Rural Value-Orientations and Farm-Policy Positions and Actions

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Research Bulletin 561 . . . May 1968 . . . Ames, Iowa

CONTENTS

SUMMARY

There is limited consensus within the agricultural sector of the United States concerning government farm policy. American farmers differ widely in their perceptions of the proper role of government in agriculture.

It is generally believed that value and belief differences among farmers are meaningfully associated with the variety of positions and actions taken by farmers with respect to government farm policy. Several observers have suggested that, if these value and belief diversities can be clearly articulated and resolved, more rapid progress can be made toward solving many present farm problems. However, there is little information on the relationship between values and beliefs and farm-policy positions and actions. Research concerning these relationships may be useful for assessing more precisely what role values and beliefs play in the present farm-policy conflict.

This bulletin reports findings from a study conducted with a sample of 186 farmers in Iowa designed to: (a) identify the value and belief patterns of Iowa farmers; (b) determine the positions and actions of Iowa farmers on past, present and possible future government farm programs; and (c) determine the impact of conflicting values and beliefs upon farm-policy positions and actions. The results suggest several important conclusions:

1. Iowa farmers adhere more strongly to societal values than to traditional rural values. Farmers interviewed adhere much more strongly to scientific orientation, risk orientation and maximization of income than they do to traditionalism, debt avoidance and fatalism. The values most widely held by the Iowa farmers are independent action and risk aversion. The Iowa farmers adhere more strongly to commutative justice than to distributive justice. But they seem relatively undecided about government responsibility because many farmers are undecided about both commutative and distributive justice.

2. Although significant portions of the Iowa farmers support conflicting farm policy alternatives, most support the present voluntary price-supply management approach. When compared with stronger government programs (compulsory programs) and with the elimination of government programs (free-market program), the voluntary approach is clearly preferred to these often-discussed alternatives.

3. The values and beliefs examined in this study form meaningful value-orientation configurations. Three complete configurations and one partial configuration were identified. These include the independent action value-orientation configuration (consisting of independent action and government dominance); the collective action value configuration (consisting of collective action, distributive justice and commutative justice); the traditional value-orientation configuraton (consisting of traditionalism, debt avoidance, farming as a way of life, fatalism and risk aversion); and a partial cluster called the contemporary value configuration (consisting of scientific orientation and risk orientation). Maximization of income, although believed part of the contemporary value configuration, is not statistically related to both values of the contemporary configuration.

4. Conflicting values and beliefs are related to conflicting policy positions and actions. Independent action and government dominance are negatively related to preference for compulsory programs and voluntary programs, but positively related to preference for the free-market system. Government dominance and independent action are negatively related to participation in past and present voluntary government programs. On the other hand, collective action, commutative justice and distributive justice are positively related to preference for compulsory, voluntary, auxiliary adjustment and income-transfer programs, but negatively related to preference for the free-market system. These three values are positively related to participation in past and present voluntary government programs. The traditional values and beliefs and the contemporary values are meaningfully related to policy positions, but not in a contrary manner. The traditional values and beliefs are positively associated with a preference for the agricultural-restraint programs and the income-transfer programs, but contrary to prediction, are not related to the auxiliary-adjustment programs. The contemporary values (scientific orientation, risk orientation and maximization of income) are positively related to the auxiliary-adjustment programs. But only scientific orientation is negatively related to the agricultural-restraint programs.

Rural Value-Orientations and Farm-Policy Positions and Actions[1]

by George M. Beal, Joe M. Bohlen
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One of the most striking features of contemporary American agriculture is the diversity of opinions among farmers concerning farm policy. Not only do farmers have varied opinions about the goals of farm policy, but they also disagree over which means will most effectively bring about these goals. This diversity is related to the different perceptions farmers have concerning the government's role in agriculture. Although many farmers are relatively satisfied with the present government production-control and price-support programs, some have expressed a desire for much stronger controls; others favor a large reduction in government controls. Many persons have asserted that this lack of consensus has impeded progress toward solving the major structural problems in American agriculture.

Social scientists have suggested that conflicting values and beliefs are partly responsible for this diversity of opinion regarding farm policy (3). They have hypothesized that certain value and belief differences among farmers are associated with the variety of views concerning what kind of farm program is needed and how such a program should be implemented. This suggestion stems from the general propositions that values and beliefs influence the choices and actions of men.

Three decades ago, rural society was considered a homogeneous entity characterized by value and belief consensus. Descriptions of rural values and beliefs focused primarily on the differences between rural and urban values and beliefs and not on value and belief conflicts within rural society per se. More recently, portions of the rural population have been conceived as moving closer to the central value-orientations of society. American rural society now is considered widely variable in the extent and intensity of adherence to dominant societal value-orientations. Regional differences, religious differences, community differences, sensitivity to technological change, degree of isolation from main currents in American life and referent group differences are said to contribute to the formation of diverse values and beliefs in rural society and the variation and intensity of adherence to dominant societal values (9). Rural society is now

considered characterized by heterogeneous and conflicting value-orientations (8, 9, 11).

Heady (4) has suggested that, until these value and belief diversities and conflicts can be articulated and resolved, little can be done to reach solutions for the multiplicity of farm problems that exist today. In light of this remark and the previous discussion, it seems desirable to obtain information on the nature of these value and belief conflicts so that they might be clearly identified. Knowledge of these conflicts may be useful in developing more informed farm policy. Furthermore, there is very little existing empirical research about the hypothesized relationship between certain value orientations and farm-policy positions and actions. Empirical research is needed to determine: (a) if these hypothesized relationships are valid and (b) more precisely what role rural values and beliefs play in the present farm-policy conflict.

The purpose of this report is to articulate these value and belief conflicts and to determine their impact on farm-policy positions and actions. The specific objectives are to determine: (a) the nature and type of value and belief patterns of Iowa farmers, (b) the positions and actions of Iowa farmers on past, present and future government farm programs and (c) the relationship between selected value and belief dimensions and farm-policy positions and actions.

THEORETICAL ORIENTATION AND DEFINITIONS

The general hypothesis of this study is that there will be a predictable relationship between the values and beliefs of farmers and their farm-policy positions and actions. To make more explicit the basis for this hypothesis and its exact meaning, each of the major concepts contained in the hypothesis is defined and discussed.

Values, Beliefs and Value-Orientations

The concept "value" has been used by many different disciplines in a variety of contexts and has referred to a number of different phenomena. Thus, any definition of this concept should not be considered as the only one, or the "correct" one, but rather as a definition that appears feasible within the context of sociology and this study. Value is defined here as an abstract normative standard that represents an individual's con-

cept of what men ought to desire and of what relationships ought to exist between phenomena (2, 5, 6). It is a concept of an ideal relationship or state of affairs.

A belief may be defined as an existential proposition held by an individual regarding the structure and operation of the physical and social universe. A belief is a conviction that something is real or true. Beliefs are man's perception of reality; i.e., what is perceived to exist.

Often, beliefs and values become integrated in such a way that value-orientations are formed. Value-orientations refer to a set of linked propositions that embrace both normative and existential elements. This interaction between beliefs and values occurs when (a) the normative judgments are based on the group notion of what facts exist and (b) the group's conception of the universe is based partly on prior normative orientation and interests (6, pp. 409-412).

Values are normative statements, whereas beliefs are existential statements. Values serve as normative standards upon which alternative means and ends may be evaluated. Beliefs determine the range of alternatives considered. Both values and beliefs, therefore, would be expected to be important variables that exert a significant influence upon a person and predispose him to react in a specific manner to a given stimulus.

Rural Values and Beliefs

From the literature and our own previous research, a number of values and beliefs were identified that were believed to be adhered to by various portions of rural society. These consist of values and beliefs that (a) have been explicitly associated with farm-policy positions and actions, (b) have been identified with rural people in the past and (c) have recently emerged in American rural society. The values and beliefs explicitly associated with farm-policy behavior are, in part, a result of recent changes in the government's role in agriculture. These values and beliefs include:

Independent action: a value stressing that everyone should make his own decisions and run his business unimpaired by any external force.

Government dominance: a belief that the government is placing too many restrictions and controls on farmers' efficiency, earning possibilities and freedom to manage their farming operations.

Collective action: a value advocating that problems should be solved and business decisions should be made through cooperation with others.

Commutative justice: a value advocating that the government should guarantee everyone a fair return for his contribution to society.

Distributive justice: a value advocating that the government should equalize opportunity and income so everyone has the necessary means to develop his full potential.

The values and beliefs identified with rural people in the past will be referred to as the traditional value-

orientation configuration. These values and beliefs together with their respective definitions are:

Traditionalism: a value advocating that "past-tested" methods rather than relatively new, untried methods should serve as guides for decision-making in farming.

Debt avoidance: a value advocating that capital should be accumulated rather than borrowed before purchasing any goods, services and property for either maintenance or expansion purposes.

Farming as a way of life: a belief that farming is the most "natural" and desirable way to live and is an end in and of itself. It emphasizes the returns of farming other than economic.

Fatalism: a belief or personal philosophy maintaining that events and man's destiny are determined by external forces in advance, so that man has no control over what happens to him.

Risk aversion: a value advocating that a farmer should use assured and predictable practices in his farming operation to reduce risk as much as possible.

Three values that have emerged in rural society in this century are scientific orientation, maximization of income and risk orientation. These values represent the counterparts to the traditional values and beliefs just defined. Scientific orientation may be considered the counterpart of traditionalism and, to some extent, of fatalism. Risk orientation is the opposite of risk aversion and, to some extent, of debt avoidance. Maximization of income represents a change from emphasizing farming as a way of life to farming as a business. These values are defined as:

Scientific orientation: a value advocating that scientific findings should be applied to all aspects of our everyday life and that scientific findings and the scientific method should serve as the criteria for the selection among alternative courses of action.

Maximization of income: a value advocating that farming should be considered primarily as a business operation and a means to economic ends, such as yield and profit.

Risk orientation: a value placing emphasis upon using methods perceived as involving elements beyond the individual's control for purposes of gaining certain predetermined ends.

This list of values and beliefs is only a partial one and does not constitute the whole array of rural values and beliefs. The values and beliefs just defined are those believed most logically related to farm-policy positions and actions.

Policy Positions and Policy Actions

The form of behavior under investigation in this study is policy behavior. Policy can be defined as an integrated program of action that an actor (or group of actors) is accustomed to or intends to undertake in response to a given problem or situation with which he is confronted. According to this definition, there

are two forms of behavior associated with policy: actual behavior (accustomed) and planned or hypothetical behavior (intended). Accustomed behavior refers to overt validated behavior or participation in past and present policy. This form of policy behavior will be called policy actions. Intended behavior represents the actor's predispositions toward proposed policy alternatives; i.e., his verbal expression of how he would behave with respect to a given set of proposed policy alternatives. Intended policy behavior will be referred to as policy positions.

There are six categories of farm programs discussed in this report that were chosen to represent cross sections of farm programs that have been implemented in the past, are presently in operation or have been proposed for future implementation. These categories of farm programs include:

1. Compulsory price-supply management and control programs, including government programs that control supply and prices by using (a) market quotas to each producer, (b) acreage allotments to each farmer and (c) compulsory purchasing of land.

2. Voluntary price-supply management and control programs, designed to control supply and prices by restricting production primarily through acreage allotments and market quotas that are binding only upon those who choose to enter the programs.

3. Free-market program, a government program that essentially would abolish all governmental controls and leave the determination of supply and price to the market mechanisms.

4. Auxiliary-adjustment programs, including government programs that encourage the process of agricultural adjustment by providing education, information, retraining and direct financial aid to farm people in order that they might find employment in urban areas.

5. Agricultural restraint programs, government programs designed to slow the process of agricultural adjustment and consisting of programs designed to discourage large-scale production and agricultural research.

6. Income-transfer programs, including programs consisting of subsidies in the form of direct cash payments, special compensations to certain groups, or both (e.g., small farmers).

To facilitate reading, the hypothesized relationships between the specific values and beliefs and the specific policy positions and actions will be stated and discussed in the Findings section, along with the data related to each of these propositions.

METHODS AND PROCEDURES

Data presented in this bulletin were gathered from a state-wide random sample of 186 Iowa farmers. The respondents were selected from the six economic areas of Iowa by using a stratified-sampling technique. Within each economic area, three counties and three seg-

ments within each of the selected counties were selected at random. To insure that most farmers interviewed were full-time farmers, only those who farmed 100 or more acres and made the major operating and management decisions were interviewed. The study was conducted during March and April 1964.

The data were obtained from two research instruments, a questionnaire and a schedule. The questionnaire contained the 127 value and belief statements, and the schedule contained a set of questions relating to farm programs and personal characteristics.

Each of the values and beliefs defined in the "Theoretical Orientation and Definitions" section was measured by a scale. The items constituting each scale were selected through careful screening. Each item was (a) submitted to 15 judges to assure that the item was not ambiguous or irrelevant and was related to the hypothesized dimension, (b) presented to a pretest sample of 92 Iowa farmers to determine the discrimination value of the item and (c) subjected to an iteration process to determine if the item was consistent with the other items of the specific dimension; i.e., included in the proper scale. The last step was an attempt to develop unidimensional scales that measured only one specific factor. Of the original 480 items screened, 127 (26.5 percent) were included in the final scales. Procedural details can be found in Warland (15) and Wolins (17).

The general procedure for administrating and scoring the scale items was patterned after that of Wolins et al. (18); details are presented in Appendix A. A comparison of the scales on the basis of how they met the conditions for additivity is presented in Appendix B.

Policy actions were measured by the number of years of participation in the Soil Bank Reserve Program, The Feed-Grain Program and the Commodity-Credit Program. We recognized that certain farmers had more opportunity to participate in these programs than others; i.e., these programs were initiated before some of the respondents had begun farming. To adjust for the built-in bias of the number of years farming, the number of years the farmer had participated in the program was divided by the total number of years he could have participated in the program.[3]

Policy positions were measured in essentially the same manner as were the values and beliefs. The only variation was that the statements to which the farmer responded were not self-administered, but administered by an interviewer (see Appendix A).

Sixteen programs were grouped into the six farm-program categories defined earlier. These six categories

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[3] For example, the Commodity-Credit Program had been in effect 15 years when the study was conducted. A farmer who farmed from 1949 to 1963 potentially could have participated in this program 15 years. Thus, his years of participation were divided by 15. A farmer who began farming in 1960 potentially could have participated in the program for 4 years. Consequently, the number of years he participated in the commodity-credit program was divided by 4. By this method, a farmer who farmed from 1949 to 1963 and had participated 15 years in the commodity-credit program received the same score (100) as the farmer who farmed from 1960 to 1963 and had participated in this program for 4 years.

Table 1. Summary of the distribution of scores on the 13 value and belief scales.[a]

Value or belief	Very high (13-16)		High (10-11)		Undecided (7-9)		Low (5-6)		Very low (0-3)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Independent action	50	26.8	71	38.2	52	28.0	11	5.9	2	1.1	186	100.0
Government dominance	29	15.6	26	14.0	47	25.3	41	22.0	43	23.1	186	100.0
Collective action	30	16.1	64	34.4	68	36.6	20	10.7	4	2.2	186	100.0
Commutative justice	13	7.0	45	24.2	76	40.9	28	15.0	24	12.9	186	100.0
Distributive justice	10	5.4	17	9.1	82	44.1	42	22.6	35	18.8	186	100.0
Traditionalism	6	3.2	8	4.3	59	31.7	67	36.1	46	24.7	186	100.0
Debt avoidance	2	1.1	9	4.8	38	20.5	70	37.6	67	36.0	186	100.0
Way of life	16	8.6	51	27.4	85	45.7	29	15.6	5	2.7	186	100.0
Fatalism	10	5.4	23	12.4	46	24.7	40	21.5	67	36.0	186	100.0
Risk aversion	55	29.6	90	48.4	33	17.7	8	4.3	0	0.0	186	100.0
Scientific orientation	24	12.9	83	44.7	70	37.6	8	4.3	1	0.5	186	100.0
Maximization of income	26	14.0	50	26.8	77	41.4	23	12.4	10	5.4	186	100.0
Risk orientation	7	3.8	75	40.2	92	49.5	10	5.4	2	1.1	186	100.0

[a] The categories "very high," "high," "undecided," "low" and "very low" in table 1 are based on the **average** numerical score per item for each scale. These categories designate the area of the scale where the respondents placed themselves with respect to one of the values and beliefs. The "high" and "very high" categories roughly correspond to agreement and strong agreement with the items contained in the scale, whereas "low" and "very low" approximately correspond to disagreement or strong disagreement with the item. For more details concerning the meaning of the scale values given in table 1 see Appendix A.

were constructed on the basis of similar content. Estimates of reliability, additivity and unidimensionality were computed. The results of this analysis indicated that these programs could be meaningfully grouped in the six categories.

FINDINGS

Values and Beliefs of Iowa Farmers

What values and beliefs are most widely held by Iowa farmers? A partial answer can be found in tables 1 and 2.[4] The farmers in the sample appear to adhere relatively strongly to independent action, collective action, risk aversion and scientific orientation. Exactly 65 percent of the Iowa farmers averaged "high" or "very high" on the independent-action scale, but only 7 percent of the sample averaged "low" or "very low" on the same scale. In like manner, approximately 51 percent of the farmers scored in the two high categories on the collective-action scale, and 78 percent scored "high" or "very high" on the risk aversion scale. Nearly 58 percent of the farmers scored in the two high categories of the scientific orientation scale.

On the other hand, the sample farmers did not score very high on the traditionalism, the debt-avoidance and the fatalism scales. More than 60 percent of the Iowa farmers appear in the "low" and "very low" categories on the traditionalism scale, approximately 74 percent appear in these categories on the debt-avoidance scale, and nearly 58 percent scored in these two categories on the fatalism scale (table 1). The

Table 2. Summary of the range and mean score for the 13 value and belief scales.

Value or belief	Number of items in scale	Possible range	Actual range	Mean score
Independent action	7	0-112	14-112	72.3
Government dominance	3	0-48	0-48	22.3
Collective action	9	0-144	3-144	86.2
Commutative justice	9	0-144	0-144	70.7
Distributive justice	8	0-128	0-117	53.7
Traditionalism	6	0-96	0-96	35.5
Debt avoidance	6	0-96	0-88	30.2
Way of life	6	0-96	19-96	51.8
Fatalism	5	0-80	0-75	28.9
Risk aversion	7	0-112	30-112	73.7
Scientific orientation	15	0-240	32-224	146.8
Maximization of income	3	0-48	0-48	27.0
Risk orientation	6	0-96	20-87	55.5

mean scores of the traditionalism, debt-avoidance and fatalism scales (table 2) also suggest that the farmers scored relatively low on these three scales.

These data support, to some extent, the proposition that rural-urban value differences are decreasing; i.e., many farmers no longer adhere to traditional rural values but adhere to societal values (8, 9). The Iowa farmers do not, in general, adhere to many of the

[4] See footnote a, table 1.

values and beliefs (traditionalism, debt avoidance, farming as a way of life and fatalism) that have been assigned to rural people in the past. In contrast, societal values,[5] such as scientific orientation and maximization of income, are relatively strongly adhered to by the Iowa farmers. The data also suggest that the Iowa farmers are oriented toward the societal value-orientation active mastery and not the more traditional rural value-orientation passive acceptance. This trend may be inferred from the low adherence to the belief fatalism and the relatively high adherence to the value scientific orientation.

Risk aversion is the only element of the traditional value-orientation configuration strongly adhered to by Iowa farmers. Only 4.3 percent of the farmers appear in the two "low" categories on the risk-aversion scale (table 1). It appears that this value has been unaffected by the recent changes and shifts in rural American society. Risk orientation, the contemporary counterpart to risk aversion, is adhered to by 44 percent of the farmers sampled. This indicates that certain farmers adhere to both risk aversion and risk orientation, i.e., adhere to relatively inconsistent values. The same pattern may be noted for independent action and collective action.

[5] The criterion used to determine which values are societal is Williams' work on American values. (Williams, 16, pp. 397-470).

Iowa farmers appear much more willing to define government responsibility in agriculture as in the area of commutative rather than distributive justice. Slightly over twice as many farmers scored in the "high" and "very high" categories on the commutative-justice scale than on the distributive-justice scale. It is possible that certain liberal aspects of the programs associated with distributive justice are viewed with some skepticism by many of the Iowa farmers.

A large percentage of the sample appears relatively undecided about the question of government responsibility. Nearly 41 percent of the farmers scored in the "undecided" category on the commutative-justice scale, and approximately 44 percent of the farmers scored in the same category on the distributive-justice scale. The mean scores (table 2) of these two scales suggest the same conclusion. The mean score of the commutative-justice scale (70.7) is very near its range mean (72.0), and the mean score of the distributive-justice scale (53.7) is slightly below its range mean (58.5).

Farm Programs Preferred

Having determined which values and beliefs are held by the Iowa farmers, the discussion will now focus upon the farm programs preferred by these farmers. Table 3 contains a summary of the data related to the Iowa farmers' preferences on past, present and proposed government farm programs. The categories

Table 3. Summary of farmers' preferences for farm programs of set one (in percentage).

Farm program	Highly in favor (13-16)	In favor (9-11)	Not in favor (5-7)	Highly not in favor (0-3)	Total
1. Voluntary price-supply management program					
Program 1—A voluntary program in which the farmer agrees to cut back the number of his crop acres	40.3	42.5	8.0	9.2	100.0
Program 2—A program in which the government would set acreage allotments for each farm. Only those who sign up will receive price supports	38.2	39.7	9.7	12.4	100.0
Program 3—A voluntary program in which the government would pay farmers for retiring their whole farms from production on a year to year basis	25.8	27.4	15.1	31.7	100.0
Program 4—A voluntary program in which farmers could sell their cropland to the government for additions to national recreational areas	23.1	42.6	16.6	17.7	100.0
Program 5—A voluntary bushel allotment in which the farmers who sign up would receive price supports for only those bushels within his allotment	18.3	43.5	21.0	17.2	100.0
Program 6—A voluntary program in which the government would pay farmers to permanently retire part or all of their farm land from production	12.9	23.6	25.3	38.2	100.0
Group Average	26.4	36.5	15.9	21.2	100.0
2. Auxiliary-adjustment programs					
Program 7—A government program to improve education opportunities in rural areas	42.5	32.7	14.0	10.8	100.0

Table 3. Continued.

Farm program	Highly in favor (13-16)	In favor (9-11)	Not in favor (5-7)	Highly not in favor (0-3)	Total
Program 8—A government program which would provide information to young farm people about urban job opportunities	33.3	49.5	10.2	7.0	100.0
Program 9—A government program to retrain farm people who wish to leave agriculture for nonfarm employment	22.6	36.6	17.7	23.1	100.0
Program 10—A government program to provide education which would help young farm people to adjust to urban life	19.4	36.6	21.5	22.5	100.0
Program 11—A program in which the government would make payments to farm families to encourage them to relocate in urban jobs	2.7	11.3	29.0	57.0	100.0
Group Average	24.1	33.3	18.5	24.1	100.0
3. Free-market program					
Program 12—The government would abolish all farm-support programs. There would be no production controls and no price support	13.4	9.7	23.1	53.8	100.0
4. Income-transfer programs					
Program 13—A government program in which price supports would apply only to farmers who operate small farms	14.5	17.2	26.4	41.9	100.0
Program 14—A program in which the government would support prices at parity levels with no production controls	8.0	23.7	31.2	37.1	100.0
Program 15—A government program in which there are no price supports or production controls, but each farmer would receive a cash payment to raise farm income	2.2	10.2	23.7	63.4	99.5[a]
Group Average	8.3	17.0	27.1	47.6	100.0
5. Agricultural-restraint programs					
Program 16—A government program to control the production of agricultural products by taxing the use of fertilizer and large equipment	7.0	15.1	23.1	54.8	100.0
Program 17—A government program to cut back support for Experiment Station research and Agricultural Extension in order to slow down the rapid development and acceptance of new ideas and practices in agriculture	5.4	9.6	29.6	55.4	100.0
Group Average	6.2	12.3	26.4	55.1	100.0
6. Compulsory price-supply management programs					
Program 18—A compulsory bushel allotment program in which the government would set bushel allotments for each farm in an attempt to control surplus and raise farm prices	7.0	13.9	17.2	61.9	100.0
Program 19—A compulsory program in which the government would set acreage allotments for each farm	5.4	13.4	16.7	64.5	100.0
Program 20—A program in which the government would select farms that should be withdrawn from production. (These farms would be purchased by the government at a fair price.)	4.8	17.8	22.6	54.8	100.0
Group Average	5.7	15.1	18.8	60.4	100.0

[a] One farmer was undecided.

"highly in favor," "in favor," "not in favor" and "highly not in favor" appearing in table 3 were established in approximately the same manner as the categories appearing in table 1. The programs are ordered with respect to the average percentage of farmers in favor of each of the six groups of farm programs.

Most farmers interviewed clearly prefer the voluntary programs to the compulsory programs (table 3). Approximately three times as many farmers appear in the "highly in favor" and "in favor" categories for the voluntary programs than appear in these categories for the compulsory programs. A majority (57.4 percent) of the farmers also favor the auxiliary-adjustment programs. On the other hand, most of the Iowa farmers reject the agricultural-restraint programs, the free-market program and the income-transfer programs.

These data suggest several important interpretations. First, it appears that many of the Iowa farmers are relatively well satisfied with the present government farm programs.[6] Although over 60 percent of the farmers favor the voluntary approach, only about 21 percent favor a stronger approach (compulsory programs), and only about 23 percent favor eliminating government farm programs (free-market program). Thus, when compared with other alternative approaches, the present approach seems highly preferred. Second, although the auxiliary adjustment programs are, in general, supported by most of the sample, there appears to be a point at which support for these types of programs diminishes. This point can be easily identified in table 3. Programs 7 through 10 under the auxiliary-adjustment program category are supported by most farmers. Program 11, however, is clearly rejected by most farmers. Programs 7 through 10 are basically educational, but program 11 involves an income payment to farm families who are willing to relocate in urban areas. Thus, it appears that the Iowa farmers are willing to have the government aid agricultural adjustment through education and retraining, but are not willing to have the government hasten adjustment by offering direct payments to encourage farmers to relocate in urban areas. This same pattern of rejection of direct payments can be seen in the data related to the income-transfer programs (table 3).

A second measure of farm policy preference yielded results similar to those in table 3. This measure consisted of a set of four different government agricultural programs that represent probable alternative courses of action. These programs are more specific and more comprehensively outlined than those just discussed and are designed to present realistic alternatives to the farmers.[7] These programs were stated as follows:

Alternative Program 1. A gradual transition (over a 5-year period) from present price-support and pro-

duction-control programs to a set of policies involving (a) price supports at levels equal to market prices during the preceding 5 years and (b) an ever-normal-granary program implemented by commodity loans and purchase agreements.

Alternative Program 2. A set of policies involving (a) price supports at present levels, (b) mandatory controls on the amount of farm products produced and marketed by individual farmers based on past production and marketings and (c) additional restrictions on entering farming.

Alternative Program 3. A set of policies involving (a) price supports at present levels, (b) a voluntary land-retirement program made attractive to farmers by government rental payment and (c) continuation of commodity loans and purchase agreements.

Alternative Program 4. A return to free markets for farm products within 5 years and elimination of all production-control and price-support programs thereafter.

Each respondent was asked to indicate which of these four programs he preferred most, next best and least. In this way, an ordering of preferences was obtained for each farmer. The data obtained are presented in table 4. The same general trends can be found that emerged from using the first set of farm programs. As a group, the Iowa farmers overwhelmingly favor alternative program 3, which is similar to the present voluntary farm program. Fifty-seven percent rated it the best choice, and nearly 84 percent ranked it best or next best. Alternative program 1, a modification of the present farm program was rated second best. Over 60 percent of the farmers ranked it in the first two categories. As before, the compulsory alternative program (program 2) and the free-market program (program 4) were ranked low. The free-market program was ranked somewhat higher than the compulsory program.

The free-market program (program 4) was ranked in a rather polemic manner. It ranks second highest in both the "best" and the "least" categories. These data suggest that, although many Iowa farmers are strongly opposed to a free-market system, there is also a sizable group who view the free-market program as the most desirable alternative.

Values, Beliefs and Policy Positions and Actions

The data analyses in this bulletin are based upon several propositions designed to establish a profile of the association between specific values and beliefs and policy positions and actions. Most of these propositions are based upon the current farm-policy dialogue. In some instances, the background and rationale behind the propositions are given; in other instances in which the rationale is more self-evident, little explanation is given.

Not all the values and beliefs are logically related to every policy position or action. In other words, the theoretical arguments developed here are not intended

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[6] The Iowa farmers are in favor of all types of voluntary programs except program 6. The notion of permanent retirement of land evidently is not as acceptable to the farmers as that of temporary retirement.

[7] These programs were constructed by Donald R. Kaldor, professor of agricultural economics, Iowa State University.

Table 4. Summary of the ranking of four alternative farm programs, set two.

Farm program	Best		Next best		Third best		Least	
	No.	%	No.	%	No.	%	No.	%
Alternative program 1								
A gradual transition (over a 5-year period) from present price-support and production-control programs to a set of policies involving (a) price supports at levels equal to market prices during the preceding 5 years, (b) an ever-normal-granary program implemented by commodity loans and purchase agreements	22	11.8	91	48.9	60	32.3	13	7.0
Alternative program 2								
A set of policies involving (a) price supports at present levels, (b) mandatory controls on the amount of farm products produced and marketed by individual farmers based on past production and marketings, (c) additional restrictions on entering farming	15	8.1	26	14.0	53	28.5	92	49.4
Alternative program 3								
A set of policies involving (a) price supports at present levels, (b) a voluntary land-retirement program made attractive to farmers by government rental payments, (c) continuation of commodity loans and purchase agreements	106	57.0	50	26.9	27	14.5	3	1.6
Alternative program 4								
A return to free markets for farm products within 5 years and elimination of all production-control and price-support programs thereafter	43	23.1	19	10.2	46	24.7	78	42.0
TOTAL	186	100.0	186	100.0	186	100.0	186	100.0

as exhaustive, but are only concerned with those relationships between values, beliefs and policy behavior that appear to have a logical basis.

INDEPENDENT ACTION VALUE-ORIENTATION CONFIGURTION

Proposition 1A: The higher the adherence to independent action, the lower is the preference for compulsory and voluntary programs.

Proposition 1B: The higher the adherence to government dominance, the lower is the preference for compulsory and voluntary programs.

Proposition 1C: The higher the adherence to independent action, the higher is the preference for a free-market system.

Proposition 1D: The higher the adherence to government dominance, the higher is the preference for a free-market system.

Proposition 1E: The higher the adherence to independent action, the lower is the participation in government farm programs.

Proposition 1F: The higher the adherence to government dominance, the lower is the participation in government farm programs.

Independent action is a value long associated with rural living. Observers of rural America have suggested that the farmer, being alone during much of this work and being forced to make his own decisions, has developed a strong image of self-sufficiency and self-reliance. He views himself not as a wage earner, but as manager of his own business and affairs. This desire

for independence has become so common among the farming population that it is considered one of the precepts of the "agricultural creed" (12).

The Great Depression and World War II have had an impact on the importance attached to independence. Before the 1930's, American farmers were able to live and work in relative isolation and were free to run their business as they pleased. The depression, however, forced the farmer to turn to the government for assistance in areas where assistance had been neither needed nor desired. The war years and those immediately following resulted in an unparalleled acceleration of farm production and an accumulation of surpluses. Many farmers began to believe that a just return for their labors was no longer achieved in the market place. And independent action came into conflict with distributive and commutative justice. Thus, the general adherence to independence diminished to some degree because other values that conflicted with independent action were considered equally important.

The belief, government dominance, can be considered as a reaction to government programs because it represents the farmer's perception of the relative constraints these programs place on his freedom and economic returns. We expected that government dominance would be positively related to independent action. An individual who perceives some external agent to be restraining his freedom would also be expected to strongly value his freedom.

Therefore, we expected that, the stronger the ad-

herence to independent action and government dominance, the lower would be the preference for and the participation in both voluntary and compulsory price-supply management and control farm programs (propositions 1A, 1B, 1E and 1F). Both these types of programs require those who participate to conform to certain production regulations and to give up some entrepreneurial freedom. Because of the explicit restrictiveness of the compulsory programs, we expected that the negative relationships between independent

Table 5. Product-moment correlation[a] among the 13 value and belief scales.

Value or belief	Independent action	Government dominance	Collective action	Commutative justice	Distributive justice	Traditionalism	Way of life	Debt avoidance	Fatalism	Risk aversion	Scientific orientation	Maximization of income	Risk orientation
Independent action		0.565	−0.345	−0.468	−0.401	0.041	0.110	−0.011	−0.015	0.143	−0.005	−0.122	0.046
Government dominance			−0.218	−0.581	−0.342	0.108	0.144	0.125	−0.054	0.118	0.009	−0.063	0.117
Collective action				0.362	0.321	−0.050	0.031	0.074	0.133	0.158	0.288	0.139	0.131
Commutative justice					0.733	0.061	0.082	0.186	0.267	0.054	0.050	0.301	0.111
Distributive justice						0.183	0.179	0.328	0.265	0.146	0.082	0.259	0.162
Traditionalism							0.526	0.424	0.422	0.265	−0.446	0.119	0.025
Way of life								0.543	0.240	0.370	−0.268	0.107	−0.006
Debt avoidance									0.338	0.246	−0.106	0.195	−0.085
Fatalism										0.203	−0.152	0.364	0.118
Risk aversion											0.017	0.223	−0.018
Scientific orientation												0.070	0.209
Maximization of income													0.252
Risk orientation													

[a] $r = 0.144$ to be significant at the 0.05 level (two tailed)

Table 6. Summary of product-moment correlations[a] among the 13 value and belief scales and farm policy preference.

Value or belief	Compulsory programs (1)	Voluntary programs (2)	Auxiliary-adjustment programs (3)	Agriculture-restraint programs (4)	Income-transfer programs (5)	Free-market programs (6)	Program alternative one (7)	Program alternative two (8)	Program alternative three (9)	Program alternative four (10)
Independent action	−0.434	−0.095	−0.155	−0.082	0.058	0.240	0.069	−0.302	−0.165	0.307
Government dominance	−0.323	−0.269	−0.138	−0.018	0.044	0.497	−0.064	−0.300	−0.260	0.458
Collective action	0.229	0.189	0.274	−0.042	−0.070	−0.305	0.006	0.218	0.236	−0.336
Commutative justice	0.414	0.285	0.348	0.036	0.127	−0.591	0.109	0.389	0.293	−0.578
Distributive justice	0.410	0.246	0.413	0.148	0.198	−0.365	0.059	0.246	0.168	−0.347
Traditionalism	0.094	−0.069	−0.142	0.458	0.266	−0.034	−0.152	0.088	0.091	−0.032
Debt avoidance	0.070	−0.023	−0.025	0.325	0.329	−0.071	−0.087	0.202	0.037	−0.131
Way of life	−0.103	0.011	−0.064	0.388	0.219	0.010	−0.095	0.087	−0.001	−0.007
Fatalism	0.128	0.157	0.009	0.265	0.273	−0.083	−0.089	0.163	0.164	−0.181
Risk aversion	0.009	0.025	0.124	0.161	−0.001	−0.076	−0.071	0.086	0.014	−0.033
Scientific orientation	0.023	0.111	0.314	−0.337	−0.148	−0.143	0.166	−0.063	0.015	−0.067
Maximization of income	0.171	0.218	0.211	0.060	0.168	−0.041	−0.172	0.234	0.141	−0.170
Risk orientation	0.082	0.116	0.206	−0.098	0.102	−0.076	0.121	−0.003	−0.027	−0.059

[a] Levels of significance for propositions tested (one tailed): $r = 0.120$ for 0.05; $r = 0.144$ for 0.025; $r = 0.170$ for 0.01; $r = 0.188$ for 0.005; $r = 0.242$ for 0.005.

Value or belief	Feed-Grain Program participation	Soil Bank Program participation	Commodity-Credit Program participation
Independent action	−0.229	−0.071	−0.126
Government dominance ..	−0.297	−0.139	−0.205
Collective action	0.180	0.271	0.243
Commutative justice	0.240	0.233	0.148
Distributive justice	0.197	0.212	0.101
Traditionalism	−0.039	−0.035	−0.101
Debt avoidance	−0.026	0.016	−0.097
Way of life	−0.051	0.008	−0.089
Fatalism	−0.021	0.042	−0.012
Risk aversion	0.130	0.063	0.019
Scientific orientation	0.148	0.108	0.184
Maximization of income ..	0.085	0.076	0.036
Risk orientation	0.026	0.078	0.039

* Levels of significance for propositions tested (one-tailed): $r = 0.120$ for 0.05; $r = 0.144$ for 0.025; $r = 0.170$ for 0.01; $r = 0.188$ for 0.005; $r = 0.242$ for 0.0005.

action, government dominance and preferences for compulsory programs would be stronger than between this value and belief and preference for and participation in voluntary types of government programs.

Also, we expected that the farmer who adheres to independent action and government dominance would favor some alternative policy to government farm programs. The approach that would probably maximize this value and belief would be a free-market system since this system places no restraints on the individual (propositions 1C and 1D). We proposed that farmers who strongly adhere to independent action would view the free-market system as the best determinant of a person's contribution to society and the place where he will ultimately receive a fair return and equality of income and opportunity regardless of present conditions.

Tables 5, 6 and 7 present data relevant to this discussion. An examination of the intercorrelation matrix, presented in table 5, indicates that independent action and government dominance are highly statistically related. The correlation is 0.565 ($P > 0.0005$). The data in table 5 also indicate that independent action is relatively unrelated to such traditional rural values and beliefs as traditionalism, farming as a way of life, debt avoidance, fatalism and risk aversion. This is somewhat surprising because independent action has been considered one of the values that formed the core of the "traditional" value-orientation configuration. The recent conflict between independent action and distributive and commutative justice may be part-

ly responsible for this lack of association. All five traditional values are statistically related to distributive justice, and two of the five values are related to commutative justice.

Table 6 contains data related to propositions 1A and 1B. These data, for the most part, support proposition 1A. The scores on the independent-action scale and the scores on compulsory-program index (column 1) are highly significantly related in the hypothesized direction. The scores on the independent-action scale and the scores on the voluntary-program scale (column 2), however, are not related. The data obtained from the ranking of the four major-program alternatives indicate that both the voluntary and compulsory programs are negatively related to independent action.[8] The compulsory-program alternative (column 8, table 6) and the present voluntary farm-program alternative (column 9, table 6) are significantly correlated with independent action in the hypothesized direction. There is no relationship between independent action and the modified voluntary-program alternatives (column 7). Since the modified voluntary program represents a transition between a voluntary program and a free-market system, this finding is not surprising.

Proposition 1B is clearly supported by these data. Government dominance is negatively related to both the compulsory programs and the voluntary programs (columns 1, 2, 8 and 9). The correlations between government dominance and positions concerning voluntary programs are higher than between independent action and these same variables. This more intense relationship may indicate that the belief, government dominance, implies a stronger commitment than the value, independent action. The individual who adheres to government dominance, not only believes that the government should not restrict his freedom of decision, but also believes that the government is restricting his freedom substantially more than he desires.

As expected, the relationships between independent action, government dominance and the compulsory programs are higher than the relationships between this value and belief and the voluntary programs. It appears that the compulsory programs are more inconsistent with independent action and government dominance than are the voluntary programs.

The data in table 7 offer some evidence for proposition 1E. The correlation coefficients between scores on the independent action scale and years participated in the Feed-Grain Program and the Commodity-Credit Program are significant in the expected (negative) direction. The relationship between independent action and years participated in the Soil Bank Reserve Program is not significant. Proposition 1F is more strongly supported. All three measures of farm-policy actions are significantly related statistically to government dominance in the anticipated direction.

[8] The programs were scored as follows: 4 if it was ranked "best," 3 if ranked "next best," 2 if ranked "third best," and 1 if ranked "least." Thus, the higher the score, the higher the program is ranked.

The data support propositions 1C and 1D. There is a significant positive relationship between the free-market program and independent action and government dominance (columns 6 and 10, table 6). The relationship between government dominance and the free-market program is stronger than between independent action and the free-market program.

In summary, independent action and government dominance are most highly related to the two most dichotomous programs, compulsory programs and the free-market program. They are also, on the whole, related to voluntary types of programs. The relationship between independent action, government dominance and other types of government programs, however, is ambiguous. The data do not suggest any meaningful relationship (using a nondirectional test) between this value and belief and the other program categories.

COLLECTIVE ACTION VALUE-ORIENTATION CONFIGURATION

Proposition 2A: The higher the adherence to collective action, the higher is the preference for compulsory, voluntary, auxiliary and income-transfer adjustment programs.

Proposition 2B: The higher the adherence to commutative justice, the higher is the preference for compulsory, voluntary, auxiliary and income-transfer adjustment programs.

Proposition 2C: The higher the adherence to distributive justice, the higher is the preference for compulsory, voluntary, auxiliary and income-transfer adjustment programs.

Proposition 2D: The higher the adherence to collective action, the higher is the participation in past and present government farm programs.

Proposition 2E: The higher the adherence to commutative justice, the higher is the participation in past and present government farm programs.

Proposition 2F: The higher the adherence to distributive justice, the higher is the participation in past and present government farm programs.

Proposition 2G: The higher the adherence to collective action, the lower is the preference for a free-market program.

Proposition 2H: The higher the adherence to commutative justice, the lower is the preference for a free-market program.

Proposition 2I: The higher the adherence to distributive justice, the lower is the preference for a free-market program.

Collective action has a historical basis in rural society. In the early 1900's, this value was reflected in the cooperative movement. At that time, the emphasis of collective action was basically concerned with the collective purchasing of inputs for production and had little impact upon the decision-making freedom of the farmer. The depression and the impact of technological advance broadened the empha-

sis of collective action. Faced with many new problems, a number of farmers decided that solutions to these problems could best be obtained through cooperative effort. Some farmers were willing to part of the responsibility of decision-making from the individual to the group. Such concepts as collective marketing, quota systems and collective withholding of crops and livestock became popular with many farmers.

We proposed that collective action has also become manifest as a preference for government intervention because certain farmers believe that government programs represent a realistic collective approach to their problems. Most of the government farm programs are designed to deal with the basic problems experienced by farmers; namely, low incomes, over-production and adjustment. Thus, it is expected that the more farmers adhere to collective action, the more they will support and participate in compulsory, voluntary, auxiliary and income-transfer adjustment programs (propositions 2A and 2D).

The proposition concerning commutative justice and distributive justice (propositions 2B, 2C, 2E and 2F) are relatively self-evident and require little explanation.

The voluntary and compulsory programs are designed to control production so that prices will remain relatively stable at some reasonable level. These programs deal with problems such as low incomes and poor returns. The auxiliary adjustment programs are direct means to equalize opportunity in both the farm and nonfarm sectors of the economy. The income-transfer programs deal directly with the income problem. Thus, all these programs deal with important elements of distributive justice and commutative justice.

We also expected that those who adhere to collective action, commutative justice and distributive justice will be less favorable toward the free-market system (propositions 2G, 2H and 2I). We proposed that farmers who adhere to these values do not believe that a fair return can be obtained in a free-market system; i.e., they believe they have little power to control the market system and consider the market a poor alternative to obtain a fair return or equality with other sectors of the economy.

It can be seen in table 5 that collective action, commutative justice and distributive justice form a meaningful value-orientation configuration. These data suggest that those who adhere to collective action are concerned about problems associated with distributive and commutative justice.

Collective action, commutative justice and distributive justice are all negatively related to independent action and government dominance (table 5). This is expected since these two value-orientations configurations clearly conflict with one another. One emphasizes the intervention of government, and the other emphasizes a reduction of the role of government in agriculture.

Table 6 reveals that propositions 2A, 2B, 2C, 2G, 2H

and 2I are basically supported by the data. Collective action is positively related to compulsory programs (columns 1 and 8), voluntary programs (columns 2 and 9) and auxiliary-adjustment programs (column 3). Collective action is negatively related to the free-market program (columns 6 and 10). Collective action, however, is not related to the income-transfer programs (column 5). Commutative justice and distributive justice are related positively (at the 0.05 level of statistical significance or greater) to voluntary, compulsory, auxiliary and income-transfer adjustment programs.[9] These values are negatively related to the free-market program at a high level of statistical significance ($P > 0.0005$).

The linear relationships are stronger between distributive justice, commutative justice and the compulsory programs than between these values and the voluntary programs. This finding suggests that those who believe the government should guarantee the farmer a fair return and equality of income and opportunity perceive compulsory programs as more effective than voluntary programs to obtain these goals. This is not too surprising since it has often been suggested that compulsory programs would most effectively raise the price of foods and fibers.

Propositions 2D, 2E and 2G also, on the whole, are supported by these data. The collective-action and commutative-justice scales are positively correlated with the years of participation in the Feed-Grain Program, the Soil Bank Reserve Program and the Commodity-Credit Program (table 7). The distributive-justice scale is positively related to the years of participation in the Feed-Grain and Soil Bank Reserve Programs, but is not statistically associated with the years of participation in the Commodity-Credit Program.

Thus, collective action, distributive justice and commutative justice appear positively related to most types of government farm programs.[10] The pattern of relationship is the opposite of the pattern found between independent action, government dominance, and farm-policy positions and actions.

TRADITIONAL VALUE-ORIENTATION

Proposition 3A: The higher the adherence to traditionalism, the higher is the preference for agricultural-restraint and income-transfer programs.

Proposition 3B: The higher the adherence to debt avoidance, the higher is the preference for agricultural-restraint and income-transfer programs.

Proposition 3C: The higher the adherence to farming as a way of life, the higher is the preference for agricultural-restraint and income-transfer programs.

Proposition 3D: The higher the adherence to fatalism, the higher is the preference for agricultural-restraint and income-transfer programs.

Proposition 3E: The higher the adherence to risk aversion, the higher is the preference for agricultural-restraint and income-transfer programs.

Proposition 3F: The higher the adherence to traditionalism, the lower is the preference for auxiliary-adjustment programs.

Proposition 3G: The higher the adherence to debt avoidance, the lower is the preference for auxiliary-adjustment programs.

Proposition 3H: The higher the adherence to farming as a way of life, the lower is the preference for auxiliary-adjustment programs.

Proposition 3I: The higher the adherence to fatalism, the lower is the preference for auxiliary-adjustment programs.

Proposition 3J: The higher the adherence to risk aversion, the lower is the preference for auxiliary-adjustment programs.

We proposed that the values, traditionalism, debt avoidance and risk aversion, and the beliefs, farming as a way of life and fatalism, formed the core of rural values and beliefs at the beginning of this century (1, 7, 14). These values and beliefs are associated with the traditional concept of farming; i.e., the belief in the family-farm system, the work ethic, close contact with nature, visibility of accomplishment, thrift, vocational prestige and a high appreciation for the nonmonetary rewards of farming.

Recent trends in agriculture have challenged this concept of farming. Farm sizes now are increasing beyond the limits of the traditional "family farm," the farming community is becoming less isolated and the rural subculture is becoming more integrated into the whole of American culture. Farmers are becoming more risk-oriented, credit has become an essential part of farming and advancements in technology have given farmers confidence in their ability to control their own destiny. We expected that farmers who adhere to the traditional values and beliefs, however, would desire to preserve farming in its most basic form and resist the changes that are occurring. They were, therefore, expected to support government programs that would restrain the development of this new type of agriculture (the first portion of propositions 3A, 3B, 3C, 3D and 3E).

The traditional value-orientation configuration is also expected to be related to income-transfer programs. A recent study by Quinney (13) provides information germane to this proposition. Quinney found that traditional values and beliefs were associated with low-status people. He also found that these people were politically alienated from the rest of society and appeared more responsive to liberal political measures. Quinney reasoned that these people occupy marginal positions in the social structure, have the weakest ties

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[9] Collective action, cummutative justice and distributive justice are not statistically related to program alternative 1. As with independent action and government dominance, the inclusion of both voluntary and free-market elements in this program evidently has resulted in a nonsystematic relationship between these three values and program alternative 1.

[10] These three values are also related to demand-creation programs—programs designed to increase domestic and foreign demand for American agricultural products. All three values are positively correlated to this category of programs at the 0.025 level of probability.

with the social order, receive the smallest benefits from it and have the fewest opportunities to participate in it. He concluded that these people are most responsive to political measures that could immediately improve their existence.

The income-transfer programs are the most direct means to aid people with low socioeconomic status. The data suggest, to a certain extent, that farmers who adhere to traditional values and beliefs have lower incomes and tend to desire government intervention to improve their income and opportunity positions. The traditional values and beliefs are negatively related to net income. Many of the traditional values and beliefs are positively associated with distributive and commutative justice (table 5). On the basis of these findings and the work of Quinney, we expected that the traditional values and beliefs would be positively related to the income-transfer programs (the second portion of propositions 3A, 3B, 3C, 3D and 3E).

Those who adhere to the traditional values and beliefs were not expected to favor the auxiliary adjustment programs (propositions 3F, 3G, 3H, 3I and 3J). These programs are designed to bring about changes in agriculture, changes that threaten the traditional concept of rural life.

The intercorrelations between the five scales developed to measure these five traditional values and beliefs indicate that these values and beliefs are positively interrelated (table 5). All the correlation coefficients between these five scales are significant at the 0.01 level of significance or greater. Thus, these five values and beliefs may be called a value-orientation configuration. The common background from which these values and beliefs have emerged, the overlap in content and the complementary interrelationship of these values and beliefs would lead one to expect that they would form a configuration.

Data related to propositions 3A through 3E can be found in table 6 (p. 169). The anticipated relationships between the traditional values and beliefs (traditionalism, debt avoidance, farming as a way of life, fatalism and risk aversion) and the agricultural restraint programs are supported by the data. As can be seen in table 6, all the relevant correlations are highly statistically significant in the hypothesized direction. All the traditional values and beliefs except risk aversion are also positively correlated with the income-transfer programs. Thus propositions 3A through 3E are basically supported by these data.

Propositions 3G through 3J, however, are not supported by the data. Only one of the traditional values (traditionalism, proposition 3F) is significantly related to auxiliary-adjustment programs in the expected direction. The other traditional values and beliefs appear relatively independent of the auxiliary-adjustment programs. One possible explanation is the indirect nature of the auxiliary-adjustment programs and that the heavy emphasis upon retraining, information and education may make these programs less objectionable

than was expected to some of those who adhere to traditional values and beliefs.

In summary, the traditional value-orientation configuration is associated with only two program categories, the agricultural-restraint and the income-transfer programs. This configuration, on a whole, is unrelated to the other program categories.[11]

CONTEMPORARY VALUE CONFIGURATION

Proposition 4A: The higher the adherence to scientific orientation, the higher is the preference for auxiliary-adjustment programs.

Proposition 4B: The higher the adherence to maximization of income, the higher is the preference for auxiliary-adjustment programs.

Proposition 4C: The higher the adherence to risk orientation, the higher is the preference for auxiliary-adjustment programs.

Proposition 4D: The higher the adherence to scientific orientation, the lower is the preference for agricultural-restraint programs.

Proposition 4E: The higher the adherence to maximization of income, the lower is the preference for agricultural-restraint programs.

Proposition 4F: The higher the adherence to risk orientation, the lower is the preference for agricultural-restraint programs.

We expected that scientific orientation, risk orientation and maximization of income would be positively related to the auxiliary-adjustment programs (propositions 4A, 4B and 4C). Scientific orientation is associated with a higher regard for the scientific method, technological advancement and efficiency. Risk orientation represents an orientation toward mastery rather than passive acceptance and is based on the premise that man is an active participant in the manipulation of his destiny. Maximization of income represents an orientation toward monetary gain. The auxiliary-adjustment programs have been considered by many as a rational and objective means to achieve efficient farming. These programs are designed to move people out of agriculture, give them the necessary skills to find other work, eliminate small inefficient farm units and raise the income of those remaining in farming. Thus, the auxiliary adjustment programs contain elements consistent with each of these three values.

Alternatively, agricultural-restraint programs appear inconsistent with these three values. Restraint programs are designed to perpetuate inefficiencies, retard technological progress in agriculture, and penalize efficient and large-scale farmers, thereby restricting their potential income. Since these aspects of the restraint programs are contrary to each of the three societal values,

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[11] There is some weak evidence that this configuration is associated with compulsory programs. Using a nondirectional test, fatalism and debt avoidance are statistically related to program alternative 2 (column 8, table 6), the compulsory program alternative. However, none of the traditional values and beliefs is related (at $p \leq 0.01$) to the other measures of preference for compulsory programs (column 1, table 6).

it is expected that those who adhere to scientific orientation, risk orientation and maximization of income will not favor restraint programs (propositions 3D, 3E and 3F).

The data in table 5 indicate that scientific orientation, maximization of income and risk orientation do not form a value configuration. Risk orientation is positively correlated with both scientific orientation and maximization of income, but scientific orientation and maxmizations of income are not related. The interrelations between the traditional values and beliefs and the three contemporary values indicate that maximization of income is positively related to three of the five traditional values and beliefs. Scientific orientation is negatively related to three of these five traditional values and beliefs, and risk orientation is unrelated to the traditional value-orientation configuration. Risk orientation and risk aversion and maximization of income and farming as a way of life are not opposing value-orientations as was expected.

Propositions 3A, 3B, 3C and 3D are supported by the data, but propositions 3E and 3F are not supported (table 6). All three societal values are positively correlated with the auxiliary programs. As anticipated, scientific orientation varies inversely with the agricul-

ture-restraint programs ($r = -0.337$, $P < 0.0005$). Risk orientation and maximization of income, however, are not related to the agricultural-restraint programs.

Thus, these three values are positively related to auxiliary-adjustment programs, but scientific orientation is the only value of this group related (negatively) to the agricultural-restraint programs. Scientific orientation also is the only value of the three that is negatively related to the traditional value-orientation configuration; i.e., it is the only value of the three that is dichotomous in the traditional values and beliefs.

DISCUSSION AND CONCLUSIONS

A summary of the findings presented in the preceding section is given in table 8[12] and table 9. Forty-eight of the original 62 directional hypotheses concerning farm policy positions are supported by the data at the 0.05 level of statistical significance (table 8). Thirteen of the original 15 directional hypotheses concerning farm policy actions are supported by the data at the designated level of statistical significance (table 9). In all, 61 of the 77 directional hypotheses are supported by the data. We concluded that the findings

[12] See footnote a, table 8.

Table 8. Profile of the association between rural values and beliefs and government farm policy positions.[a]

Value or belief	(1) Voluntary programs	(2) Voluntary programs	(3) Voluntary programs	(1) Compulsory programs	(2) Compulsory programs	(1) Free market programs	(2) Free market programs	Auxiliary adjustment programs	Agricultural restraint programs	Income transfer programs
Independent action	0[b]	−	0[b]	−	−	+	+	−[c]	0	0
Government dominance	0[b]	−	−	−	−	+	+	0	0	0
Collective action	0[b]	+	+	+	+	−	−	+	0	0[b]
Commutative justice	0[b]	+	+	+	+	−	−	+	0	+
Distributive justice	0[b]	+	+	+	+	−	−	+	+[c]	+
Traditionalism	−[c]	0	0	0	0	0	0	−	+	+
Debt avoidance	0	0	0	+[c]	0	0	0	0[b]	+	+
Way of life	0	0	0	0	0	0	0	0[b]	+	+
Fatalism	0	+[c]	+[c]	+[c]	0	−[c]	0	0[b]	+	+
Risk aversion	0	0	0	0	0	0	0	0[b]	+	0[b]
Scientific orientation	+[c]	0	0	0	0	0	0	+	−	−[c]
Maximization of income	−[c]	0	+[c]	+[c]	+[c]	−[c]	0	+	0[b]	+[c]
Risk orientation	0	0	0	0	0	0	0	+	0[b]	0

[a] The numbers appearing to the right or above the voluntary programs, the compulsory programs and the free-market programs represent the various measures used for each of these categories. "Voluntary programs (1)" and "voluntary programs (2)" represent program alternative 1 and program alternative 3, respectively (columns 7 and 9, table 6). "Voluntary programs (3)" represent voluntary program index (column 2, table 6). "Compulsory programs (1)" is program alternative 2 (column 8, table 6). "Compulsory programs (2)" is the compulsory program index (column 1, table 6). "Free-market program (1)" is program alternative 4 (column 10, table 6). "Free-market program (2)" is the free-market program index (column 6, table 6).

A plus sign (+) represents a positive significant relationship, a negative sign (−) represents a negative significant relationship and a zero (0) indicates no statistically significant relationship between two variables.

[b] Hypothesis not supported.

[c] Relationship not supported.

174

presented in this report basically support the general hypothesis that values and beliefs are meaningfully related to farm-policy behavior.

Tables 8 and 9 show that there are 18 statistically significant relationships (using a two-tailed test at the 0.05 level of probability) that were not anticipated. Fourteen of these 18 relationships involve fatalism, scientific orientation and maximization of income. The pattern of the unexpected relationships involving fatalism and maximization of income suggest that those who adhere to these values desire voluntary and compulsory government farm programs rather than a free-market system to improve prices of agricultural commodities. The data in table 9 suggest that those who adhere to scientific orientation have been active in present government farm programs.

Even though sharp value, belief and policy conflicts exist among Iowa farmers, the data suggest that certain farm program categories appeal to most of these farmers. As pointed out earlier, the auxiliary-adjustment and voluntary programs have a relative wide appeal. Approximately 57 percent of the Iowa farmers interviewed favor the auxiliary-adjustment programs, and over 60 percent favor the voluntary programs. Similarly, nearly 69 percent of the sample ranked one of the two voluntary types of programs best among the four alternatives offered. Since 65 percent of the farmers scored in the "high" or "very high" category on the independent-action scale, we can say that voluntary and auxiliary-adjustment government programs appeal to certain farmers who would be expected to reject them.

The data reported here, not only suggest that values and beliefs are related to behavior in relation to farm policy, but also that values and beliefs are important variables to consider when attempting to predict behavior related to farm policy. The multiple correlations between the 13 value and belief scales and each of the measures of farm-policy positions and actions are all highly statistically significant $(P > 0.01)$. The amount of variance "explained," however, is not very large. The range of the "explained" variance is from 11 percent for the years participated in the soil bank to 46 percent for the preference for the free-market system. Therefore, other variables must be taken into account to obtain better over-all prediction of farm-policy positions and actions. For example, the situation in which the farmer operates may influence his policy behavior. The "degrees of freedom" to participate or not to participate in farm programs vary greatly so that one farmer may have more freedom to act according to his values and beliefs than another farmer.

Another important variable may be "calculation." One writer contends that the decision to support or reject production controls is based primarily upon how the farmers calculate their chances of surviving the adjustments that would result if prices declined (10).

Table 9. Profile of the association between rural values and beliefs and government farm policy actions.[a]

Value or belief	Years in feed grain program	Years in soil bank program	Years in commodity credit program
Independent action	−	0[b]	−
Government dominance	−	−	−
Collective action	+	+	+
Commutative justice	+	+	+
Distributive justice	+	+	0[b]
Traditionalism	0	0	0
Debt avoidance	0	0	0
Way of life	0	0	0
Fatalism	0	0	0
Risk aversion	0	0	0
Scientific orientation	+[c]	0	+[c]
Maximization of income	0	0	0
Risk orientation	0	0	0

[a] A plus sign (+) represents a positive significant relationship, a negative sign (−) represents a negative significant relationship and a zero (0) indicates no statistically significant relationship between two variables.

[b] Hypothesis not supported.

[c] Relationship not anticipated.

An analysis of the available situational variables indicates that crop acres, age and soybean acres influence the hypothesized relationship between certain values and beliefs and behavior in relation to farm policy. The data available, however, are not adequate to determine the precise impact of relevant situational variables upon the relationship between value-orientations and policy positions and actions. Research is needed to determine what combination of variables influences most of the positions that farmers select on government farm policy before "cause-effect" questions can be discussed.

The results of this study probably can be generalized only to Iowa farmers. As Schuler and Taylor (14) have pointed out, values, attitudes, beliefs and opinions vary from region to region. Thus, the pattern found in Iowa may differ greatly from that in other parts of the country. For example, we found that Iowa farmers adhere to commutative justice much more than to distributive justice and support most strongly those programs designed to give the farmer a fair return. In other areas of the country, strong support for programs like the poverty programs may indicate that distributive justice is valued much more than in the Iowa Corn Belt. Research is needed to determine the pattern of relationship between values, beliefs and farm-policy in other areas so that these differences, if any, can be identified. It may be that value conflicts, not only have an important influence on farm policy choices interregionally, but intraregionally as well.

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Each farmer was asked to respond to each item on the basis of the following set of instructions:

"The part of the schedule which I will leave with you contains a number of statements upon which we want your views about farming and farm policy. We would like to have you respond to each of the statements in this schedule.

"After you have read each statement, circle 'A' if you agree with it and 'D' if you disagree with it.

"After you have circled either 'A' or 'D,' please indicate how strongly you agree or disagree with the statement by circling one of the numbers to the right of the statement. The numbers 1 through 5 are meant to indicate how strongly you agree or disagree with the statement. Circle number 1 if it really doesn't make much difference to you if you agree or disagree with the statement. Circle number 5 if you very strongly agree or disagree with the statement. For some of the statements the numbers 2, 3, 4 may better describe how strongly you agree or disagree with the statement. When this is the case, circle the appropriate number. If you are **fully** and **completely** undecided, circle both 'A' and 'D' indicating you neither agree nor disagree with the statement. In case you circle both 'A' and 'D' do not circle any of the numbers.

"These statements are in **no** way designed to be a test. There are no **right** or **wrong** answers to the statements. The answers which will be most helpful to this research project are the ones which best reflect **your own feelings** about each of the statements. This is a sample of male heads of households; therefore, we would appreciate it if you would personally complete the schedule."

The respondent then read each statement and made his response. An example of how the statements were presented is given below. The statement is from the independent action scale.

"10. Farmers should remain independent even if it means a loss of income to them.

$$\begin{array}{c|ccccc} A \\ D \end{array} \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 "$$

There are five categories (1, 2, 3, 4, 5) designed to indicate the intensity of the agreement or disagreement with each item. Categories 1, 2 and 3 were assigned their face numerical value. Category 4 was assigned the score of 5, and category 5 was assigned a

Table A-1. Example of scoring procedure for a positive item.

Responses	D-5	D-4	D-3	D-2	D-1	D-A	A-1	A-2	A-3	A-4	A-5
Numerical value	−8	−5	−3	−2	−1	0	1	2	3	5	8
Transformed value	0	3	5	6	7	8	9	10	11	13	16

score of 8 (18). Agreement with positive items (those regarded as indicating a positive position with respect to the defined value or belief dimension) was scored positively, and disagreement with a positive item was scored negatively. The scoring procedure was reversed for negative items. Thus, the range of responses was from +8 to −8. This scoring procedure for a positive item is shown in table A-1.

Each respondent could make 11 different responses. The scores were transformed to a positive scale by adding 8 to each value so that the possible range of the responses on any given item was from 0 to 16.

The method of administration and the scoring procedure for the farm-policy position statements were much the same as those for the value and belief statements. Each farmer was asked to evaluate the farm programs on the basis of the following set of instructions:

"Through the years there have been a number of government farm programs, and many other farm programs have been proposed. We have a list of government farm programs which have been proposed at various times. We want you to indicate how you would vote on each of the programs if you had to vote **today**.

"Please respond by answering **yes** if you would vote for the program and **no** if you would not vote for the program.

"After you have voted either yes or no, we would like to have you indicate how certain you are of this choice. On Card 1 you will see numbers from 1 to 5. We wish to have you use these numbers to indicate the degree of certainty which you feel about your vote on the issue. Indicate number 1 if you are quite uncertain or have strong reservations about your choice. Indicate number 5 if you feel quite certain or have no reservations about your vote. In some cases, numbers 2, 3 or 4 may best describe how certain you are of your vote."

The responses were scored in the same way as the value and belief statements so that the range of responses on each program was from 0 to 16.

After the completion of the study, each of the 13 value and belief scales was inspected to determine the relative degree to which it met the conditions for additivity. These conditions included the following: (a) The responses to different items must be linearly related. (b) The variances of the responses to different items must be homogeneous and independent of the means. (c) The intercorrelations among the items must be positive and homogeneous.

The first condition for additivity was evaluated on the basis of (a) a comparison between the minimum acceptable item total correlation coefficient (r_{it}) and the field sample r_{it}'s of each scale, (b) the magnitude of the average intercorrelation coefficient ($\bar{r}_{ij}$), (c) the magnitude of the coefficient of reliability (r_{tt}) and (d) the magnitude of the intercorrelations among the items of each scale. The minimum item total correlation coefficient is defined as $r_{it} = \dfrac{1}{n}$, where n is the number of items in a given scale. This coefficient defines the amount of independence variance of the total score contributed by each item if there were no experimental relationship, i.e., the amount of variance contributed only by chance. The computed item total correlations of all items included in the 13 scales exceeded their respective computed minimum acceptable item total correlation coefficient. This finding was considered as evidence that the responses to different items were linearly related. High magnitudes of the average intercorrelation coefficients, the coefficients of reliability and the intercorrelation coefficients were also considered evidence that the items in the scale were linearly related.

The second condition was evaluated on the basis of an inspection of the pattern of relationships between the item means and item standard deviations and the range of the item standard deviations. The relationship between the item means and standard deviations was declared as being either "relatively independent," "somewhat negative" or "somewhat positive." The ranges of the item standard deviations were determined and were compared with one another. The smaller the range, the more homogeneous the item variances were considered.

The third condition was evaluated on the basis of an examination of the intercorrelations among the items of each scale. The range of the concentration of intercorrelations was determined by locating the range in which 60 percent or more of the intercorrelation coefficients were included. Thus, the smaller the range of the concentration of the intercorrelation coefficients, the more homogeneous these intercorrelations were considered.

Since one cannot prove additivity, the degree to which the data conform to the three conditions for additivity can only be determined in a relative sense. Thus, the criteria for evaluating the scales with respect to the conditions for additivity are primarily descriptive.

A comparison of how each of the 13 scales meet the three conditions for additivity relative to **one another** (not to any predetermined or absolute standard) can be found in table B-1. Data relevant to each of the criteria just discussed are presented. The scales have been ordered on the basis of their **general** over-all conformity to these criteria relative to one another.

Table B-1. Summary of the scale data related to the criteria of additivity.

Scale	Number of items	r_{tt}	$\bar{r}_{ij}$	Relationship of $\bar{X}$ and S	Range of S	Concentration of intercorrelations
Government dominance	3	0.896	0.687	relatively independent	4.70 to 5.12	0.70 to 0.79
Fatalism	5	0.805	0.451	relatively independent	4.43 to 5.25	0.40 to 0.49
Commutative justice	9	0.870	0.423	relatively independent	4.26 to 5.01	0.30 to 0.49
Distributive justice	8	0.804	0.340	relatively independent	4.21 to 5.01	0.30 to 0.55
Debt avoidance	6	0.806	0.322	somewhat positive	3.09 to 4.42	0.30 to 0.49
Traditionalism	6	0.740	0.322	somewhat positive	3.81 to 5.23	0.20 to 0.39
Scientific orientation	15	0.835	0.252	somewhat negative	2.65 to 4.42	0.10 to 0.39
Maximization of income	3	0.575	0.311	relatively independent	4.12 to 4.40	0.20 to 0.29
Risk aversion	7	0.689	0.241	somewhat negative	2.90 to 4.14	0.10 to 0.29
Independent action	7	0.653	0.212	somewhat negative	3.82 to 5.09	0.20 to 0.39
Collective action	9	0.700	0.201	somewhat positive	3.30 to 7.67	0.00 to 0.29
Way of life	6	0.520	0.153	relatively independent	4.06 to 4.72	0.00 to 0.19
Risk orientation	6	0.423	0.109	somewhat negative	3.06 to 4.26	0.00 to 0.19