planning but outlook can be presented so that farmers can deduct from the facts those applicable to his individual case.

Relation of Outlook Information to Other Extension Activities

The relationship of outlook information and the overall extension program has been previously discussed. This concerns general activities and the training of extension staff members. There are specific activities carried on by extension that require more economic and outlook information than indicated for the general procedures.

Program Planning and Projection

Program planning in the Agricultural Extension Service is a scheduling of activities that are expected to be done over a specified period of time. This may be a one-year program or for some longer period. The schedule of activities is usually connected with agricultural problems. The plan includes not only what the event is, but where it is to take place, who is to be responsible for each phase and what is expected to be accomplished toward a solution of the problem concerned. In some

---

[2] J. Carroll Bottom, "Methods of Presenting Economic Data to Farmers," Journal of Farm Economics, Vol. XXXIV, December, 1952, pp. 837-841.

instances programs are planned for a period of five years and the activities to be undertaken for a specific year are considered as a plan of work.

Program projection does not specify how things are to be done. It is concerned with making logical decisions as to what problems to work on and the order of importance or emphasis for each. Program projection is determined after a systematic analysis of problems. Selection of important problems can be done only after thorough study of the present situation and what future trends might be. Program projection, then, is dependent on a determination of the most likely course of events for a certain period of time in the future. After the future course of events has been fairly well charted then these events need to be appraised in terms of the wants of the people concerned. If the future possibilities are not desired or require adjustments, then consideration is given to the things necessary to take care of the problem.

The definition of program planning and projection obviously implies the use of sound long-term outlook information. If people concerned with agricultural problems are to plan future courses of action for dealing with problems, then the first step is the positive identification of the real problem. In order for them to do this, economic education must play a decisive role.

Ratchford[3] classifies two general groups of problems, (1) "felt problems," or those of immediate concern and (2) "normative problems," those not felt at the moment but which can be predicted as following from certain courses of action. There is a high correlation between

---

[3]C. B. Ratchford, "Selecting Economic Data to Present to Farmers," Journal of Farm Economics, Vol. XXXIV, December, 1952, pp. 828-836.

"felt" and short-term problems and between long-term and "normative" problems. The general tendency is for people to slight long-run problems in program planning due to pressure of felt problems. A good outlook program can focus more attention to long-term problems. If people perceive future problems in relation to the present situation without carefully calculated forecasts, then program projection cannot be easily justified.

Economic education with sufficient information to enlighten people as to understanding present problems is a necessary prelude to any program planning or projection work. Outlook information relating the present situation with future probabilities must become an integral part of the undertaking. If economic outlook is to properly guide the planning process it is necessary that material be prepared and presented by one or more persons devoting a major part of their time to this area. Program planning and projection is not likely to succeed if outlook and other economic information is only incidentally presented in the identification of problems and prescribing their solutions.

Farm and Home Development

Farm and home development is an activity of the extension service which is concerned with solving agricultural problems through the individual farm unit approach. Under this procedure the extension workers counsel and plan with the farm family. Problems and needs are determined after a careful analysis of the organization of the family farm unit. Individual plans are made for adjustments that conform to the achievements desired by the family. These adjustments may involve considerable investment in equipment and permanent improvements since a long-time viewpoint must be considered. Economic outlook information must there-

fore play a vital part in the decisions made by the farm family and the extension worker who is assisting them. This information must be supplied to the extension worker doing the farm and home planning with the family in such a manner as to be most useful with a minimum amount of time required for interpretation by the worker and the farm family.

The need for economic data and information was recognized by extension administrators when the Farm and Home Development program was initiated. However, the requirements and nature of material desired was not evident until later. Brown[4] set forth needs in terms of planning and later in collaboration with Claar[5] emphasized the changing requirements. The importance of outlook in this program was set forth by Nesius[6] when he called attention to insufficient information on which farm families could base decisions.

Rural Development

The rural development program was recently initiated through the extension service on a pilot basis to seek possible solutions to the low income problem in agricultural areas. Under this program the entire resources of a county are considered and evaluated in terms of use and possibilities. Where incomes of rural families are especially low, activities are to be undertaken to explore the possibilities for increasing those incomes either by farm improvement supplemented with

---

[4]Dorris D. Brown, "Problems of a Farm and Home Planning Program," Journal of Farm Economics, Vol. XXXVI, May, 1954, p. 189.

[5]J. B. Claar and Dorris D. Brown, "Changing Requirements for Agricultural Data," Journal of Farm Economics, Vol. XXXVIII, December, 1956, pp. 1446-1451.

[6]E. J. Nesius, "The Role of Agricultural Economists in Farm and Home Planning," Journal of Farm Economics, Vol. XXXVII, December, 1955, pp. 842-847.

non-farm work, or shifting the human resources to other regions.

This requires a very careful study of economic conditions prevailing in the county, the potential possibilities for developing new uses for these resources, and what the future implications might be. Due to the involvement of total resources, human and otherwise, economic information, analysis and interpretation become very important in this undertaking. Of course, the extension service is not the only organization involved, but supplying an adequate program of outlook information can be a very worthwhile contribution of the extension service. In this connection the relation of non-farm economic factors with the agricultural outlook information becomes more evident as a requirement for fulfilling the needs.

4-H Club Work

Club work in the extension service is carried on through project work and a number of activities. Guiding youth to become useful citizens is an underlying objective of this work. Since the youth of today will be the adults of tomorrow, charged with the direction of national and world affairs, future indications of these events are needed as guide posts. 4-H Club members need to develop an early understanding of prevailing economic conditions in the agricultural industry, and to know how these relate to the non-agricultural industry and world events. An understanding of economic relationships and outlook will enable 4-H youngsters to better choose the course that they wish to follow in equipping themselves for future jobs. Outlook information supplied through the extension service to these 4-H members and parents can be helpful to them in reaching these decisions.

CHAPTER V

SUMMARY AND CONCLUSIONS

The major objective of this study was the development of an agricultural outlook information program for Oklahoma farmers. In order to do this, it was necessary to investigate two general problem areas:

(1) the problem of supply adjustment confronting farmers, and

(2) the problem confronting the economist in developing the program.

After careful study of research and literature concerning these problems, an attempt has been made to combine these with inferences and experienced observations for arriving at conclusions for a desirable outlook program in Oklahoma.

Publications concerning outlook as used in different states were reviewed for ideas that could be used. One campus (Kansas State University) was visited to study outlook program methods. Three other state workers were interviewed concerning their respective outlook programs. All four of these programs were subjected to an analysis in terms of meeting certain conditions for Oklahoma needs. By combining the apparent desirable features of these programs and publications a suggested program and publication for Oklahoma was developed.

It was determined that an effective outlook program for Oklahoma farmers should provide:

(1) All types of information necessary for production planning

by farmers rather than short-run marketing information only. This includes economic education.

(2) Continuous source of information throughout the year.

(3) Timing of subject matter releases to coincide with planning periods and before decisions are made--minimizing the time-lag in preparation of short run information and reaching farmers.

(4) Responsibility for technical coordination of material used in the program.

(5) Participation and training of state and county staff members of the Agricultural Extension Service of the University.

(6) Administrative coordination with the overall Extension program as well as the educational activities of the University.

Generally it might be said that an effective outlook program attempts to provide farmers with information that enables them to approach the ideal of perfect knowledge as to supply and demand relationships. The program should be evaluated occasionally and adjustments made to meet changing requirements.

BIBLIOGRAPHY

Agricultural Marketing Service. Agricultural Outlook Charts. Washington, D. C.: United States Department of Agriculture, 1958, pp. 8, 17, 21, and 26.

Athearn, James L. "Price Expectations, Plans and Decision Making Among Ohio Commercial Cattle Feeders." Journal of Farm Economics, Vol. XXXVIII (February, 1956), pp. 126-143.

Bachman, Kenneth L. "Prospective Changes in the Structure of Farming," presented to the 36th Annual National Agricultural Outlook Conference, (November, 1958), Washington, D. C., pp. 11-15.

Baker, John D., Jr. and Don Paarlberg. "How Accurate is Outlook?" Journal of Farm Economics, Vol. XXXIV (November, 1952), pp. 509-519.

Bottom, J. Carroll. "Methods of Presenting Economic Data to Farmers." Journal of Farm Economics, Vol. XXXIV (December, 1952), pp. 837-841.

Brown, Dorris D. "Problems of a Farm and Home Planning Program." Journal of Farm Economics, Vol. XXXVI (May, 1954), p. 189.

Claar, J. B. and Dorris D. Brown. "Changing Requirements for Agricultural Data." Journal of Farm Economics, Vol. XXXVIII. (December, 1956), pp. 1446-1451.

Cochrane, W. W. "The Market as a Unit of Inquiry." Journal of Farm Economics, Vol. XXXIX (February, 1957), pp. 21-22.

_____. "Additional Views on Demand and Supply." Agricultural Adjustment Problems in a Growing Economy. Ames: Iowa State College Press, 1958, pp. 94-106.

Cromarty, William A. "Changing Relationships Between Agriculture and the National Economy." Journal of Farm Economics, Vol. XL (December, 1958), pp. 1568-1578.

Hart, V. B., M. C. Bond and L. C. Cunningham. Farm Management and Marketing. New York: John Wiley & Sons, Inc., 1942, pp. 384-388.

Heady, Earl O. "Uncertainty in Market, Relationships and Resource Allocation in the Short-Run." Journal of Farm Economics, Vol. XXXII (May, 1950), pp. 240-257.

_____. Economics of Agricultural Production and Resource Use. New York: Prentice-Hall, Inc., 1952.

_____. "Adjustments in Production to a Growing Economy." Journal of Farm Economics, Vol. XXXVII. (December, 1955), pp. 1065-1069.

_____. "Implications of North Central Managerial Study." Journal of Farm Economics, Vol. XXXVII (December, 1955), pp. 1122-1125.

Johnson, Glenn L. Managerial Concepts for Agriculturalists. Lexington: Kentucky Agricultural Experiment Station, 1954, Bulletin 619, pp. 10-12.

Johnson, Sherman E. "Present and Future Surpluses--Trends and Solutions from Standpoint of Supply." Increasing Understanding of Public Problems and Policies. Chicago: Farm Foundation, 1956, pp. 43-48.

_____. "Technological Changes in the Future of Rural Life." Journal of Farm Economics, Vol. XXXII, No. 2 (May and August, 1950), pp. 225-239 and 485, respectively.

_____. "A Mid-Century Look at U. S. Agriculture." Journal of Farm Economics, Vol. XXXIII (November, 1951), pp. 649-662.

Johnson, Sherman E. and Glen T. Barton. "Effects of Technological Research and Education." Agricultural Adjustment Problems in a Growing Economy. Ames: Iowa State College Press, 1958, pp. 39-58.

Johnson, Sherman E. et al. Managing a Farm. New York: D. Van Nostrand Company, Inc., 1946, pp. 338-346.

Knight, Frank. Risk, Uncertainty and Profit. Boston & New York: Houghton Mifflin Company, 1921, pp. 197-232.

Leftwich, Richard H. The Price System and Resource Allocation. New York: Rinehart & Company, Inc., 1956.

Marshall, Alfred. Principles of Economics, 8th edition. London: Macmillan & Co., Ltd., 1920. Book 5, Chapter 5-8.

McNeal, Dean. "The Development and Use of Economic Information and Forecasts by Industry." Journal of Farm Economics, Vol. XXXI (February, 1949), pp. 646-640.

Miller, L. F. "Outlook and Farm Management." Journal of Farm Economics, Vol. XXXI (February, 1949), pp. 642-645.

Nerlove, Marc. "Estimates of the Elasticities of Supply of Selected Agricultural Commodities." Journal of Farm Economics, Vol. XXXVIII (May, 1956), pp. 496-512.

Nesius, Ernest J. "Joint Use of Theory and Empirical Data." Journal of Farm Economics, Vol. XXXII. (December, 1950), pp. 1169-1181.

_____. "The Role of Agricultural Economists in Farm and Home Planning." Journal of Farm Economics, Vol. XXXVII (December, 1955), pp. 842-847.

Ogg, Wallace. "Useful Techniques in an Extension Program in Economic Principles as Applied to Agriculture." Journal of Farm Economics, Vol. XXXI (February, 1949), p. 697.

Plaxico, James S. "Aggregation of Supply Concepts and Firm Supply Functions." Southern Cooperative Series Bulletin No. 56. Stillwater: Oklahoma Experiment Station, (June, 1958), pp. 76-91.

_____. Discussion of "Response of the Farm Production Unit as a Whole to Prices." Journal of Farm Economics, Vol. XL (December, 1958), pp. 1128-1130.

Ratchford, C. B. "Selecting Economic Data to Present to Farmers." Journal of Farm Economics, Vol. XXXIV (December, 1952), pp. 828-836.

Reiss, F. J. "Measuring the Management Factor." Journal of Farm Economics, Vol. XXXI (November, 1949), pp. 1065-1072.

Taylor, H. C. The Story of Agricultural Economics. Ames: Iowa State College Press, 1952, pp. 448-477.

Tolley, H. R. "History and Objectives of Outlook Work." Journal of Farm Economics, Vol. XIII (October, 1931), pp. 523-531.

Tompkin, J. R. "Response of the Farm Production Unit as a Whole to Prices." Journal of Farm Economics, Vol. XL (December, 1958), pp. 1115-1130.

Williams, D. B. "Price Expectations of Illinois Farmers," Journal of Farm Economics, Vol. XXXIII (February, 1951), pp. 20-39.

VITA

Houston Everett Ward

Candidate for the Degree of

Master of Science

Thesis: DEVELOPING AN EFFECTIVE PROGRAM FOR USE OF OUTLOOK INFORMATION BY OKLAHOMA FARMERS

Major Field: Agricultural Economics

Biographical:

Personal Data: Born near Woodland (Red River County), Texas, May 20, 1912, the son of Delbert C. and Jewell Ann Ward.

Education: Attended two years of grade school at Kanawa, Texas; completed the remainder of grade and high school attendance at Idabel, Oklahoma, graduating in May, 1931; received the Bachelor of Science Degree from Oklahoma State University with a major in Agricultural Administration in May, 1935.

Professional Experience: Junior Analyst B.A.E. on temporary appointment at Oklahoma State University June to October, 1935. Administrative Assistant in Agricultural Adjustment at Poteau, Oklahoma October, 1935 to October, 1938. County Agent at Sallisaw, Oklahoma October, 1938 to August, 1941. County Agent at Hugo, Oklahoma August, 1941 to August, 1956. Associate Extension Economist at Oklahoma State University beginning in August, 1956.