

ACCOMPLISHMENT  
REPORTS  
SOME IDEAS  
AND EXAMPLES

Compiled by Joan Wright  
and Connie McKenna

January 1985

Supported by North Carolina  
Agricultural Extension Service and  
United States Department of  
Agriculture Extension Service

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FOREWORD

In growing recognition of the increasing demand for information from various decision-makers the state and federal Extension partners worked for several years to develop the coordinated program evaluation and accountability effort, which was implemented in FY 84. It calls for three types of evaluation information. One of these is the accomplishment report--a report of results accomplished by each major program\* in the four-year plan of work. A summary accomplishment report for each major program is required no later than 1987.

In order to provide some ideas to state and local Extension units as to what constitutes an 'accomplishment report', the Extension Service-USDA funded a project at North Carolina State University. These materials are a result of that project. They contain examples of hypothetical accomplishment reports for several major programs drawn from actual state plans of work. Recognizing that major program descriptions (Form A) necessarily omit details, additional notes on the plans for evaluation have been prepared for each example. This is obviously not an exhaustive collection of all possible or desirable approaches to planning accomplishment reports. Instead, it represents a selection of feasible, acceptable ways of collecting and presenting evidence of Extension's program accomplishments.

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\* A major program is defined in the State Extension Plan of Work and Report Guidelines as a distinct and significant planned effort with resources committed toward the achievement of specific and realistic objectives and expected results. Major programs are inputted to a national data base on Form A, also included in the Guidelines.



One way to work from the plan of work toward the accomplishment report is to write out the details for designing and conducting the event for which you are currently only summarized in the major program description (see A-1). This can serve as an advance reminder or memory jogger of what has to be done to gather evidence of accomplishment, and when it has to be done. It could also be invaluable to a new staff member entering a major program in progress.

### THE STARTING POINT--THE MAJOR PROGRAM PLAN

The factors on planning for accomplishment reports" included with the examples in

Every major program in the four-year plan of work represents a high priority Extension effort. A great deal of thought was put into selecting and planning each major program, of which only a small proportion is evident in the one-page summary description. Like the proverbial iceberg, there is a lot more that does not show.

**Situation description:** It is important to know what the problem or situation is that calls for this program. How extensive and significant is the problem? Is Extension justified in using public resources to develop a program to address the problem? It is also important to know the current status of the problem so that by the end of the four years one will have an idea of how much progress has been made in resolving or ameliorating it.

**Program objectives:** Once the rationale for the program is clear, one needs to know what results can be expected from the program. These are expressed in objectives specifying measurable changes that Extension can reasonably expect to influence. One might look at these intended results as Extension's promises to its publics in return for dollars invested. Obviously, the intended results stated in the objectives should be clearly related to the problem addressed by the major program.

**Plan of action:** Whether it is reasonable to expect those results can be judged in part by the nature and extent of effort that Extension plans to put into the program. Knowing what is planned to happen when, where, and with whom not only establishes the logic of the program, but helps one to determine how accomplishment evaluation can be woven into program operations.

**Plan for evaluation:** The plan for evaluation is a logical outgrowth of the situation description, program objectives, and plan of action--the preceding parts of the major program description. It specifies the evidence by which one could measure the extent to which the expected results had been accomplished, and states where and how that evidence is to be acquired. Ideally, the plan for acquiring evidence fits the program operations, and can reasonably be managed with existing resources. Some idea of how the information will be analyzed is important, too. For example, will there be a comparison of the situation in 1987 with that in 1983? Will Extension participants be compared with similar non-participants? Will comparisons be made among subgroups of participants?

**Estimated impacts:** The summary description for each major program includes space for the state to identify estimated impacts. The impacts listed should be consistent with the program objectives and the evidence of their accomplishment. If the relationship among the three is not clear, a very important part of the whole picture is missing.

## MOVING ALONG--PLANNING FOR ACCOMPLISHMENT REPORTS

One way to move from the plan of work toward the accomplishment report is to write out the details for designing and conducting the evaluation which are necessarily only summarized in the major program description (Form A). This can serve as an advance reminder or memory jogger of what has to be done to gather evidence of accomplishments, and when it has to be done. It could also be invaluable to a new staff member inheriting a major program in progress.

The "notes on planning for accomplishment reports" included with the examples in these materials represent ideas on how the people responsible for the program are carrying out their plans for evaluation, and why they chose to do it that way. The next few pages are a summary of ideas found in the examples.

### WHAT ARE ACCOMPLISHMENTS?

In the examples included in this resource book, accomplishments represent the **results** of Extension efforts, not the efforts (inputs) themselves. The accomplishments in these examples take three forms.

1. **What Extension clientele learn regarding the content taught in Extension programs** - These are the knowledge, attitudes, skills, and aspirations gained by participants in Extension programs (KASAs, Level 5 in Bennett's hierarchy of evidence\*).

- leaders of community organizations learn skills involved in setting agendas and conducting meetings
- 4-H youth gain self-esteem
- individuals learn how to plan for greater financial security

2. **The use or application of Extension program content by program participants and others who receive the information indirectly** - This corresponds to practice change (Bennett's Level 6). Many of the examples focus primarily on practices adopted, with the implicit assumption that those practices require know-how, willingness to try, and desire to achieve the predicted outcomes.

- practices of soil testing, liming, and fertilization
- residents' use of crime prevention measures
- keeping records and using them in farm decision-making
- applying leadership skills by serving as a 4-H volunteer
- following recommended dietary guidelines

\* Bennett, Claude, ANALYZING IMPACTS OF EXTENSION PROGRAMS. Extension Service--USDA, 1976.

\*\* Some persons consider gain in self-esteem to be an end result, not a change in attitude. It could be argued that increased self-esteem leads to increased participation and achievement, or that increased participation and achievement lead to increased self-esteem. There is probably truth to both points of view.

3. **The results of using information and adopting practices that Extension has been teaching** Not all major programs identify accomplishments in terms of end results (Bennett's Level 7). This may be because many of the consequences that we expect are not likely to show up in the four year time span covered by the plan of work. Further, many factors (e.g. nature, the economy) are beyond our control and may influence results more than or in spite of the application of practices recommended by Extension. Additionally, not all consequences of human behavior can be predicted or measured, either because we don't know how or don't have the resources to do so. The results identified in the examples can be realized within the four year A/E program cycle.

- increased weaning weight of beef calves
- an increase in cropland acres irrigated
- the number of community problem-solving efforts undertaken
- the number of land preservation strategies considered
- improvement in overall family financial security

In some of the examples it is possible to **attach a dollar value** to the results of programs. An estimate of the value per acre of draining or irrigating cropland is available from specialists who have conducted research on this topic. The additional income generated by increased market weight of calves can also be estimated. Sometimes a financial outcome, as in the financial security program, seems reasonable to expect but is not feasible to measure accurately in dollar value with the evaluation resources available. In this society we value some things (e.g. the right of citizens to participate in public affairs, improved self-concept among our youth) without having to attach a dollar value. In other cases, while it may be possible to construct shadow prices, values are understood. Improved management skills is one such example.

Any of the major program accomplishments described above must be logically **attributable**, at least in part, to **Extension program efforts**. For that reason it is very important that records of effort and involvement (i.e. input and participation data) can be attached to every major program. During the first year or two of a new program the only accomplishments to date may be the Extension activities conducted (Bennett's Level 2) and the participation of intended audiences (Bennett's Level 3). These are accomplishments, and should be recognized as steps toward achieving the ultimate program objectives, even though they might not be reported in the one-page summary of accomplishments (Form D). Using Bennett's metaphor of the Extension program as a chain of events, there must be no missing links.

#### EVIDENCE OF ACCOMPLISHMENT

In the examples selected for these materials, the evidence identified is that which can feasibly be collected with the resources available. It may not be the best evidence imaginable, but it is readily available and/or the process of collecting it can be made an integral part of the program activities. This is why it is important that the plan of action and plan for evaluation be developed together, and that both are tied to the program objectives.

\* "Shadow price" is a term used by economists to describe a reasonable estimate of the monetary value of a 'good' not ordinarily bought and sold in the marketplace.



A few general approaches to collecting evidence of accomplishments appeared frequently in the examples. These include:

- 1) **Keeping systematic program records** - Extension typically requires a substantial amount of record-keeping (e.g. staff time expended, clientele participation, EFNEP records, 4-H records). Often these records can be used as is or, with a little advance planning, can be adapted slightly to provide an excellent source of evidence.
  - special leadership agreement forms constructed to record self-assessment of leadership life skills
  - attendance lists from public meetings, kept to document increases in public participation
  - requests for information and assistance, recorded as evidence of increasing interest, awareness, or expertise
  
- 2) **Designing program activities to yield evidence of accomplishment** - An integral part of many educational activities is the opportunity for learners to demonstrate or review what they have learned and/or applied. When the assessment process serves as a stimulus for continued learning and achievement, the collection of accomplishment information can legitimately be viewed as an educational activity and not just an add-on to business as usual.
  - exercises in which participants demonstrate their ability to do what was taught
  - tests of learning built into the lessons/sessions of a home study course or workshop series
  - an end-of-course/series feedback form to assess participants' intentions of applying what was learned
  - producer records, an educational tool, contain evidence of accomplishment
  
- 3) **Use of data/records from non-Extension sources** - Existing data (records, documents) can be systematically pulled together as benchmarks and trendlines as well as indicators of accomplishments.
  - copies of soil sample analyses from the state soil analysis lab
  - sales records from major fertilizer distributors
  - sales records from graded calf sales
  - law enforcement agencies' crime statistics
  - plans recorded by local governments
  
- 4) **Surveys of participants and others** - Interviews and questionnaires are frequently used to find out what people believe they have learned, how/whether they are using what they learned, and what benefits they have gained from the program.
  - follow-up with program participants as an opportunity not only to get evidence of accomplishment, but to offer continuing encouragement for following recommended practices and to get ideas for improving or extending the program
  - farm visits as an opportunity to instruct farmers in a particular practice, offer individual consultation, and to collect data

Surveys can seek information from **all participants, or a sample** of the intended audience may be used. It may be possible to take advantage of a group assembly to conduct a survey, such as using an end-of-meeting feedback sheet. Surveys can be used at different times to find out whether people have changed their attitudes, practices, etc. over time.

It is important that survey instruments (interview schedules or questionnaires) be carefully designed and **tested on the audience** with which they are to be used. The instrument outlines included with these materials suggest content but are in **draft** form, not in appropriate wording and format for use as is.

No surveys should be undertaken without thorough training of the persons who will do the work, whether that work involves selecting a sample, mailing questionnaires, conducting interviews, coding completed instruments, or tabulating data. It is not necessary that all of the work be done by Extension staff, but it is essential that whoever does it is well trained.

5) **In-depth study of selected cases** - It is occasionally valuable to study the effects of some programs in much the same way as on-farm demonstrations are conducted. This usually calls for collaboration between agents and specialists in designing and monitoring the demonstration and in collecting and analyzing the data.

- pilot test of a new 4-H curriculum with results, if positive, validating wider use of the curriculum
- careful recording of data before and after recommended management practices are adopted in demonstration farms, with special attention to increased profits which could yield a dollar value estimate to be applied to similar practice changes

6) **Direct observation of program results** - Occasionally program accomplishments are visible in their natural surroundings. It should be noted, however, that "seeing" is not enough—these observations must be recorded (i.e. become a matter of record). To serve as evidence, what is to be observed must be specified in advance and

- installation of irrigation system
- litter records kept on a farrowing pen
- home garden planted

**Summary:** It is obvious, even from this small sample, that there is not just one way to collect evidence of accomplishments. Although all evidence should be recorded systematically, it can be collected in a variety of ways. It is often possible to plan the program to yield data for accomplishment reports. When that is not the case, look for other sources of existing data. Plan the process of collecting evidence (e.g. surveys, in-depth studies) to get the most educational mileage possible, by involving program participants to help collect evidence, offering consultation to persons interviewed, or reminding participants that it is important to continue the application of what they have learned.

## ANALYSIS OF EVIDENCE

- There is an old bromide about the man who, when asked how his wife was, replied, "Compared to what?" Extension certainly does not want to be in the position of reporting accomplishments and leaving the "compared to what?" question open for dispute.
- In most cases situation indicators at the beginning of the program are compared with measures of those indicators at **subsequent points in time**. For example, the number of acres irrigated and the number of systems installed may be examined every two to three years. In other cases trendlines are available for many years prior to the current four-year program period (e.g. soil samples, farm acreage). In some, **benchmark/baseline** data are to be collected as part of the first year's program effort (e.g. agent rating of producer management skills).
- The time frame for comparison does not necessarily have to be in terms of years. It may be **before and after participation** in a relatively short program, or it might be the participants' retrospection to a time prior to the program compared with their self-assessment at the end of the program.

It may also be appropriate to judge accomplishments in terms of the extent to which objectives were met. Comparisons may be made among different delivery systems, as in the use of workshop series versus home study courses, or between participants and non-participants. Results may be cross-tabulated for analysis by type of farm operation, size of household, or any other known characteristic of clientele, situation or program.

**Comparisons** are the basis for drawing conclusions and interpreting the evidence. In most cases, the difference between the early (or pre-program) measure and the latest (post-program) measure of accomplishment is the impact reported on the back of Forms A and D.

## REPORTING RESULTS

It was the hope of the state and federal partners working on the Accountability & Evaluation System that accomplishment reports would satisfy 'needs to know' for all partners in the Extension system. To do so involves careful consideration at the **planning stage** to determine what will be needed and to make sure that needed information will be collected. It may also involve some analysis (such as the comparison of different delivery systems) that would not be included in a summary accomplishment report (Form D).

Even more important, perhaps, is **planning to use the results** of accomplishment reporting at state and local levels. This will inevitably involve reporting accomplishment information in more than one format. Whereas a one page summary is used in the national on-line data base, other formats will be more appropriate for other purposes. Thinking through who could use information, and when and how best to provide it to each potential user, is a consideration beyond the scope of this resource book. The point to be emphasized is that the accomplishment reporting process can be very valuable, but it is up to the individuals who plan and carry out the process to make it so.



## CAN EXTENSION CLAIM THE ACCOMPLISHMENTS REPORTED?

It would be naive to believe that Extension clientele are influenced only by the Extension programs in which they participate. It would also be naive to believe that end results, no matter how much Extension and its clientele work to achieve them, occur only as a result of that work. What, then, is the claim that Extension can make?

In discussing accomplishments with various users of this information, Extension probably **should not claim sole credit or blame** for any accomplishments. Further, Extension should not claim accomplishments without acknowledging other influences that might have affected those accomplishments (which would be particularly appropriate when weather adversely affects crop yields, for example, or when other agencies have cooperated in the effort). Another useful rule is that Extension should not claim accomplishments without knowing where clientele were before the program (the benchmark), or without knowing where non-clientele are without the program (another comparison discussed earlier).

When claiming accomplishments Extension should avoid implying that changes affected **all intended audiences** unless there is evidence that they participated sufficiently for the program to have made a difference to them. Reports should also avoid creating the impression that accomplishments were the same for every member of the intended audience (or the actual audience) unless there is evidence to support that claim (which generally means a comparison of results among subgroups).

A well-written report, describing the parameters of the problem, the educational objectives, and the specific results accomplished, allows readers of the report to draw their own conclusions about Extension's role and success in tackling the problem.

## CONTENTS OF THE EXAMPLES

These examples were selected to represent a variety of measurement and data collection techniques that are widely applicable across Extension programs. **There is no intended connection between any particular approach and a particular program area or major program.**

Each example is self-contained, including the **Form A** (major program description) from the state's plan of work and **Form D** (accomplishment report). These are the only materials that would be inputted to the national Extension data base. The **Notes** and **instrument outlines**, when applicable, are included as explanation of how program accomplishments were evaluated, and would not be submitted with an annual report. It is assumed that the contact person for any major program could provide similar explanation if asked to do so.

This is not a text on evaluation methods. It is assumed that Extension personnel can consult appropriate resources on topics such as measurement, data collection, analysis and interpretation once they have a clear idea as to what would constitute evidence of expected accomplishments for their major programs.

✓

All of these examples are set in a mythical state that has 70 counties and a substantial agricultural base (about 45,000 farm units). Data for some of the accomplishments were estimated by the specialists who were responsible for the programs. Many of the data that a state would include in Forms A and D, such as the estimated and expended time (FTE) on program, have not been invented for these examples. Details of the plan of action and other parts of Form A have been omitted. It did not seem wise to insert information that might be construed as a standard rather than an example.

The purpose of the examples is not to identify excellent programs but to suggest feasible ways to plan for and report program accomplishments. It should be re-emphasized that the major program descriptions, evaluation plans, and accomplishment reports included in these materials are not perfect in content or in format. They are adequate--and may be considered as a base on which to make improvements. In all cases the contact persons have reviewed the examples and have agreed that the plans and resulting reports were realistic and feasible within the existing time and resource constraints.

#### USE OF THE EXAMPLES

Comments from reviewers of an earlier draft of this material differed greatly in regard to where it would be of most use. In some states it was believed that **agents** would find it helpful; in others, **specialists** were seen as the most likely users. Problems such as difficulties in aggregating evidence, potential infringement on local program determination, and lack of evaluation resources were cited as influences on the way a state carries out its responsibilities for the A&E system, and for its use of resource materials.

In those states where agents are involved in the gathering of evidence of program accomplishments, the help of specialists is as important a resource in program evaluation as it is in program planning and implementation. It became evident while working on these examples that a **joint effort of subject matter specialists and resource persons with expertise in evaluation is desirable**. The former are essential to assure the appropriateness of evidence of accomplishment. The latter provide a check on the appropriateness and feasibility of means of collecting that evidence. Together they can plan for a reasonable analysis and interpretation of the data, and an overall coherence of effort.

Given the difficulties involved in planning even the simplest means of acquiring evidence of Extension accomplishments, it seems reasonable that each specialist responsible for a major program should be expected to develop a detailed written plan for evaluation of accomplishments. This would be reviewed by state program leaders, possibly with the aid of evaluation resource persons, to avoid overloads on clientele or agents, to increase the efficiency of data collection efforts, and to take advantage of coordinated efforts when possible. The farm management program (number 5) is an example of a coordinated plan for sampling, collecting evidence, and aggregating that evidence.

A **checklist** that may be useful for preparing accomplishment reports is appended.



11. The program is the address is clearly stated.

12. The scope and boundaries of the program is described.

13. Demographic/extension data are included.

14. Objectives are specified to the program.

15. Objectives are measurable, either in terms of number (not quality), economic indicators and/or in terms of end results (social and economic consequences).

16. Objectives specify levels or amounts of measurable performance.

17. Methods used are specified to the program and recorded as Extension FTS on the back of Form 10.

18. Development of non-extension personnel (volunteers, cooperators) and other agencies is specified.

19. Social funding, other non-extension support is identified.

### APPENDICES

20. Acknowledgements are documented with evidence in client identities.

### CHECKLIST TO ASSIST IN PREPARING ACCOMPLISHMENT REPORTS . . . 10

1. The evidence for the objectives is clearly stated as program results (see 12 above).

2. The evidence is clear (and, when appropriate).

### THE EXAMPLES . . . . . 11

3. If there is no data to report in the accomplishment report, a statement is included.

**NOTE:** These examples were selected to represent a variety of measurement and data collection techniques that are widely applicable across Extension programs. There is no intended connection between any particular approach and a particular program area or major program.

### ACKNOWLEDGEMENTS . . . . . 105

4. A contribution is made from the evidence of accomplishments to date.

5. Information on accomplishments to date on future program efforts is included.

6. Impact evidence.

7. Impact reports should include those used on Form 5. There are no added.

8. Quantified impact evidence of accomplishments.

9. CHANGED THE

10. Total staff time is recorded in full-time equivalent staff years (e.g., 1.5 FTEs).

11. The total time of volunteers is recorded in FTEs; the total number of volunteer hours is also recorded. This information is optional.

12. The dollar value of volunteer time is recorded using an appropriate hourly wage equivalent. This information is optional.

CHECKLIST TO ASSIST IN PREPARING ACCOMPLISHMENT REPORTS (FORM D)

SITUATION (Same as on Form A)	YES	NO
1. The problem to be addressed is clearly stated.	_____	_____
2. The scope and importance of the problem is specified.	_____	_____
3. Benchmark/baseline data are included.	_____	_____
<b>OBJECTIVES (Same as on Form A)</b>		
4. Objectives are appropriate to the problem.	_____	_____
5. Objectives are measurable, written in terms of learner (not agent) accomplishments and/or in terms of end results (social and economic consequences).	_____	_____
6. Objectives specify levels or standards of acceptable performance.	_____	_____
<b>RESOURCES INVOLVED</b> May be omitted in text if only Extension resources are involved. Extension resources contributing to the program are recorded as Expended FTEs on the back of Form D.		
7. Involvement of non-Extension personnel (volunteers, cooperators) and other agencies is specified.	_____	_____
8. Special funding, other (non-Extension) support is identified.	_____	_____
<b>ACCOMPLISHMENT</b>		
9. Accomplishments are documented with evidence; the evidence is clearly identified, and matches quantified impacts.	_____	_____
10. The evidence fits the objectives--i.e., it is reported as program <b>results</b> (see #5 above).	_____	_____
11. Who benefits is clear (e.g. what participants?).	_____	_____
12. If there is not room to report all of the accomplishments, the most significant are included.	_____	_____
13. If percentages are used, the number on which the percentage is based is given.	_____	_____
14. Outcome comparisons (e.g. with baseline) are specified.	_____	_____
<b>EVALUATION</b>		
15. The source of evidence is specified.	_____	_____
16. Methods of collecting the evidence are clearly described.	_____	_____
<b>FUTURE IMPLICATIONS</b>		
17. A conclusion is drawn from the evidence of accomplishments to date.	_____	_____
18. Influences of accomplishments to date on future programming efforts is indicated.	_____	_____
<b>IMPACT KEYWORDS</b>		
19. Impact keywords should include those used on Form A. Others may be added.	_____	_____
20. Quantified impacts match evidence of accomplishment.	_____	_____
<b>EXPENDED TIME</b>		
21. Total staff time is recorded in full-time equivalent staff years (e.g. 1.22 FTEs).	_____	_____
22. The total time of volunteers is recorded in FTE's; the total number of different volunteers is also recorded. This information is optional.	_____	_____
23. The dollar value of volunteer time is calculated using an appropriate hourly wage equivalent. This information is optional.	_____	_____

THE EXAMPLES (with summary of approaches included in each)

#1, Building Self-Esteem through 4-H . . . . .	13
" Self assessments and feedback sheets completed by participants in esteem-building curriculum	
" Records of 4-H project enrollment, project completion, awards, and club activities (routinely aggregated at state level from county reports)	
#2, Community Crime Prevention . . . . .	23
" Records of enrollment and attendance	
" Records of completion built into program (resource notebook assignments, group session tests, home study course logs)	
" Survey of residents (undertaken by community groups as part of project assignments)	
" Analysis of existing data — law enforcement agency crime records	
#3, Developing Youth Volunteers in 4-H . . . . .	31
" Leadership agreement forms completed by 4H youth volunteers, plus additional records developed to provide a "paper trail" of individuals' actual accomplishments of learning goals	
#4, Family Dietary Guidance . . . . .	37
" Telephone interviews with samples of participants in Extension food and nutrition programs and of general public, conducted by agents or trained volunteers	
#5, Farm Management and Marketing . . . . .	45
" Agent ratings of producer skills based on interviews and observations of sample of farmers in counties selected as major producers of each major commodity in the state; (this example limited to swine production).	
#6, Financial Security . . . . .	57
" Tests included in home study course and workshop series	
" End-of-course/series feedback sheets from participants	
" Follow-up survey using questionnaires mailed to participants 12 to 15 months after program ends (part of on-going study)	
#7, Leadership Skills for Community Development . . . . .	63
" End-of-session feedback from participants	
" Follow-up survey (by mailed questionnaire) of participants	
" Instructor rating of participant skills based on observation	
#8, Least Cost Fertilization Practices . . . . .	73
" Analysis of Existing Data -- Plant & Soil Analysis Lab reports, State Dept. of Agriculture records, Agricultural Stabilization & Conservation Service (ASCS) records	
" Grower survey -- Agent interviews with sample of 25 or more farmers/county	
#9, Management of Agricultural Irrigation and Drainage . . . . .	83
" Survey of agents to report observations of acreage (by type of commodity) under irrigation, by type of irrigation system and water source	
" Participation/enrollment records	
" Survey of dealers attending annual meeting (informal polling, but systematic)	
" Records of agent requests for microcomputer program	
#10, Reproductive Management in Beef Cattle . . . . .	89
" Records of demonstration herds (eventually to be part of BCIP records)	
" Records of veterinarians	
" Interviews with beef producers	
" Records of requests for information	
" Records of graded calf sales	
#11, Rural Land Use Management . . . . .	99
" Analysis of local news, minutes of local government, minutes of advisory committees, proposed preservation strategies, computer logs	
" Records of requests for assistance	
" Attendance records from public meetings	

## 1 BUILDING SELF-ESTEEM THROUGH 4-H

**SITUATION:** Youth professionals identified lack of self-esteem (pride in oneself) as a top priority problem of youth in the state. Similarly, teens involved in recent youth forums cited lack of self-esteem as a major reason for the high incidence of substance abuse and teen pregnancy.

Self concept, including self-esteem, is built through interaction with others. The 4-H program offers a variety of social learning experiences, such as participation in club activities, conducting demonstrations, serving on judging teams, and performing in leadership roles with other youth. By encouraging youth to participate in these activities and by assisting youth to achieve success in participating and in completing the activities, leaders can increase the contribution of the 4-H program to positive self-esteem among youth.

4-H leaders recognize the problem, but feel unskilled in encouraging more youth to participate fully in 4-H activities. They report that it is particularly difficult to involve children who appear to have a negative concept of themselves.

### OBJECTIVES:

- 1) Youth involved in the esteem-building curriculum will experience a positive change in self-esteem.
- 2) In comparison with 4-Hers in clubs which have not yet introduced the esteem-building curriculum, youth who participate in the curriculum will
  - a) participate in more 4-H activities at club and county levels (currently averages 3.2 per member per year); and
  - b) complete more 4-H projects during the year (currently 1.5 per member, with an average of 60% of members completing at least one project).

**PLAN OF ACTION:** An esteem-building curriculum will be developed by state specialists for use in clubs and special events (e.g. 4-H retreats) as an adjunct to on-going activities. The eight-module curriculum will be pilot-tested in four different settings (1983-85). In 1985 the revised version will be introduced to half of the state (with training for leaders); the remainder of the state will receive training and materials in 1986. Use of the curriculum at the county level will be voluntary. Esteem-building principles will be emphasized in other 4-H leader training, agent in-service training, and program materials throughout the four-year program span.

- PLAN FOR EVALUATION:**
- 1) The pilot tests of the new curriculum will be evaluated by
    - a) changes in participant self-esteem from before the program to 6 months after the program is over, using a self-anchoring scale;
    - b) monitoring involvement of participants in regular 4-H activities; and
    - c) monitoring 4-H accomplishments of participants.
  - 2) When the curriculum is released for general use, participation and accomplishments of 4-H'ers completing the curriculum will be compared with those of 4-H'ers not exposed to it.

### CONTACT

E. S. Teem, Extension 4-H Specialist  
Land-Grant University

Control No. 01  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) 4-H  
 (List as many as apply)  
 Subject matter area Youth Development  
 Commodity/subject Self-esteem, involvement, project completion  
 Audience Youth, 4-H members, 4-H leaders  
 Methods Esteem-building curriculum, 4-H club activities

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Average number of project completions	
per member per year	2/member
Proportion of club members completing	
at least one project	75%

Estimated time (FTE) on program				*REPORTING PLANS			*SCOPE	
Year	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St.	70
1984	x.x	---	x.x	1984			In Prog.	70
1985	x.x	---	x.x	1985			Other	
1986	x.x	---	x.x	1986				
1987	x.x	---	x.x	1987	XXX		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX



NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING  
BUILDING SELF-ESTEEM THROUGH 4-H

1. The 4-H program assumes, based on social science research, that there is a relationship between successful participation in social learning activities and positive self-esteem. Emphasis here is placed on encouraging youth to participate in activities and complete 4-H projects. The pilot will be considered successful if the 4-H'ers who enroll in it enjoy and complete it; it may not be of long enough duration to create a measurable direct impression on enrollees' self-esteem.

**PLAN FOR EVALUATION:** The esteem-building curriculum will be pilot-tested in two regular 4-H clubs and in two week-long youth retreats. In both cases, all modules will be used. In the club program the modules will be conducted at weekly club sessions; at the retreat they will be conducted over a three-day time span.

Feedback sheets from leaders and participants will be distributed at the end of the last session to get their reaction to the modules and their suggestions for improving the curriculum. It is hypothesized that the dropout rate will be negligible and that feedback will be universally positive.

Prior to the first module a self-anchoring scale will be used by participants (youth and leaders) to describe persons at both ends of a good-bad continuum and to locate the respondents' self-rating between (see attachment). At the end of the last module respondents will be asked again to locate themselves in that space. Six months later the post-test will be repeated, plus a (retrospective) scale on which respondents say where they were before starting the program. These yield three possible change scores:

- A) the difference between pretest and end-of-session ratings;
- B) the difference between pretest and six month follow-up ratings;
- C) the difference between retrospective and follow-up ratings;
- D) the difference between pretest and retrospective rating.

A two "step" difference in one or more of these ratings will be considered success. [Note: The scales are a part of the educational program, and are therefore considered relatively unobtrusive.]

The 4-H'ers' participation in regular 4-H activities and their accomplishments (completion of 4-H project records) for the year following enrollment in the esteem-building curriculum will be compared with those of the same 4-H'ers and/or club in the preceding year. It is hypothesized that the 4-H'ers in the pilot effort will participate and accomplish more after participation in the esteem-building curriculum than they and/or their fellow club members did in the preceding year.

[Note: If there is no significant difference in the direct measure (the self-anchoring scale) of self-esteem, the pilot will be considered successful if the feedback is positive and if participation and accomplishments of enrollees after participating in the pilot surpasses their (or their fellow club members') participation and accomplishments in the previous year. If the latter does not occur, the curriculum will be revised until at least those outcomes occur. The use of the curriculum will be contingent on positive findings in the pilot study.]

When the curriculum is released for general use, a random sample of clubs using it will be asked to record the self-esteem data obtained from the self-anchoring scales on special forms developed by the 4-H specialist. This will provide a check on the continuing effectiveness of the curriculum. The percentage of participants whose reported self-esteem increases at least two "steps" during that time will be calculated.

Participation and accomplishments of 4-H'ers in all clubs completing the curriculum will be recorded. Participation will be defined as the average number of club activities per member (i.e. events in which club members are expected to participate) per year. Accomplishments will be defined as the sum of projects completed and 4-H awards received by members of a club during a program year, divided by the number of members present at three or more club meetings. The proportion of club members who successfully complete at least one project will also be calculated. **[Note: These records are built into the state 4-H information system.]**

Comparisons between clubs that use the program the first year will be made with those that do not introduce the program until later.

Feedback from teachers and their reaction to the modules and their suggestions for improving the curriculum. It is hypothesized that the dropout rate will be negligible and that feedback will be universally positive.

At the first module a self-anchoring scale will be used by participants (youth and leaders) to describe behavior at both ends of a good-bad continuum and to locate the respondents' self-rating between last attainment. At the end of the last module respondents will be asked again to locate themselves in that space. Six months later the post-test will be repeated. Data is presented on which respondents say where they were before starting the program. These yield three possible ratings:

- A) the difference between pretest and end-of-module ratings;
- B) the difference between pretest and six month follow-up ratings;
- C) the difference between retrospective and follow-up ratings;
- D) the difference between pretest and retrospective ratings.

A two "step" difference in one or more of these ratings will be considered success. [Note: The scales are a part of the educational program, and are therefore considered relatively unobtrusive.]

The 4-H'ers' participation in regular 4-H activities and their accomplishments (completion of 4-H project records) for the year following enrollment in the extension-building curriculum will be compared with those of the same 4-H'ers and/or club in the preceding year. It is hypothesized that the 4-H'ers in the extension-building curriculum that they make their fellow club members did in the preceding year.

[Note: If there is no significant difference in the direct measure (the self-anchoring scale) of self-esteem, the pilot will be considered successful if the feedback is positive and if participation and accomplishments of enrollees after participating in the pilot surpasses their (or their fellow club members) participation and accomplishments in the previous year. If the latter does not occur, the curriculum will be revised until at least those outcomes occur. The use of the curriculum will be contingent on positive findings in the pilot study.]

LIKING MYSELF SCALE

Describe the best person you know  
who would rate a "10."

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Describe the worst person you know  
who would rate a "1."

---

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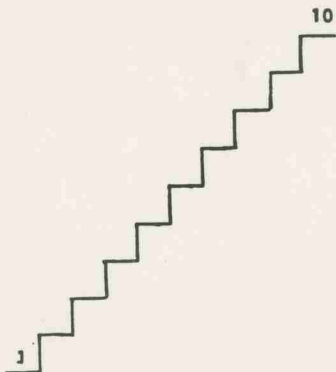
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Put an "X" on the stairstep that best  
shows how you feel about yourself today  
compared to the "best person" and the  
"worst person."

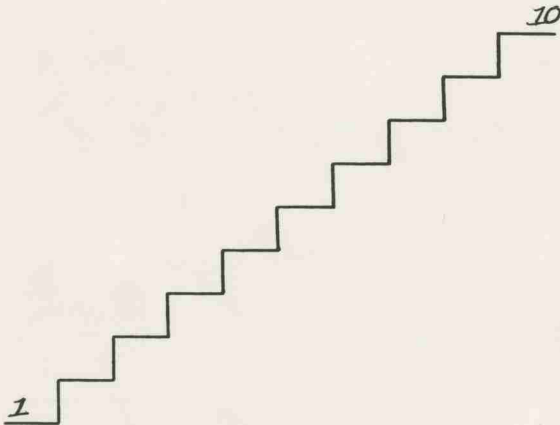


Birthdate:

---

Month / Day / Year

Now that you have completed an intensive study of yourself and how to be a group facilitator, your concept of what makes a good group leader may have changed. Based on how you view leadership now, rate your personal leadership skills as you think you were on the first day of training. Place an "X" on the staircase to indicate where you were then.



## 1 BUILDING SELF-ESTEEM THROUGH 4-H

**SITUATION:** In 1983 youth professionals identified lack of self-esteem (pride in oneself) as a top priority problem of youth in the state. Teens involved in youth forums at the time also cited lack of self-esteem as a major reason for substance abuse and teen pregnancy. 4-H leaders recognized the problem, but felt unskilled in encouraging more youth to build self-esteem by participating fully in 4-H activities. They found it was particularly difficult to involve children who appeared to have a negative self-image. In response to leaders' requests a special esteem-building curriculum was developed for use as part of the 4-H program.

**OBJECTIVES:** 1. Youth and leaders involved in the esteem-building curriculum will experience a positive change in self-esteem.

2. In comparison with 4-Hers in clubs which have not yet introduced the esteem-building curriculum, youth who participate in the curriculum will (a) participate in more 4-H activities at club and county levels and (b) complete more 4-H projects during the year.

**RESOURCES INVOLVED:** Two 4-H clubs and two youth retreats volunteered to participate in the 1984 pilot test of the esteem-building curriculum. Five additional clubs volunteered to be part of a second test in 1985.

ACCOMPLISHMENTS:	1984-85	1985-86	1986-87
Positive changes in self-esteem from pre-test measure to 6 month follow-up	86% of 118	83% of 164	87% of 129 (sample)
Average number of club activities per year prior to using curriculum - 3.3			
Ave.% increase in activities after club uses esteem-building curriculum - 25% more	1985	1986	1987
Average number of project completions per member			
Clubs using esteem-building curriculum	3.0	2.5	2.5
All other 4-H clubs	1.5	1.5	1.5
Proportion of club members who successfully completed at least one project			
Clubs using esteem-building curriculum	90%	85%	80%
All other 4-H clubs	60%	65%	60%

**EVALUATION** Self-esteem measures (using a self-anchoring scale) were built into the curriculum. Club records yielded participant and accomplishment data.

**FUTURE IMPLICATIONS** Based on results of the pilot test of the esteem-building program, self-esteem increased; 4-H participation and accomplishment also increased. Use of the new curriculum has consistently increased participation and accomplishment among 4-H youth, and can be expected to aid youth to avoid the problems cited in 1983.

**CONTACT:**

E. S. Teem, Extension 4-H Specialist  
Land-Grant University

Control No. 01  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) 4-H  
 (List as many as apply)  
 Subject matter area Youth development  
 Commodity/subject Self-esteem, involvement, project completion  
 Audience Youth, 4-H members, 4-H leaders  
 Methods Esteem-building curriculum, 4-H club activities

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Average number of project completions per member per year	2.5 (1 more than without curriculum)
Proportion of club members completing at least one project	80% (20% more than without curriculum)

Expended time (FTE) on program				*VOLUNTEER			*SCOPE
*EXPENDED FTE	Prof.	Para.	Vol.	Year	Pers.	Dollar	Co. in St. 70
1984	x.x		x.x	1984	xxx	\$x,xxx	In report 58
1985	x.x		x.x	1985	xxx	\$xx,xxx	Other 12
1986	x.x		x.x	1986	xxx	\$xx,xxx	
1987	x.x		x.x	1987	xxx	\$xx,xxx	XXXXXXXXXXXXXXXXXXXX
							XXXXXXXXXXXXXXXXXXXX

2

**COMMUNITY CRIME PREVENTION**

**SITUATION:** Non-violent crime has increased in many counties in recent years and has become a problem for farmers and ranchers as well as residents of towns and cities. Crime prevention is not the responsibility of law enforcement officers alone. Complementary individual and group actions prevent crime by "hardening the target," removing some of crime's root causes, and strengthening those community values and informal social controls that support acceptable forms of behavior. A reduction in the number and severity of crime incidents requires a coordinated effort involving professionals, public officials and private citizens.

Of the counties that have experienced crime increases of 30% or more in the past three years, twenty have requested a crime prevention program. Each has a substantial proportion of agricultural land, as well as at least one population center of 2,000 or more.

**OBJECTIVES:**

- 1) Community leaders in the 20 counties will become aware of the seriousness of the crime problem in their locality, and will help design a crime prevention program suited to their communities' needs and resources.
- 2) Fifty percent of the residents in the 20 counties will learn to recognize specific tools or programs they may use to raise barriers to criminal activity, improve surveillance, facilitate apprehension and encourage acceptable forms of behavior.
- 3) Two thousand members of Extension-related groups (e.g. Homemakers' Clubs, Community Development Clubs, 4-H Clubs) will learn about specific criminal behavior and how to prevent it.

**PLAN OF ACTION:**

(State level) - Crime prevention resource notebooks will be compiled and distributed to the 20 participating counties at agent training session. Notebooks include information about home, farm, business, personal, and community security. Specific crime prevention programs ("Operation Identification," "The Vandalism Game," "Shop-lifting," "Money Fraud," "Personal Security at Home") will be packaged for use with community groups (1983); an Extension home study lesson, "Protect Yourself from the Unscrupulous," will be completed in 1984.

(County level) - Working with local law enforcement agencies and leaders in existing community groups, agents in the 20 counties will help organize neighborhood crime prevention programs and show groups how to use the crime prevention resource notebooks (1983-84). During 1984-85 the packaged programs will be presented in the counties, scheduled at times and locations to maximize exposure. The Extension home study lesson will be distributed on request in 1985-86.

**PLAN FOR EVALUATION:**

Participants will be asked to complete and return the evaluation forms included in the resource notebooks, packaged programs, and home study lessons. These forms measure changes in knowledge, attitudes, and participation regarding crime prevention efforts. Reported crimes in the counties involved with the program will be used to determine impact.

**CONTACT:**

Cynn O. Moore, CRD Specialist  
Land-Grant University



Control No. 02  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture, CRD, 4-H, HE  
 (List as many as apply)

Subject matter area Community Development

Commodity/subject Crime prevention, community organization

Audience Community leaders, citizens, community groups

Methods Resource notebooks, home study lesson, crime prevention groups, packaged programs

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
% of participants applying crime prevention	50%
% of residents applying crime prevention	35%
Change in incidence of vandalism	No increase
Change in incidence of shoplifting	No increase

Estimated time (FTE) on program				*REPORTING PLANS			*SCOPE
*ESTIMATED FTE	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St. 70
Year							
1984	x.x		x.x	1984			In Prog. 20
1985	x.x		x.x	1985			Other
1986	x.x		xx.x	1986			
1987	x.x		xx.x	1987	XX		
							XXXXXXXXXXXXXXXXXXXX
							XXXXXXXXXXXXXXXXXXXX

NOTES ON PLANNING FOR ACCOMPLISHMENT REPORT  
COMMUNITY CRIME PREVENTION

[Note: One would ordinarily know the number of residents in the 20 counties and would include that number with the percentages in the estimated impacts.]

1) Baseline data on the incidence of crime at the county level was not included in the situation statement because a) the existing classification of crimes did not distinguish between those that could reasonably be influenced by an educational program and those that could not, and b) the incidence of reported crime generally increases in the initial year(s) of a crime prevention program, making it difficult to determine what the baseline for comparison should be. Two frequent crimes--shoplifting and vandalism--were selected as indicators for changes in crime rate because they can be clearly defined classifications and can be altered by individual and group crime prevention measures designed at the local level to fit these problems. The comparison basis selected was the median incidence of each crime between 1980 and 1982.

2) Based on state crime statistics, the incidence of crime has been increasing dramatically in the last ten years. The goal of the program is to lower the rate of increase; it will be **very successful** if it can prevent an increase in the two crimes selected as indicators.

3) One "assignment" in the crime prevention resource notebooks was for each participating neighborhood/club to investigate the incidence of various crimes in that county. **To prevent an influx of demands on local law enforcement agencies, each county organized a study committee** (usually with members recruited from the neighborhood groups). The committee worked with law enforcement officials to create a data base that not only educated citizens as to the severity of crime in the county, but also helped in determining which kinds of crime prevention should receive high priority attention. Each study committee put together and published an annual update. This was an educational process that simultaneously served to collect evidence for program development and accomplishment reporting.

4) The evaluation forms contained in the resource notebooks are to be completed by the participating groups on the basis of interviews conducted with local residents. Interview items measure residents' knowledge and practice of specific crime prevention measures emphasized in that community, and the extent of importance residents attach to citizen responsibility for crime prevention. Directions for organizing and conducting the interviews are included in the notebook, with "how to" suggestions for handling typical problems. The evaluation forms are to be completed within three months after each half of the notebook is finished, with a follow-up two years later (or in 1987, whichever is sooner). It is recognized that measurement and sampling errors are likely; the educational value of the survey process, it is believed, outweighs the loss of accuracy.

5) Home study lessons and specific crime prevention programs include "test" for participants to take before and after each lesson/session. (The forms are to be duplicated for groups sessions.) Tests from the home study lessons are self-graded, and results entered in a study log that is mailed at completion of the course in order to receive a certificate. Forms from group sessions are collected by the session leader, summarized, and sent to the state program office for the project's record system.

6) It is important that as much of a geographic area be included in the crime prevention program as possible, since many prevention measures rely on resident awareness and watchfulness. Each of the counties that has asked to be involved is made up of many smaller communities or neighborhoods. Rather than considering a county "involved" when only one small community is participating, a ground rule has been adopted that a county can only be counted as "involved" when at least 50% of the geographic area is represented by residents in participating communities. Community leaders will assist in mapping the "coverage" of their groups.

**PLAN FOR EVALUATION:** The following evidence of accomplishment will be used:

Indicator

Data Collection Method

1) **Crime prevention program coverage**

"Coverage" is that proportion of the county in which a participating community group's members live.

Program coverage will be determined by locating each group's coverage on a county map and calculating the proportion of the land area that is thus reached.

2) **Community crime prevention awareness**

The completion by a community group of the first half of the resource notebook, including designation of high priority prevention measures and the first community survey, is the measure of community awareness. Completion by enough participating groups to cover at least half of the county is the goal.

Each community group participating in the program will be instructed in how to use the notebook. Assistance will be available, if needed, with the assignments and the community survey. The proportion of the county covered by groups that complete the first half of the notebook will be calculated.

3) **Community crime prevention commitment**

The completion by a community group of the second half of the resource notebook is the measure of commitment. This includes implementation of high priority prevention measures and the second community survey.

The proportion of the county covered by groups that complete the second half of the notebook will be computed.

4) **Crime prevention program participants**

The number of persons who attend specific programs and/or enroll in the home study course.

Attendance rolls and enrollment records will be recorded for the state and each county.

5) **Crime prevention knowledge**

The percentage of participants in specific programs and home study courses who correctly answer more than 75% of the post-test questions accurately is the measure of knowledge.

Completed home study logs and group session test results will be summarized for the state, and proportions calculated. Agents will receive county summaries for their use in program planning and development.

6) **Crime prevention practice**

The percentage of participants in specific programs and the home study course who report applying two or more crime prevention practices is one measure. The other is the proportion of residents interviewed in the follow-up survey who report using two or more crime prevention practices.

For program participants, same as above. Proportion of home study completers and special program participants will be calculated. For residents, survey results will be aggregated and percentage of interviewees who have adopted practices will be calculated.

7) **Crime incidence**

The number of reported instances of shoplifting and vandalism aggregated by county law enforcement agencies for each six-month period.

Law enforcement agencies have agreed to make these statistics for the preceding six months available in July and January, from July 1983 through July 1987. An average for the 20 counties will be calculated.



2 COMMUNITY CRIME PREVENTION

**SITUATION:** By 1983 non-violent crime had become a major problem for farmers and ranchers as well as residents of towns and cities. Twenty counties that had experienced crime increases of 30% or more in the three years prior to 1983 requested a crime prevention program. A coordinated effort was designed involving professionals, public officials, and private citizens.

**OBJECTIVES:**

- 1) Community leaders in the 20 counties were to become aware of the seriousness of the crime problem in their locality, and to help design a crime prevention program suited to their communities' needs and resources.
- 2) Fifty percent of the residents in the 20 counties were to learn to recognize specific tools or programs to raise barriers to criminal activity, improve surveillance, facilitate apprehension and encourage acceptable behavior.
- 3) Two thousand members of Extension-related groups (e.g. Homemakers' Clubs, Community Development Clubs, 4-H Clubs) were to learn about specific criminal behavior and how to prevent it.

**RESOURCES INVOLVED:** About 200 leaders of 116 community groups, 2200 members of Extension-related groups, and approximately 6500 residents made up the estimated 8900 volunteers involved in this program. Law enforcement agencies in all 20 counties and at state level cooperated.

**ACCOMPLISHMENTS:**

PERCENTAGE OF COVERAGE COMPLETING PARTS I AND II

1984	{xxxx x (23% Part I)			- 12 counties covered 50% or more
1985	{xxxx xxxx xxx (47% Part I, 11% Part II)	- 18 counties		
1986	{xxxx xxxx xxxx (61% Part I, 49% Part II)	- 20 counties		
1987	{xxxx xxxx xxxx xxxx (85% Part I & II)	- 20 counties		

20%    40%    60%    80%    100%

	1984	1985	1986	1987
Participants passing knowledge test	NA	91% of 303	93% of 812	94% of 1,477
Home study	NA	91% of 303	93% of 812	94% of 1,477
Special programs	93% of 726	90% of 8,598	96% of 10,634	97% of 4,318
Crime incidence--percentage change from baseline				
Vandalism	1980-82=124	114.5%	121.0%	114.5%
Shoplifting	1980-82=589	105.8%	112.9%	107.3%
				99.2%

**EVALUATION:** Data were acquired through community crime prevention program activities, a follow-up survey of participants, and from law enforcement statistics.

**FUTURE IMPLICATIONS:** Increasing frequency of both types of crime used as indicators of impact has been reduced. Individual and community participation is impressive; knowledge and practice adoption are both increasing. Additional specific programs may be useful in maintaining community commitment in the 20 counties. Other counties are ready to participate in the program.

**CONTACT:**

Cynn O. Moore, CRD Specialist  
Land-Grant University

Control No. 02  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture, CRD, 4-H, HE  
 (List as many as apply)

Subject matter area Community Development

Commodity/subject Crime prevention, Community organization

Audience Community Leaders, Citizens, Community Groups

Methods Resource notebooks, home study lesson, crime prevention groups, packaged programs

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
% of participants applying crime prevention	81% of xxxx participants
% of residents applying applying crime prevention	48% of sample of xxxx residents interviewed
Change in incidence of vandalism	104.8% of 1980-82 baseline
	91.5% of 1986 level
Change in incidence of shoplifting	99.2% of 1980-82 baseline
	92.4% of 1986 level

Year	Expended time (FTE) on program			*VOLUNTEER		*SCOPE	
	Prof.	Para.	Vol.	Year	Pers.	Dollar	Co. in St. 70
1984	x.x		xx.x	1984	xx	\$xx,xxx	In report 20
1985	x.x		xx.x	1985	xxx	\$xx,xxx	Other
1986	x.x		xx.x	1986	xxx	\$xx,xxx	
1987	x.x		xx.x	1987	xxx	\$xx,xxx	XXXXXXXXXXXXXXXXXXXX

(NAME) A UNIT

**3 DEVELOPING YOUTH VOLUNTEERS IN 4-H**

**SITUATION:**

Involvement in increasingly responsible leadership roles represents a major opportunity for youth to learn (by doing) some important life skills. Traditional roles as officers in 4-H clubs and councils are available to a small proportion (about 12% in 1983) of 4-H members. In order to increase the leadership experiences of youth, the 4-H program in this state gives each 4-H'er a chance to assume leadership as a member (a 9-11 year old who works with the group to achieve group leadership life skills and who begins working on individual leadership skills); a volunteer helper (a 12-14 year old youth who aids another 4-H member to carry out that individual's 4-H plan); and a volunteer advisor (a 15-19 year old who aids a group of 4-H members). The job description for each volunteer leadership role includes identification of increasingly responsible duties and tasks with space to record the accomplishment of each task selected during the year.

**OBJECTIVES:**

- 1) By 1987 more than half of the state's 4-H club members will have recorded leadership skills they had planned and accomplished during the preceding year;
- 2) The proportion of 4-H volunteers who are between the ages of 15 and 20 will have increased from 15% in 1983 to 25% in 1987.

**PLAN OF ACTION:**

(State level) - Materials will be pilot tested in 40% of the counties, with a total of 250 clubs, during 1984. Revisions will be made as needed. Two or more trainer training sessions will be conducted in 1984 and 1985 in each district. All trainers will be prepared at a master volunteer level. Special training events for youth volunteers will be conducted at state and district levels.

(County level) - Local training on the use of the materials and program will be conducted for 4-H agents, adult volunteers and youth leaders in all counties, and materials will be distributed. Agents will assist 4-H leaders in steps to implement the program in 1985-87, including encouragement for completion of Leadership Agreement records.

**PLAN FOR EVALUATION:**

A summary of completed leadership agreement records for youth involved in each volunteer leadership role will be sent by 4-H club leaders to the 4-H agent(s) in the county. A summary of club reports will be prepared by the agent(s) and forwarded to the state 4-H office for aggregation.

**CONTACT**

I. M. Youngblood, 4-H Specialist  
Land Grant University

Control No. 03  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) 4-H  
 (List as many as apply)  
 Subject matter area Youth Development  
 Commodity/subject Leadership development; leadership life skills; volunteer development  
 Audience 4-H members; youth  
 Methods Leadership life skills program

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Increased no. of youth among 4-H volunteers	1000 more than in 1983
Increased % of youth among 4-H volunteers	15% more than in 1983
Increased % of 4-Hers in leadership positions	45% more than in 1983
Average no. leadership task accomplishments	x.x per year

*ESTIMATED FTE				*REPORTING PLANS			*SCOPE
Year	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St. 70
1984	xx.x		xx.x	1984			In Prog. 70
1985	xx.x		xx.x	1985			Other
1986	xx.x		xx.x	1986			
1987	xx.x		xx.x	1987	XX		XXXXXXXXXXXXXXXXXX



DEVELOPING YOUTH VOLUNTEERS IN 4-H  
NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING

**PLAN FOR EVALUATION:** Because the reporting forms for use with the expanded youth leadership program have not been in use prior to 1984, the basis for comparison with 1987 accomplishments is the 1983 number and proportion of 4-H youth who held club and council offices, and the number and proportion of 4-H volunteers who were between the ages of 15 and 20.

The leadership agreement forms (see sample attached for member role) may be revised after the pilot tests, but an equivalent form containing the same basic information will be developed. 4-H agents will be asked to summarize the following information:

- total number of 4-H volunteers (including youth volunteer advisors and all adult leaders);
- proportion of youth volunteers (ages 15-20) in total 4-H volunteer force;
- number of youth who served in each 4-H leadership role (member, helper, advisor) during the year;
- proportion of all 4-H'ers serving in each 4-H leadership role (member, helper, advisor) during the year;
- average number of youth per club serving in each 4-H leadership role;
- average number of leadership tasks (communicating, decision-making, getting along with others, learning, managing, understanding yourself, working in groups) accomplished in each 4-H leadership role group;
- frequency distribution of leadership task accomplishments across the leadership life skills.

The leadership tasks accomplished are those which the 4-H member wishes to learn (see the middle column in the "Agreement for Growth" form) and which are later certified by the helper as having been completed. There is an "Agreement for Growth" form, a self-evaluation form, and an accomplishment reporting form for each leadership role in 4-H.

The above information will be aggregated at the state level.

# Agreement for Growth in Leadership Life Skills

This agreement is between \_\_\_\_\_  
(4-H member's name)

serving in a leadership role in the 4-H program, and \_\_\_\_\_  
(helper's name)

serving in the helper's role.

This agreement begins \_\_\_\_\_ and ends \_\_\_\_\_  
(date) (date)

Duties of Leadership Role. You may complete all or part of the duties listed on the role description. List those duties you will do.	Leadership Life Skills you want to learn (see your self-evaluation).	Learning Experiences you will do to learn these skills.

Materials supplied by the 4-H program \_\_\_\_\_

Signed \_\_\_\_\_  
(4-H member) (helper)

Date \_\_\_\_\_ ***This agreement may be revised at any time.***

Developed by: **Southern Region Leadership Subcommittee.**

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## DEVELOPING YOUTH VOLUNTEERS IN 4-H

**SITUATION:** Involvement in increasingly responsible leadership roles represents a major opportunity for youth to learn (by doing) some important life skills. In 1983 traditional roles as officers in 4-H clubs and councils were available to a small proportion (about 12%) of 4-H members. In order to increase the leadership experiences of youth, the 4-H program in this state developed a 4-H leadership life skills program, which gives each 4-H'er a chance to assume leadership as a member a volunteer helper, or a volunteer advisor. The job description for each volunteer leadership role includes identification of increasingly responsible duties and tasks with space to record the accomplishment of each task selected during the year.

**OBJECTIVES:**

- 1) By 1987 more than half of the state's 4-H club members will have planned and accomplished leadership skills during the preceding year;
- 2) The proportion of 4-H volunteers who are between the ages of 15 and 20 will have increased from 15% in 1983 to 25% in 1987.

**RESOURCES INVOLVED:** Leaders in 262 clubs volunteered to pilot test the new leadership life skills program. Thirty-six master volunteers were trained to train all 4-H agents and club organizational leaders in the state who had not participated in the pilot test.

**ACCOMPLISHMENTS/EVALUATION:** The following information has been summarized from 1983 program records and from completed 4-H leadership agreement records for the 1986-87 program year. (Agents estimate that 92% of the clubs used the new program in 1986-87, and that 85% of the 4-H'ers who worked on leadership life skills completed the records.)

	1983	1987		
Total Number of 4-H Volunteers				
Youth volunteers (ages 15-20) - number	1292	2861		
- proportion of all 4-H volunteers	15%	32%		
Youth serving in all leadership roles				
Number of 4-H'ers	XXXX	XXXXX		
Proportion of 4-H membership	12%	61%		
Average number/club	3.4	10.2		
Youth serving in new 4-H leadership roles			MEMBER	HELPER
total number			xxx	xxx
proportion of total membership			xx%	xx%
average number/club			xx.x	xx.x
ave. no. leadership task accomplishments			x.x	x.x
Number of 4-H leadership life skill accomplishments reported in 1987				
Communicating xxx			Decision-Making xxx	
Getting Along with Others xxx			Learning xxx	
Managing xxx			Understanding Yourself xxx	
Working in Groups xxx				

**FUTURE IMPLICATIONS:** The new leadership life skills program increased leadership opportunities 25% and provided life skills training for 61% of current 4-Hers. Enthusiastic participation is an indication that the program should be continued.

**CONTACT**

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Control No. 03  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) 4-H  
 (List as many as apply)

Subject matter area Youth development

Commodity/subject Leadership development; leadership life skills; volunteer development

Audience 4-H members; youth

Methods Leadership life skills program

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Increased no. of youth among 4-H volunteers	1596 more than in 1983
Increased % of youth among 4-H volunteers	17% more than in 1983
Increased % of 4-Hers in leadership positions	49% more than in 1983
Average no. leadership task accomplishments	x.x per year

Year	Expended time (FTE) on program			*VOLUNTEER			*SCOPE
	Prof.	Para.	Vol.	Year	Pers.	Dollar	Co. in St. 70
1984	xx.x		xx.x	1984			In report 67
1985	xx.x		xx.x	1985			Other 3
1986	xx.x		xx.x	1986			
1987	xx.x		xx.x	1987			XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX



4

**FAMILY DIETARY GUIDANCE**

**SITUATION:** Extension home economists throughout the state rated nutrition education as one of the top three continuing program emphases for the next four years. The wellness (illness prevention) concept is considered an important way of life for many Americans, but agents report that 60% of their clientele, while aware of a relationship between food and health, are uneducated or undereducated in basic principles of nutrition and meal planning. Many are taken in by fad diets, claims of health food advocates and expensive weight loss regimens. Three fourths of their clientele have expressed concern about diminished buying power. Consumers need information on how to plan, select, and prepare food which represents maximum nutrition at minimum cost.

**OBJECTIVES:** Consumers, both direct (estimated at xxx participants) and indirect clientele (xxx,xxx households in the general public) will learn:

- the relationship between diet and health and fitness
- to make food choices and plan appetizing diets that comply with the USDA dietary guidelines
- how individual problems, conditions, and preferences affect food choices
- how to select and prepare food that will provide maximum nutrition and satisfaction at the lowest cost
- how to evaluate fads, trends, products, etc. in terms of cost and effect

**PLAN OF ACTION:** County programs include continuing emphasis on nutrition through mass media (newspaper columns, TV and radio spots and features, Extension newsletters), telephone hotlines, and computerized diet analysis, and through group programs (e.g. workshops, seminars, short courses). While some special programs will be offered (e.g. Food and Fitness, Nutrition for Pregnancy, Least Cost Human Nutrition) most will be of a more general nature. Volunteer leaders will be trained to offer group programs. Paraprofessionals will continue to work with limited resource audiences.

State specialists will continue to update teaching resources, provide in-service training for agents, and prepare materials for local release through the various media. They will also develop instruments and provide leadership for an annual nutrition survey that will have public relations and educational value as well as provide evidence of accomplishments.

**PLAN FOR EVALUATION:** A survey of a sample of Extension clientele and the general public will be conducted in the fall of 1984, 1985, and 1986 to assess foods and nutrition knowledge and dietary practices. These surveys will be supplemented by immediate feedback from group programs conducted by Extension home economists. Comparisons between participants and public, urban and rural, were made annually. Each group's progress from year to year will be charted.

**CONTACT**

U. Will Eatright, Food & Nutrition Specialist  
Land-Grant University

Control No. 04  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) HE  
 (List as many as apply)  
 Subject matter area Food & Nutrition  
 Commodity/subject Dietary guidelines; nutrition education; meal planning; food buying; food preparation  
 Audience Homemakers; general public; limited resource families  
 Methods Mass media releases; newsletters; telephone hotlines; computerized diet analysis; workshops; seminars; short courses

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Proportion of participants (xxxx)	
knowledgeable	1/5 more in 1986 than in 1984
adopting practices	1/5 more in 1986 than in 1984
Proportion of general public (xxx,xxx households)	
knowledgeable	1/10 more in 1986 than in 1984
adopting practices	1/10 more in 1986 than in 1984

Estimated time (FTE) on program				*REPORTING PLANS			*SCOPE
Year	Prof.	Para.	Vol.	Year	Accom.	St. Impact	Co. in St.
1984	xx.x	x.x	xx.x	1984			In Prog. 70
1985	xx.x	x.x	xx.x	1985			Other
1986	xx.x	x.x	xx.x	1986			
1987	xx.x	x.x	xx.x	1987	XX		xxxxxxxxxxxxxxxxxxxx

NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING  
**FAMILY DIETARY GUIDANCE**

1) Agents were asked to estimate the proportion of their clientele who were a) aware of a relationship between food and health; b) un- or under-educated in basic principles of meal planning and nutrition; and c) concerned about decreased buying power. No other data concerning client need were available.

2) It would be possible to estimate the number of consumers who will learn content of the objectives, or the increase in the proportion of consumers who would report gains in learning and practice changes. Such estimates would be based on the situation in a particular state.

**PLAN FOR EVALUATION:** Because there are no baseline data that are direct measures of consumer nutritional knowledge a survey will be undertaken in fall of 1984 to determine

- 1) the current level of foods and nutrition knowledge and dietary practices among Extension clientele (persons known to Extension home economists as participants in nutrition-related programs and/or recipients of nutrition information); and
- 2) the current level of food and nutrition knowledge and dietary practices among the general public.

This survey will be repeated in 1985 and 1986 to analyze changes, if any, in levels of foods and nutrition knowledge and dietary practices for Extension clientele and the general public.

The survey (by telephone interview) will be conducted by the home economics agents or members of county program advisory committees under the direction of the agents. The number of persons interviewed will vary from 25 in small rural counties to 75 in heavily populated counties. Forty percent of the sample will be randomly selected from rosters of nutrition program participants and newsletter recipients. The remainder will be randomly selected from the local telephone directory. When a selected respondent is known to be an Extension participant, the next name in the directory will be substituted. A respondent from the general population will be any person in the household who has major responsibility for planning, purchasing, and preparing food for the residents of that household.

It is recognized that this is a small sample and that its utility as a probability sample for each county is limited. That number of interviews, however, could be reasonably handled by the agents and program committee members, and would give both counties and the state a better idea of trends in dietary practices. The total sample size for the state is estimated at 1200, with 480 clientele and 720 general public respondents.

The information to be collected from each respondent is included on the attached interview schedule outline. The data should be considered indicators of nutritional knowledge and practice, rather than an exhaustive "test" of each respondent's behavior.

Analysis will include the following comparisons of knowledge and practice:

- clientele vs. general public in each year
- rural vs. urban residents
- changes from one year to another for both groups

Suggested scoring procedures are intended to emphasize the significance of misinformation by counting "wrong answers" against correct information. While the scoring system appears complicated, it permits a broad variation in scores and cannot be disproportionately skewed by a lot of information (or misinformation) about a limited number of dietary considerations.

An arbitrary score was set as a threshold of respondent knowledgeability regarding food groups (29 points), nutrition principles (5 points), and good dietary habits (12 points). A respondent was considered to have applied knowledge if he/she reported two or more correctly informed (i.e. with no misinformation) dietary practices.

The use of this type of interview and whatever scoring system is adopted requires adequate training of interviewers. This training can be viewed as an excellent update and review for Extension agents and volunteers.

It is probably not feasible to conduct a survey for every major program each year. In this case, the importance of nutrition education in the state and the potential public awareness created by the survey were judged to warrant this investment of resources.



**FAMILY DIETARY GUIDANCE**  
OUTLINE FOR INTERVIEW

[Note: The wording below is not designed to be used without pretesting for specific audiences. The items are written as suggestions, not necessarily the best way to acquire the information desired. The format of the instrument might include a checklist of anticipated responses, with space for others. Interviewers should be thoroughly trained in the use of the final instrument, with special attention given to avoidance of forcing responses into given categories.]

Foods & Nutrition Knowledge

What are the Basic Food Groups? (Record as given; for each group identified ask the following questions as appropriate.)

What foods are included in the group? (if not indicated by name of group)

Why should you include these foods in your diet?

How many servings (of this food group) are recommended for an adult each day?

Dietary Practices

(Record the respondent's answers as given. Probe if necessary to determine whether an answer indicates good or erroneous understanding of nutrition principles.)

When you decide what foods to buy, or what to plan for your family's meals, what do you think about?

Are you trying to cut back on your salt or sodium intake? (if yes, HOW?)  
(e.g. use less salt, remove salt shaker from table, limit salty snack foods)

Are you trying to cut back your sugar intake? (if so, HOW?)  
(e.g. drink fewer sweetened beverages, reduce sugar in desserts, use sugar substitute, limit amount of sweet snacks)

Are you trying to cut back your fat intake? (if so, HOW?)  
(e.g. select leaner cuts of meat, use cooking methods other than frying)

Have you made any other changes in your food habits in the last year or two?  
(if so, WHAT?) (e.g. eat greater variety of foods, eat more foods with fiber, keep costs down, reduce cholesterol)

Are you trying to help you or another member of your family lose weight?  
(if so, HOW?) (e.g. portion control, exercise, change eating habits, healthful snacks)

When shopping for food, what do you do to keep costs down?  
(e.g. buy less, buy less junk food, shop for advertised specials, purchase the most economical size, compare prices, use coupons)

What do you consider to be the worst nutrition errors that most people make?

## SCORING PROCEDURES (TENTATIVE)

### Food and Nutrition Knowledge

- |   |             |
|---|-------------|
| 1) Identity of food group (if partial, count only once) | +1          |
| If group not identified, no points                      | 0           |
| 2) Correct info on foods in that group                  | +1 up to 5  |
| Incorrect info on foods in that group                   | -1 up to -5 |
| 3) Correct info on nutrient value                       | +1 up to 5  |
| Incorrect info on nutrients                             | -1 up to -5 |
| 4) Correct info on number of servings                   | 2           |
| Incorrect info on number of servings                    | 0           |

(NOTE: If fat & sugar group mentioned, give 2 points for correct information on its significance; if incorrect, 0 points)

(NOTE: In no case should the number of negative points exceed the number of positive points; the lowest score for each item and for all items should be 0)

Range of points for each of 4 food groups	0 - 14
Range of points for sugar & fat group	0 - 2
Range of points, total for all items	0 - 58

### Food Selection & Meal Planning

- |  |            |
|--|------------|
| 1) For each correct/good nutrition principle                         | +1 up to 5 |
| For other "good" reasons, +1 up to no. points for nutrition concerns |            |
| For misinformed reasons, -1 each, but not below zero                 |            |

Range of points for this question      0 - 10

### Dietary Practices

- |   |             |
|---|-------------|
| 1) For each practice (salt, sugar, fat, calories) attempted | 1           |
| Correct/appropriate method                                  | +1 up to 5  |
| Incorrect/misinformed method                                | -1 up to -5 |
| 2) For each other good food habit change                    | +1 up to 3  |
| questionable/misinformed food habit                         | -1 up to -3 |
| 3) For keeping food costs down,                             |             |
| each appropriate method                                     | +1 up to 5  |
| each inappropriate method                                   | -1 up to -5 |

(NOTE: In no case should a score go below zero.)

Range of scores for each of 4 specified dietary practices	0 - 6
Range of scores, total for specified dietary practices	0 - 24
Range of scores, good food habits	0 - 3
Range of scores, keeping food costs down	0 - 5
Range of scores, total for all dietary practice items	0 - 32
Range of scores, total for all items on interview	0 - 100

## 4 FAMILY DIETARY GUIDANCE

**SITUATION:** Extension home economists throughout the state rated nutrition education as one of the top three continuing program emphases for the next four years. The wellness (illness prevention) concept is considered an important way of life for many Americans, but agents report that 60% of their clientele, while aware of a relationship between food and health, are uneducated or undereducated in basic principles of nutrition and meal planning. Many are taken in by fad diets, claims of health food, advocates and expensive weight loss regimens. Three fourths of their clientele have expressed concern about diminished buying power. Consumers need information on how to plan, select, and prepare food which represents maximum nutrition at minimum cost.

**OBJECTIVES:** Consumers will learn:

- the relationship between diet and health and fitness
- to make food choices and plan appetizing diets that comply with the USDA dietary guidelines
- how individual problems, conditions, and preferences affect food choices
- how to select and prepare food that will provide maximum nutrition and satisfaction at the lowest cost
- how to evaluate fads, trends, products, etc. in terms of cost and effect

**RESOURCES INVOLVED:** One hundred twenty volunteer interviewers were trained to help agents conduct the annual dietary survey throughout the state. A grant from ABC Food Company paid the survey costs.

**ACCOMPLISHMENTS/EVALUATION:** County programs on food and nutrition enrolled an average of 1,926 different persons for 3.2 contact hours (average) annually. Evidence of accomplishment was acquired through telephone interviews with samples of these participants and the general public conducted each year by Extension agents and volunteers. (Detailed analysis available upon request.)

Indicator	1984	1985	1986
Number of participants contacted	473	481	483
% knowledgeable - food groups	56%	62%	75%
- nutrition principles	xx%	xx%	xx%
- good dietary habits	xx%	xx%	xx%
% applying knowledge	xx%	xx%	xx%
Average score (possible range = 0-100)	58	61	65
Number of general public contacted	716	725	711
% knowledgeable - food groups	xx%	xx%	xx%
- nutrition principles	xx%	xx%	xx%
- good dietary habits	xx%	xx%	xx%
% applying knowledge	xx%	xx%	xx%
Average score (possible range = 0-100)	39	43	44

**FUTURE IMPLICATIONS:** While participants are generally more knowledgeable than the general public, both groups are increasing both knowledge and its application in good dietary habits. More emphasis should be placed on informing publics of good food habits.

**CONTACT**

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Land-Grant University

Control No. 04  
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 Fiscal year(s) 1984-87  
 Program Area(s) HE  
 (List as many as apply)

Subject matter area Food & Nutrition

Commodity/subject Dietary guidelines; nutrition education; meal planning; food buying; food preparation

Audience Homemakers; general public; limited resource families

Methods Mass Media releases; newsletters; telephone hotlines; computerized diet analysis; workshops; seminars; short courses

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Proportion of xxxx participants	
knowledgeable	21% more than in 1984
adopting practices	19% more than in 1984
Proportion of general public (xxx,xxx households)	
knowledgeable	16% more than in 1984
adopting practices	15% more than in 1984

Expended time (FTE) on program				*VOLUNTEER			*SCOPE
*EXPENDED FTE				Year	Pers.	Dollar	Co. in St.
Year	Prof.	Para.	Vol.				
1984	xx.x	x.x	xx.x	1984	xx	\$xx,xxx	In report 70
1985	xx.x	x.x	xx.x	1985	xxx	\$xx,xxx	Other
1986	xx.x	x.x	xx.x	1986	xxx	\$xx,xxx	
1987	xx.x	x.x	xx.x	1987	xxx	\$xx,xxx	



5

**FARM MANAGEMENT AND MARKETING**

**SITUATION:** Farmers in the United States have been, and are faced with, decreasing commodity prices, increased production costs and dwindling profits. For the next several years, the farm sector will be confronted with acreage restrictions, a record farm debt, stable and perhaps decreasing land values and severe cash flow problems. In this economic environment, farmers need to improve their farm management ability to survive.

Essentials of good farm management include 1) the systematic recording of information related to the production of each commodity; 2) understanding of marketing options for each commodity; and 3) current information on their overall farm financial status as well as for each enterprise. At present there is no good evidence of the management skill level of the 48,326 farm operators in the state.

**OBJECTIVES:** Farmers in all of the state's major commodities will

- develop and maintain adequate and current record-keeping systems on production of each of their major commodities;
- be able to evaluate marketing alternatives for each commodity; and
- have readily accessible the information on the current fiscal status of their farming operations.

**PLAN OF ACTION:**

(State level) Develop programs to assist farmers in analyzing cost of production by enterprise and to provide economic analyses of farm programs (1983-87). Conduct workshops and seminars to train agents, agricultural leaders, and producers in the economic evaluation of modern production and marketing techniques and financial management (1983-86). Prepare and publish newsletters, fact sheets, circulars on selected production, marketing and management subjects (1983-87). Evaluate investment opportunities on livestock and poultry housing, greenhouses, equipment, etc. (1983-87). Assist county staff as requested (1983-87).

(County level) Conduct programs on all aspects of financial management including

- economic feasibility of changing production practices
- cost analysis for machinery, land, quota ownership, etc.
- marketing alternatives
- production cost analysis by enterprise (1983-87).

**PLANS FOR EVALUATION:** A survey of producers of each major commodity in the state will be conducted in the late fall of 1984 and 1986. Using interview schedules and sampling schemes developed by state specialists, producers will be interviewed by county agents. Results will be tabulated at the state level.

**CONTACT**

Morris Better, Extension Economist  
Land-Grant University

Control No. 05  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture  
 (List as many as apply)  
 Subject matter area Farm Management  
 Commodity/subject Livestock, Field crops, Vegetable crops, Farm records, Marketing  
 Audience Farmers, Farm families  
 Methods Workshops, seminars, newsletters, fact sheets, demonstrations, farm visits

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Record-keeping improved	25% over 1984
Market strategy improved	25% over 1984
Financial awareness improved	25% over 1984
Overall farm management improved	25% over 1984

*ESTIMATED FTE				*REPORTING PLANS			*SCOPE
Year	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St.
1984	x.x			1984			In Prog. 70
1985	x.x			1985			Other
1986	x.x			1986			
1987	x.x			1987	XX		XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX

## FARM MANAGEMENT AND MARKETING - SWINE PRODUCTION

### NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING

- 1) Because there is no current measure of producer management skills in any commodity area, a survey is planned to establish baseline data. Through personal observation and interview with a sample of farmers (not just those who participate in Extension programs) agents will become more aware of specific farm management learning needs of all their potential clientele.
- 2) This example of a plan for evaluation is designed for one commodity--swine. A similar plan would be developed for each other major commodity in the state. It will be possible to develop an index of record-keeping, marketing awareness, and financial status awareness for each commodity, which can be aggregated by computer for an overall index of farm management accomplishment.
- 3) Many states may wish to emphasize whole farm planning, a complete analysis of resources and alternative uses, with associated risks, to determine the optimum mix of enterprises to maximize income or other objectives particular to a farming operation. The major program in this state emphasizes management specific to commodities, anticipating a more comprehensive objective in future plans of work. The assumption here is that principles of management and marketing are transferrable from one commodity/enterprise to another, but may be more easily demonstrated and learned in a delimited application.
- 4) "Farmers" is used to include all of the members of the farm management team, whether family members or non-related business partners. The term includes producers of all major commodities in the state, with emphasis during this four year period on full-time farm operations.
- 5) Major emphasis in the plan for evaluation is placed on collecting evidence of record-keeping behavior, with less attention to marketing and overall management/planning. Given the limited resources available for collecting evidence of accomplishments, this appeared to provide the most basic and most useful data for planning future program effort and reporting accomplishments.

#### PLANS FOR EVALUATION:

**[Note: The following plan for evaluation is specific to swine production. A similar plan would be developed for each other major commodity.]**

Two surveys will be conducted during the four-year program period--a baseline survey in late fall of 1984 (after harvest), and a follow-up in late fall of 1986 (or prior to spring planting in 1987). An interview form developed by swine specialists and agricultural economists will be sent to a sample of the top swine producing counties, two from each of the three geographic regions in the state.

[Note: The sampling scheme has been constructed so that no county will be requested to provide evidence of accomplishment for more than three commodities. In general, counties in which income from a particular commodity equals or exceeds the average income for that commodity across all counties in which it is produced are defined as major producers. Geographic distribution of major producers and number of commodities of which a county is a major producer are both considered in designating the sample counties.]



The sample of swine producers to be interviewed will be stratified by number of pigs/hogs sold annually: less than 100; 100 to 499; 500 to 999; 1000 or more. Agents will be instructed to identify the producers on their mailing list in each size category. A minimum of 25 producers will be interviewed; the proportion of the sample in each size category should correspond to the proportion of each size category in the mailing list. (Categories in which there are less than five producers should be merged with the next larger or smaller category.) Interviewees are to be selected randomly within size categories. The three major areas of farm management accomplishment for all commodities are 1) production record-keeping; 2) marketing awareness; and 3) financial status awareness. Indicators (specific to swine production) are listed on the attached outline for the interview. Items are included to permit analysis by size and nature of operation.

Based on their overall observations and information from the interview, agents will rate each producer on "record-keeping behavior" (keeping records and demonstrating use of recorded information in production decisions); "market strategy" (the fit of producer's choice of market outlet, method of hedging [if any], and market price information-seeking efforts with that producer's overall situation); and on "financial awareness" (producer's knowledge of current farm and enterprise financial status). Agents will write a brief explanation of the rating. [Note: While these ratings are subject to agent bias, they are overall assessments of producer management skills that are based on evidence, and easier to report and interpret than the raw data. The raw data will be used by agents and specialists in program planning.]

Analysis will include the following:

#### Record-keeping behavior

- proportion of producers who keep records on each item
- average number of items in each decision package for which records are kept
- average number of items (total) for which records are kept

#### Marketing awareness

- proportion of producers using each available market outlet
- proportion of producers using some form of hedging
- proportion of producers seeking market price information

#### Financial awareness

- proportion of producers who know debt to asset ratio
- proportion of producers with regular cash flow statements
- proportion of producers with current balance sheets

Agents' ratings - proportions of producers judged to have less than adequate, adequate, or excellent

- record-keeping
- market strategy
- financial awareness

[Note: Proportions of producers rated less than adequate, adequate, or excellent for each of these three indicators of farm management skill can be summarized for every other commodity included in the state's total farm management program, yielding manageable accomplishment data for the whole.]



These measures require a knowledgeable interviewer who understands the complex relationships among production, marketing, and financial operations. The interviewer must be able to ask probe questions when appropriate. The visit with the producer is an opportunity to do some teaching along with collecting data; it should help the agent in planning further educational efforts with swine producers in the county. Some of the information collected (e.g. who keeps the financial records for the farm/swine enterprise) is specifically included as an aid to planning educational efforts.

**FARM MANAGEMENT AND MARKETING - SWINE PRODUCERS SURVEY**

OUTLINE FOR INTERVIEW

**[NOTE: This survey is intended to be used as an informal interview tool. The wording and format should be adapted for use in a specific situation. Agents should be thoroughly trained to use observation as well as appropriate probes in conducting each interview. The items are written as suggestions, not the best way to acquire the information desired.]**

Swine Operations

Nature and size of operations (check all that apply)

- finishing -----> No. of hogs sold annually \_\_\_\_\_
- farrow to finish -----> No. of hogs sold annually \_\_\_\_\_
- feeder pigs -----> No. of pigs sold annually \_\_\_\_\_

Facilities

Confinement for each facility

- Farrowing house \_\_\_\_\_
- Growing/finishing house \_\_\_\_\_
- Nursery \_\_\_\_\_
- Breeding facility \_\_\_\_\_
- Gestation house \_\_\_\_\_

Total	Partial	None
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Other enterprise(s)? NO \_\_\_\_\_  
 YES-----> What? \_\_\_\_\_

Record-keeping Behavior  
 (OBSERVATION)

Does the producer keep records?

- NO \_\_\_\_\_
- YES-----> Farrowing cards with current litter info? \_\_\_\_\_
- Farrowing cards with items recorded for future use? \_\_\_\_\_
- Birth to market information? \_\_\_\_\_
- Feed consumption (ave. lbs./day, main ingredients)? \_\_\_\_\_

Items recorded (if applicable)

- Farrowing data: (check all that apply)
- sow identification \_\_\_\_\_
- sire of litter \_\_\_\_\_
- farrowing date, total and live pigs born \_\_\_\_\_
- litter identification \_\_\_\_\_
- litter weight (weighed prior to weaning) \_\_\_\_\_
- pigs weaned \_\_\_\_\_
- farrowing rate (# farrowing/# bred) \_\_\_\_\_

Herd replacement data: (check all that apply)

- individual weights (such as at 154 days)  
 backfat probes

Other ----> what? \_\_\_\_\_

INTERVIEW: [Record the answers given; check applicable items below]

What factors do you consider when you're selecting boars/gilts?

- breed  
 growth rate  
 number of littermates  
 litter weight (prior to weaning)  
 structural soundness  
 underline  
 dam's record  
 sire's record  
 other ----> what? \_\_\_\_\_

What mating factors do you consider?

- breeds  
 boar availability  
 boar "works good"  
 potential for producing replacements  
 other ----> what? \_\_\_\_\_

What factors do you consider when it comes to culling?

- failure to breed and settle  
 poor disposition  
 litter size  
 litter weight  
 unhealthy offspring  
 age  
 lameness  
 other ----> what? \_\_\_\_\_

### Marketing Awareness

Where do you market your animals? (Check all that apply)

- public auction  
 buying station ----> grade & yield? \_\_\_\_\_ live weight? \_\_\_\_\_  
 packing house ----> grade & yield? \_\_\_\_\_ live weight? \_\_\_\_\_  
 production contract ----> with whom? \_\_\_\_\_  
 other ----> what? \_\_\_\_\_

Do you get information on market prices before selling your animals?

NO

YES ----> from what source? \_\_\_\_\_

----> on which outlets? \_\_\_\_\_

\_\_\_\_\_ public auction

\_\_\_\_\_ buying station

\_\_\_\_\_ packing house

\_\_\_\_\_ Other--what? \_\_\_\_\_

Do you record

\_\_\_\_\_ market weight?

\_\_\_\_\_ grade?

\_\_\_\_\_ price received?

\_\_\_\_\_ average market price on day of sale?

\_\_\_\_\_ average market price at other markets on day of sale?

How do you obtain your feed grains?

\_\_\_\_\_ grow and store

\_\_\_\_\_ buy and store

\_\_\_\_\_ forward contract

\_\_\_\_\_ buy as needed

Do you use the futures market?

YES

NO ----> Do you observe prices on the  
futures market? \_\_\_\_\_

Do you use any other method(s) of hedging?

### Financial awareness

Do you know the cost of production per animal? YES NO

Do you know your total operating costs? YES NO

What would you estimate as your debt-to-asset ratio? [Define as necessary: **Debts outstanding on land, buildings, operating costs, animal inventory, equipment, etc. divided by value of land, buildings, equipment, inventory of animals & supplies**] (Check the ratio given. If not given, ask which of the following is closest estimate.)

\_\_\_\_\_ ratio given by producer

\_\_\_\_\_ < 25%

\_\_\_\_\_ 25 - 50%

\_\_\_\_\_ 51 - 75%

\_\_\_\_\_ > 75%

\_\_\_\_\_ Don't know



Who works up your fiscal records? (check those that apply for the swine operation and the total farming operation)

<u>SWINE</u>	<u>TOTAL</u>	
_____	_____	lending institution
_____	_____	self or member of family
_____	_____	accountant
_____	_____	other ----> Who?

How often do you get a cash-flow statement on your swine operation?

On your total farm operation?

How often do you get a current balance sheet on your swine operation?

On your total farm operation?

When it comes to farm management, what's the most important things you think most farmers need to learn?

**To be completed by agent after interview is finished**

How would you rate this producer's overall record-keeping? (Circle one)

1                      2                      3                      4                      5  
 Poor                      Adequate                      Excellent

Explanation:

How would you rate this producer's overall market strategy?

1                      2                      3                      4                      5  
 Poor                      Adequate                      Excellent

Explanation:

How would you rate this producer's overall financial awareness?

1                      2                      3                      4                      5  
 Poor                      Adequate                      Excellent

Explanation:

5 FARM MANAGEMENT AND MARKETING

**SITUATION:** Farmers in the United States have been, and are faced with, decreasing commodity prices, increased production costs and dwindling profits. For the next several years, the farm sector will be confronted with acreage restrictions, a record farm debt, stable and perhaps decreasing land values and severe cash flow problems. In this economic environment, farmers need to improve their farm management ability to survive.

Essentials of good farm management include 1) the systematic recording of information related to the production of each commodity; 2) understanding of marketing options for each commodity; and 3) current information on their overall farm financial status as well as for each enterprise.

**OBJECTIVES:** Farmers were to:

- develop and maintain adequate and current record-keeping systems on production of each of their major commodities;
- be able to evaluate marketing alternatives for each commodity; and
- have readily accessible the information on the current fiscal status of their farming operations.

**RESOURCES INVOLVED:** One hundred thirty-five producers cooperated in farm records demonstration program, representing all principal commodities.

**ACCOMPLISHMENTS:** Average annual enrollment in farm management seminars was 10,276, 41% of active farm operators.

Agent ratings of producer management skills in 1984 & 1987, by commodity type

	LIVESTOCK (N=XXX, 1984) (N=YYY, 1987)			FIELD CROPS (N=XXXX, 1984) (N=YYYY, 1987)			VEGETABLE CROPS (N=XXXX, 1984) (N=YYYY, 1987)			TOTAL (N=XXXX, 1984) (N=YYYY, 1987)		
100%												
50%						X			X			X
		X Y	X		Y	X Y		Y	X		Y	X
	Y	X Y	X Y		X Y	X Y	Y	X Y	X Y	Y	X Y	X Y
	X Y	X Y	X Y	Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y
0%	X Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y	X Y
	excel- lent	ade- quate	inade- quate	excel- lent	ade- quate	inade- quate	excel- lent	ade- quate	inade- quate	excel- lent	ade- quate	inade- quate

**EVALUATION:** Agents rated a sample of producers in each major commodity, stratified by region and size and nature of operations. Ratings were based on on-farm interviews and observations related to record-keeping, market strategy, and financial awareness. Detailed data are available on request.

**FUTURE IMPLICATIONS:** While agent ratings indicated management skills improvement in all commodity types, more than 35% of producers are rated less than adequate. Emphasis on record-keeping should be continued, especially in vegetable and field crops. More emphasis on marketing is needed with livestock producers.

**CONTACT:**

Morris Better, Extension Economist  
Land-Grant University

Control No. 05  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture  
 (List as many as apply)  
 Subject matter area Farm Management  
 Commodity/subject Livestock, Field crops, Vegetable crops, Farm records, Marketing  
 Audience Farmers, Farm families  
 Methods Workshops, seminars, newsletters, fact sheets, demonstrations, Farm visits

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Record-keeping improved	30% over 1984
Market strategy improved	20% over 1984
Financial awareness improved	15% over 1984
Overall farm management improved	20% over 1984

Expended time (FTE) on program			*VOLUNTEER		*SCOPE	
Year	Prof.	Para.	Vol.	Year	Pers. Dollar	Co. in St. 70
1984	x.x			1984		In report 70
1985	x.x			1985		Other
1986	x.x			1986		
1987	x.x			1987		XXXXXXXXXXXXXXXXXXXX
						XXXXXXXXXXXXXXXXXXXX

6

**FINANCIAL SECURITY****SITUATION:**

Changes in economic conditions, financial institutions, and tax laws have impacted significantly on families'/individuals' current and future goals of financial security. Consumers have broader choices in life insurance, home mortgages, and savings/investment options. Longer life expectancies and major changes in Social Security and pension plans have affected their economic decisions re: retirement years. As these changes have been felt, requests for assistance in financial management planning have rapidly increased in the last three years.

**OBJECTIVES:**

Participants in Extension programs on financial management will gain knowledge to help them make informed decisions regarding:

- a) savings and investments
- b) pre-retirement planning
- c) insurance
- d) financial planning.

**PLAN OF ACTION:**

(State level) - In-service training for agents in alternative savings options and investments appropriate for small investors (1984-85); in-service training in current economic outlook for individuals/families (1984-87). Update home study course (1984) and prepare fact sheets for local distribution (1984-87). Develop computer-assisted program on planning for financial security (1985-87). Conduct regional Money Matters workshop series in eight locations (1984-87).

(Local level) - Promote home study course and regional workshop series (1984-87). Distribute fact sheets; cooperate with local industries and financial institutions to promote and conduct financial security programs. Use newly developed computer-assisted programs with clientele.

**PLAN FOR EVALUATION:**

Evidence of **participants' knowledge** will be obtained from

- 1) home study course tests, included at the end of each lesson, and
- 2) workshop series tests, administered at the end of each session.

Evidence of **participants' plans to apply knowledge** will be obtained from feedback sheets at the end of home study course and workshop series.

**Trends in financial management decisions** will be identified by a follow-up survey to participants in home study course and workshop series.

**CONTACT:**

Penny Wise, Family Economics Specialist  
Land-Grant University



Control No. 06  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) HE  
 (List as many as apply)  
 Subject matter area Family economics  
 Commodity/subject Financial planning; pre-retirement planning; savings & investment; insurance; tax planning; use of credit  
 Audience Families; homemakers; financial institutions; business & industry; employed persons  
 Methods Workshop series; home study course; fact sheets

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
*ESTIMATED IMPACTS Number respondents reporting:	Total from surveys, 1984-87
Improvement in tax status	XXXX
in net disposable income	XXXX
in savings/investment	XXXX
in retirement position	XXXX
in insurance/estate planning	XXXX
in use of credit	XXXX
in overall financial security	XXXX

Year	*ESTIMATED FTE			*REPORTING PLANS			*SCOPE
	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St. 70
1984	x.x			1984			In Prog. 70
1985	x.x			1985			Other
1986	x.x			1986			
1987	x.x			1987	XX		

XXXXXXXXXXXXXXXXXXXX  
 XXXXXXXXXXXXXXXXXXXX

## FINANCIAL SECURITY

### NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING

1) Data for program planning (e.g. fluctuations in interest rates, number of new savings/investment accounts, effects of adjustable rate mortgages) are available from a variety of state and local sources. These may be useful in program justification, and in interpreting program accomplishments. Because of variation from state to state, they are not included in this example.

2) Demand for program may be indicated by enrollment trends in financial management seminars/courses sponsored by community colleges, universities, brokerage houses, Cooperative Extension, etc., as well as by requests to agents for assistance.

3) As an educational agency, Extension can provide information for clientele to use in decision-making, but cannot appropriately get clients to make particular decisions. The program's objective is, therefore, for participants to gain knowledge in four areas of current significance to financial decision-making. It is assumed that they will apply that knowledge in more informed decision-making, resulting in increased family financial security.

4) In this state most effort has been put into the home study course and regional workshop series. Each of these educational efforts has a built-in means of finding out whether participants have learned what was taught and what they plan to do with that information.

Each is also part of an on-going follow-up study to determine family financial management behavior. If the study were not already in progress, it might not be feasible to collect decision-making behavior data as evidence of program accomplishment. The response rate in the four years that the follow-up study has been underway is about 63%--remarkably high, considering the mobility of the clientele involved. It may be that efforts to enroll more lower income persons in these efforts, if successful, will affect the rate of response negatively.

5) The interactive computer-assisted program is being designed for use with limited resource audiences. While the principles included in the program will be applicable to any income level, examples and language will be selected for relevance to individuals and families who would not ordinarily enroll in a course/workshop on financial management. (Microcomputers are available in all county Extension offices, and can be transported to other locations for use with special audiences. Libraries in many communities have microcomputers, and will receive copies of the program for use by individuals.)

6) Results of the interactive computer-assisted program which is to be developed during the four-year program span are not included in the plan for evaluation, nor are results of the fact sheets. Not every program activity can be expected by itself to make an impact on learners. Newly developed program activities may not reach enough clientele to make a significant impact during a given four-year period.

7) Enrollment forms for home study courses and workshop series provide some demographic data on participants (e.g. gender, age, occupation, education, previous training). This permits analysis of program completions to determine if there is any relationship with participant characteristics. It also shows what clientele subgroups are not being reached by these program efforts.

**PLAN FOR EVALUATION:** The following evidence of accomplishment will be used:

1) **Participant knowledge** - At the end of each lesson (home study course) or session (workshop series), participants are asked to complete a test of the content covered. Home study course tests are mailed to the county agent, who grades and records the test and returns it to the participant. Workshop session tests are collected by the instructor and returned to participants at the next weekly session. Participants are considered to have mastered the content if they answer at least 80% of the questions correctly. They are considered to have completed the course or workshop if they master the content of 6 of the 7 home study lessons or 3 of the 4 workshop sessions. The number of participants and completers are aggregated annually from county and regional data. (Note: Very few persons drop out of the course/series, perhaps because the fees required represent an inducement to get their money's worth.)

2) **Participant's plan to apply knowledge** - It is assumed that participants will plan to apply what they have learned to their own financial management. At the end of the last lesson/session, participants are asked to complete a feedback sheet which is returned to the agent/instructor. In addition to items regarding satisfaction with the learning experience, the feedback sheet includes questions as to what participants plan to do regarding financial management areas covered in the course/series, and their reasons for same. The number of participants who indicate at least one reasonably supported plan is recorded, along with the major content area (i.e. pre-retirement, savings/investment, financial planning, insurance).

3) **Trends in financial management decisions** - As part of an on-going study, a questionnaire is mailed to all participants completing the end-of-course or series feedback sheet. Respondents are asked to indicate what decisions they have made in regard to savings/investment, pre-retirement, insurance, financial planning, and other aspects of financial management (e.g. buying a home, use of credit). They are also asked to estimate the effects of each decision on their financial security. (Note: These data are not considered reliable dollar value measures of family financial security, but do reveal trends in family financial management decision-making.) The time period covered is the year or more since completing the home study course/workshop series. Some demographic data are requested to enable analysts to identify changes in participants' lives that might be related to financial management.

For purposes of the accomplishment information report, the percentages of respondents reporting improvements in each of six financial management areas and overall financial security are recorded. (If the reported decision-making is inconsistent with the report of improvement, no improvement is recorded. This is an attempt to balance a possible respondent inflation of financial security improvement.)



6

**FINANCIAL SECURITY**

**SITUATION:** Changes in economic conditions, financial institutions, and tax laws have impacted significantly on families'/individuals' current and future goals of financial security. Consumers have broader choices in life insurance, home mortgages, and savings/investment options. Longer life expectancies and major changes in Social Security and pension plans have affected their economic decisions re: retirement years. As these changes have been felt, requests for assistance in financial management planning have rapidly increased in the last three years.

**OBJECTIVES:** Participants in Extension programs on financial management will gain knowledge to help them make informed decisions regarding

- a) savings and investments
- b) pre-retirement planning
- c) insurance
- d) financial planning.

**RESOURCES INVOLVED:** Local industries and financial institutions across the state distributed fact sheets and promoted Money Matters workshops. Special funds were contributed toward development of interactive computer program on money management.

**ACCOMPLISHMENTS/EVALUATION:** Records of completion and plans to apply knowledge were built into the home study course and workshop series. Questionnaires were mailed to participants a year after completion to determine financial security.

INDICATOR	1984	1985	1986	1987
Home Study Course				
Number enrolled	XXX	XXX	XXX	XXX
Number completing course	XXX	XXX	XXX	XXX
Number planning to apply knowledge	XXX	XXX	XXX	XXX
Workshop Series				
Number enrolled	XXX	XXXX	XXXX	XXXX
Number completing series	XXX	XXX	XXXX	XXXX
Number planning to apply knowledge	XXX	XXX	XXX	XXXX
Follow-up study--No. reporting improvements	(N=XXXX)	(N=XXXX)	(N=XXXX)	(N=XXXX)
in Tax status	XXX	XXX	XXX	XXX
Net disposable income	XXX	XXX	XXX	XXX
Savings/investments	XXX	XXXX	XXXX	XXXX
Retirement position	XXX	XXX	XXX	XXXX
Insurance/estate planning	XXX	XXX	XXXX	XXXX
Use of credit	XXX	XXX	XXX	XXX
Overall financial security	XXX	XXXX	XXXX	XXXX

**FUTURE IMPLICATIONS:** More than half of the participants reported improvement in overall financial security, with least improvement reported in netdisposable income and tax status. Participants continue to underrepresent persons below state median income level. Emphasis in computer money management program should be on lower income levels; current efforts should be continued.

**CONTACT:**

Penny Wise, Family Economics Specialist  
Land-Grant University



Control No. 06  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) HE  
 (List as many as apply)  
 Subject matter area Family economics  
 Commodity/subject Financial planning; pre-retirement planning; savings & investment; insurance; tax planning; use of credit  
 Audience Families; homemakers; financial institutions; business & industry; employed persons  
 Methods Workshop series; home study course; fact sheets

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
*QUANTIFIED IMPACTS No. respondents reporting	Total from surveys, 1984-87
Improvement in tax status	XXXX
in net disposable income	XXXX
in savings/investment	XXXX
in retirement position	XXXX
in insurance/estate planning	XXXX
in use of credit	XXXX
in overall financial security	XXXX

Expended time (FTE) on program				*VOLUNTEER			*SCOPE
*EXPENDED FTE	Prof.	Para.	Vol.	Year	Pers.	Dollar	Co. in St. 70
Year							
1984	x.x		.x	1984	xx		In report 70
1985	x.x		.x	1985	xx		Other
1986	x.x		.x	1986	xx		
1987	x.x		x.x	1987	xx		XXXXXXXXXXXXXXXXXXXX

**7 LEADERSHIP SKILLS FOR COMMUNITY DEVELOPMENT**

**SITUATION:** Community problems are often complicated, interrelated, and expensive to resolve. Experience has taught that many community problems cannot be resolved until citizens who are (or will be) affected by a problem understand it and have expressed their interests regarding its solution. This requires citizen participation in community problem solving, a process that relies heavily on the skills of community leaders. Leaders have demonstrated their willingness to participate in the process of achieving a better community, but many need training in leadership skills. Feedback from leaders of Extension-related community organizations alone indicated an interest in participating in leadership skills clinics, with many persons identifying other community organizations whose leaders would also like to participate.

**OBJECTIVES:** Participants in leadership skills clinics will:

- 1) master the objectives of the session(s) they attended;
- 2) apply the skills learned to their own organizations;
- 3) work on at least one community problem in each organization in which they are involved;
- 4) involve local citizens in these community problem-solving efforts;
- 5) seek information from Extension concerning the community problems addressed.

**PLAN OF ACTION:**

1983-84- Conduct 5 trainer training sessions throughout the state; distribute facilitators' handbooks and other materials to trainers planning local leadership clinics;

1984-87- Provide assistance to trainers in conducting leadership clinics; distribute materials for clinics as needed; send out materials for follow-up to clinics; set up informational meetings as needed on frequently reported community problems; develop community organization training sessions and individual consultation as needed.

**PLAN FOR EVALUATION:**

1. Use clinic feedback forms and instructor observation to find out extent to which participants mastered leadership skills taught;
2. Use follow-up survey to participants to find out number of problem-solving efforts and amount of citizen involvement.

**CONTACT**

V. I. Person, Leadership Specialist  
Land-Grant University

Control No. 07  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) AGRICULTURE, 4-H, CRD, HE  
 (List as many as apply)  
 Subject matter area Leadership development  
 Commodity/subject Leadership skills, community problem-solving, citizen involvement  
 Audience Community leaders; community organizations  
 Methods Clinics; technical assistance; use of data base

Estimated measurable impacts/results--keywords Enter quantity--(economic or social)

*ESTIMATED IMPACTS	
No. of persons learning leadership skills	7,500
--reporting skill improvement	4,500
--reporting skill application	4,500
--reporting more community problem-solving	2,000
--reporting more citizen involvement	3,000

Estimated time (FTE) on program				*REPORTING PLANS			*SCOPE
*ESTIMATED FTE				Year	Accom	St. Impact	Co. in St. 70
Year	Prof.	Para.	Vol.				
1984	1.5		2.0	1984			In Prog. 70
1985	2.5		3.0	1985			Other
1986	2.5		3.0	1986			
1987	2.5		3.0	1987	x		XXXXXXXXXXXXXXXXXXXX
							XXXXXXXXXXXXXXXXXXXX

NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING  
**LEADERSHIP SKILLS DEVELOPMENT**

1) It is assumed that improved leadership skills will enhance the likelihood of greater citizen involvement in community problem-solving. As leaders develop process skills, it is further assumed that they will recognize the need for information pertinent to community problems, and that in many cases Extension will be sought as a reliable, unbiased source of relevant information.

**PLAN FOR EVALUATION** Participants in the leadership clinics will provide the following data:

<u>Data</u>	<u>How Obtained</u>
1) assessment of the extent to which they feel they mastered the objectives of each session attended	session feedback forms (not included)
2) skills improved	
3) skills applied in their own organizations	follow-up questionnaires mailed to each participant in the clinics (see the outline attached)
4) community problem(s) addressed in each organization in which they are leaders	
5) nature and extent of citizen involvement in their organizations' work on community problems	
6) requests for information on community problems	

Clinic facilitators (trainers) will provide the following data:

1) addresses of participants in each session	registration lists for each session
2) extent to which participants mastered the content of each session	observation of participants in each session (rating guide not included)

**[Note: The facilitators' observations can be used as a check on the reliability of participants' self reports of skills learned and applied in each clinic.]**

Registration forms provide addresses for follow-up with clinic participants. Efforts to attain a high response rate to the follow-up questionnaire will include setting the expectation of follow-up at the clinics, treating participants as an elite group, and offering help with future leadership and community problems (both in group and individual sessions).



## LEADERSHIP SKILLS DEVELOPMENT

### Instrument Outline

[Note: The content outlined below would, in this example, be used in a questionnaire mailed to participants in the leadership skills clinics six months after their last clinic session. This is not designed to be used as is; the format and wording should be adapted and pretested for use in a particular situation.]

Introduction: About six months ago you were enrolled in a leadership skills clinic sponsored by the \_\_\_\_\_ County Extension Service. As you may recall, community leaders participating in the clinic agreed to provide some follow-up feedback. Please answer the questions below and add any comments that might help Extension to improve the leadership skills program.

I. Skills improved: The leadership skills listed below were covered in the clinic sessions. Check any which the clinic helped you improve.

Comments

- Planning an agenda
- Working with committees
- Chairing a meeting
- Presenting a report
- Parliamentary procedures
- Leading a discussion
- Involving others
- Reaching decisions
- Identifying community problems
- Seeking appropriate information
- Other--what? \_\_\_\_\_

II. Skills applied: Check any of the skills below that you have applied **twice or more** since the last clinic session.

- Planning an agenda
- Working with committees
- Chairing a meeting
- Presenting a report
- Parliamentary procedures
- Leading a discussion
- Involving others
- Reaching decisions
- Identifying community problems
- Seeking appropriate information
- Other--what? \_\_\_\_\_

Comments: \_\_\_\_\_

III. Community problem-solving: A) Please check any of the community problems listed below which have been addressed during the last six months by organizations in which you have a leadership role. (If a problem could be identified by more than one topic listed, check the topic you think is most applicable.) Add any others to the list.

- community water supply, water quality
- community waste water management
- solid waste management
- land use planning
- soil/water/natural resource conservation
- economic development
- community housing, facilities
- community recreation
- crime prevention, safety
- fire protection
- other--what? \_\_\_\_\_

Comments: \_\_\_\_\_

B. How many community problems have you dealt with in the groups in which you have a leadership role THIS YEAR? \_\_\_\_\_

How does this compare with the number of community problems A YEAR AGO?

- THIS IS LESS      Comments: \_\_\_\_\_
- ABOUT THE SAME
- THIS IS MORE

C. Have you or your organization requested information THIS YEAR to assist in solving the problems you checked (if any)?

NO	CONTENT	SOURCE
<input type="checkbox"/> YES----->	<input type="checkbox"/> technical information	<input type="checkbox"/> Extension
	<input type="checkbox"/> problem-solving skills	<input type="checkbox"/> Other--list: _____
	<input type="checkbox"/> other--what? _____	_____

D. Did you or your organization request information A YEAR AGO to assist in solving the problems you worked on then (if any)?

NO	CONTENT	SOURCE
<input type="checkbox"/> YES----->	<input type="checkbox"/> technical information	<input type="checkbox"/> Extension
	<input type="checkbox"/> problem-solving skills	<input type="checkbox"/> Other--list: _____
	<input type="checkbox"/> other--what? _____	_____

Comment: \_\_\_\_\_

IV. Citizen involvement: A. During the last six months did your organization(s) sponsor any opportunities for citizen involvement? Check any below that apply; if "other", describe briefly.

Comments

- public meeting(s)
- study group(s)
- community survey(s)
- citizen task force(s)
- other--what? \_\_\_\_\_

B. If your organization did sponsor some opportunity for citizen involvement during the last six months, approximately how many citizens were involved?

Number \_\_\_\_\_ Comments:

C. How does this compare with citizen involvement in the same organization(s) a year ago?

Comments:

- THIS IS LESS
- ABOUT THE SAME
- THIS IS MORE

V. About you: A. Please fill in the following information to help us in analyzing the feedback from you and the other leaders who participated in the clinics.

<u>Organizations to which you belong</u>	<u>No. Years</u>	<u>Current leadership position, (if any)</u>
_____		
_____		
_____		
_____		

B. How many years have you held one or more leadership positions? \_\_\_\_ years

C. How many years have you lived in your community? \_\_\_\_ years

VI. A. Suggestions for leadership skills program:

B. Request for assistance: If you (or your organization) would like assistance in community problem-solving, complete the attached form and mail it separately.

THANK YOU FOR YOUR HELP. PLEASE COMPLETE THIS FORM BY XXXXXXXX AND RETURN TO

V. I. PERSON, EXTENSION LEADERSHIP SPECIALIST  
LAND-GRANT UNIVERSITY  
ANYWHERE, ANYSTATE, XXXXX

## 7 LEADERSHIP SKILLS DEVELOPMENT

**SITUATION** Many community problems cannot be resolved until citizens understand the problems and express their interests regarding potential solutions. In order to increase opportunities for citizen involvement in community problem solving, skills of local leaders have been developed through participation in leadership skills clinics. It is assumed that as leaders develop skills they will not only involve more citizens, but will seek more information about the nature of community problems and how they might be solved.

**OBJECTIVES** Participants in leadership skills clinics were to:

- 1) master the objectives of the session(s) they attended;
- 2) apply the skills learned to their own organizations;
- 3) work on at least one community problem in each organization in which they were involved;
- 4) involve local citizens in these community problem-solving efforts;
- 5) seek information from Extension concerning the community problems addressed.

**RESOURCES INVOLVED:** Two hundred thirty-one volunteer trainers conducted 547 leadership clinics across the state, in which 11,852 community leaders participated.

ACCOMPLISHMENTS	1985	1986	1987	Total
No. of clinic participants	2,396	4,511	4,945	11,852
% of participants mastering at least half of objectives	79%	82%	87%	83%
% of participants reporting skill improvement	(N=1,412) 68%	(N=2,891) 72%	(N=2,002) 73%	(N=6,305) 71%
skill application	71%	75%	69%	72%
more community problem-solving	25%	33%	29%	29%
more citizen involvement	32%	34%	33%	33%

**EVALUATION** Participants assessed the extent to which they mastered session objectives on end-of-session feedback forms. A mailed questionnaire was sent six months later to obtain follow-up feedback from participants.

**FUTURE IMPLICATIONS:** Participants have learned and applied many leadership skills, but indicate need for more help with identifying community problems, using information, and citizen involvement. Most frequent community problems were related to land use planning and water supply and quality.

**CONTACT**

V. I. Person, Extension Leadership Specialist  
Land-Grant University



Control No. 07  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) AGRICULTURE, 4-H, CRD, HE  
 (List as many as apply)  
 Subject matter area Leadership Development  
 Commodity/subject Leadership skills, community problem-solving,  
 citizen involvement  
 Audience Community leaders; community organizations  
 Methods Clinics; technical assistance; use of data base

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
No. of persons learning leadership skills	9,894
No. of respondents to follow-up survey	6,305
--reporting skill improvement	4,476 (71%)
--reporting skill application	4,540 (72%)
--reporting more community problem-solvng	1,828 (29%)
--reporting more citizen involvement	2,081 (33%)

*EXPENDED FTE				*VOLUNTEER			*SCOPE
Year	Prof.	Para.	Vol.	Year	Pers.	Dollar	Co. in St. 70
1984	1.9	---	1.4	1984	151	\$21,000	In report 70
1985	2.5	---	2.3	1985	231	34,500	Other
1986	2.5	---	2.1	1986	200	31,500	
1987	2.5	---	1.9	1987	189	28,500	

## 8 LEAST COST FERTILIZATION PRACTICES

**SITUATION** Because our soils in their natural uncropped state are infertile, large amounts of lime and fertilizer nutrients have been applied to produce profitable crops, particularly on high value commodities such as cotton, peanuts, tobacco, and vegetables. Some nutrients (e.g. phosphorous) accumulate following fertilizer applications, while other do not. Many farmers have not yet learned which is which; furthermore, many do not test their soils regularly to determine lime and nutrient needs of particular fields for particular crops.

**OBJECTIVES** In order to increase net income and production efficiency, and to preserve a high level of environmental quality, farmers will adopt the following least cost fertilization practices:

1. determine the nutrient needs of crops by testing each field at least once every three years;
2. follow soil tests for applying only the amount of lime and fertilizer suggested;
3. use high analysis fertilizers when appropriate;
4. time the application of fertilizer for maximum utilization by the plants;
5. calculate the anticipated payback of liming for leased fields; and
6. keep field histories of lime, fertilizer, and pesticide use.

**PLAN OF ACTION** In addition to agents and commodity specialists disseminating information on least cost fertilization practices for particular crops, the following methods will be used to accomplish the objectives:

1. letters to emphasize taking soil samples for identification of lime and fertilizer needs; soil nutrient reserves will be identified and more efficient fertilizer systems will be suggested;
2. training on interpreting soil and plant analyses;
3. strip demonstrations of limed vs. unlimed soybeans;
4. radio tapes and TV programs on timely methods of applying nutrients;
5. solicit opportunities to teach fertilizer dealers and manufacturers of the need to supply new or different kinds of fertilizers that more nearly fit local soil and crop needs;
6. with crop specialists, refine software to analyze efficient fertilization/crop production practices; use with appropriate audiences.

**PLANS FOR EVALUATION** The collection of trend data for the state (number of soil samples, soil analysis results, sales of lime and fertilizers) will be continued. Analyses of these trends will consider (as feasible) soil types, major commodities grown, weather conditions, and farm programs (e.g. PIK). In order to assess changes in grower practices over time, a survey will be designed to be administered by county agents to a sample of farmers in each county. Survey instruments will include items relative not only to least cost fertilization practices but also to other cultural practices for specific commodities.

**CONTACT**

Sandy Clay, Extension Soils Specialist  
Land-Grant University

Control No. 08  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture  
 (List as many as apply)  
 Subject matter area Soil Science  
 Commodity/subject Soil Fertilization, Soil Conservation  
 Audience Farmers  
 Methods Information letters, practice demonstrations, radio & TV, meetings, computer software

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Soil samples taken	xxx,xxx
Liming recommendations	xx% of soil tests
Fertilizer recommendations followed	xx% of soil tests
Increased net return/acre	\$xx-corn, \$xx-soybeans, \$xxx-tobacco

*ESTIMATED FTE				*REPORTING PLANS			*SCOPE
Year	Prof.	Para.	Vol.	Year	Accom.	St. Impact	Co. in St. 70
1984	xx.x			1984			In Prog. 70
1985	xx.x			1985			Other
1986	xx.x			1986			
1987	xx.x			1987	XX		XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX



NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING  
LEAST COST FERTILIZATION PRACTICES

- 1) In the fertilizer industry sales commissions are generally based on tons sold, so there is encouragement for the industry to sell farmers more commercial fertilizer than needed to increase crop yields. There is also a tendency to use low analysis rather than high analysis fertilizer, even though it may cost more for the industry to produce and cost the farmer more per acre.
- 2) For sandy soils especially, the timing of a fertilizer application may be important to avoid leaching of nutrients prior to the time of most rapid plant growth. The amount of fertilizer used may be reduced by proper timing.
- 3) While data are available on trends regarding the number of soil samples analyzed, levels of nutrient reserves in the soil, and sales of lime and commercial fertilizers, there is little evidence (other than agent impressions) of changes in growers' knowledge and concern regarding least cost fertilization practices. Ultimately such practices would decrease costs and increase the net profit from crops, and would probably result in less non-point source pollution of surface waters from excess phosphorous, nitrogen, and other nutrients supplied from fertilizers.
- 4) The management of fertilization practices is a complex activity, requiring the farmer to understand the interaction of soil-plant factors. Extension represents a source of information that has no self-interest in promoting use of more fertilizer, whether or not needed. Extension has computer programs to help producers figure least cost practices, but growers have generally not been assertive in demanding what they want from fertilizer dealers.
- 5) Because the emphasis of this example is on planning an accomplishment report rather than planning the program, no data are included. In a real situation one would include available data. The data collected in this four-year cycle through the accomplishment reporting process will provide base data for the next planning cycle.
- 6) While it is assumed that least cost practices will increase net income, other factors may intervene. Extension's concern is what farmers know and do. This may be directly affected by efforts of county Extension agents, and less directly by the efforts of state specialists.
- 7) County agents' plans vary, but frequently include demonstrations of recommended practices for major commodities; demonstration of microcomputer programs for calculating least cost practices for specific fields and crops; campaigns for soil testing; dissemination of current research findings at commodity meetings; and encouragement of individual farmers to adopt record-keeping and other appropriate management practices.
- 8) It is assumed that adoption of recommended fertilization practices will help decrease costs of production and increase net returns. The approach used in this example focuses not on changes in costs, which require more elaborate records than many farmers currently keep, but on the changes in net returns. It is acknowledged that other factors influence net returns; a careful analysis of the survey data may help to identify the relative contribution of fertilization practices.



## PLANS FOR EVALUATION

1. Analysis of Trends The collection of trend data for the state will be continued. Analyses of these data will consider (as feasible) soil types, major commodities grown, weather conditions, and farm programs (e.g. PIK, conservation reserve).

<u>Data</u>	<u>Source and Collection Method</u>
- Number of soil samples (by county & by crop)	State Plant & Soil Analysis Lab reports, sent routinely to county agents & state specialists
- Soil & plant analysis results (identifies soil nutrient supply and suggested lime and fertilizer needed in soils tested)	Same as above
- Fertilizer sales (tons of fertilizer by grade and ratio in each area of state)	Records collected by state department of agriculture from fertilizer industry sales; sent upon request
- Lime sales (tons)	Same as above
- Total acreage by commodity in each county	ASCS records
- Number of producers by county	Same as above

### Comparisons

- Continue trend analysis (currently available from early 1950's to present)
- Comparisons by major commodity areas,  
soil type areas,  
areas affected by adverse weather conditions,  
influence of farm programs (e.g. proportion of acreage in PIK  
or conservation reserve, proportion of acreage leased)

### Anticipated Results All other things being equal, trends should show

- Increase in number of soil tests annually, up to a hypothetical maximum
- Increased intensity of soil sampling (i.e., average no. of acres represented  
by each sample will decrease)
- Decreased use of fertilizer per acres actually farmed
- Increased lime per acres actually farmed, especially in pH sensitive crops  
like soybeans (up to optimum use)
- Increased sale of high analysis fertilizers
- Increased sale of fertilizer grades (i.e. ratio of NPK) appropriate to crop
- Decreased nutrient loss in surface water runoff (NOT recorded in these data)

2. Grower Survey In order to assess changes in grower practices over time, a survey will be designed to be conducted by county agents with a sample of farmers in each county. The sample size will be proportional to the number of farmers listed by ASCS (with replacement for those not actually farm operators).

Respondents will be randomly selected within major commodities grown in the county. Agents will interview farmers in commodities for which the agents have responsibilities, with a maximum of 25 respondents per agent and a minimum of 25 respondents per county. **[Note: This will be considered a heavy drain on time by some agents; it may be possible to train advisory committee members to do at least part of the interviews.]**

Survey instruments will include items relative not only to least cost fertilization practices but also to other cultural practices for specific commodities. A draft of the instrument is attached. Commodity specialists will develop the items for their areas. After checking for completeness and legibility, agents will send the forms to the campus, where results will be tabulated for each county (and returned for local use). Aggregation of data on farmer awareness of interactions, incidence of practices, and acres affected for each commodity will permit a comparison between the baseline survey (conducted in the fall of 1984) and the follow-up (winter, 1987).

**LEAST COST FERTILIZATION PRACTICES**  
**INSTRUMENT OUTLINE**

[Note: These items are not formatted for actual use by an interviewer. Wording and content may be modified for use. Instrument should be pretested before survey is conducted.]

FARM DATA

Total acreage farmed _____	acres		
<u>Commodity</u>	<u>Acres</u>	<u>Owned</u>	<u>Leased</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

PRACTICE

ITEM

Soil testing                    When was the last time you took soil tests on your farm?  
  
                                  What percentage of acreage farmed is that?  
  
                                  For which fields? **[This question allows interviewer to select one field about which to ask the following]**

For selected field        **[Note: The rest of the items refer to this one field.]**

Commodity \_\_\_\_\_  
Acres \_\_\_\_\_  
Soil type        \_\_\_\_\_ sandy -----> Depth of sandy surface  
                  \_\_\_\_\_ clayey                             <10 inches  
                  \_\_\_\_\_ organic                           10 to 16 inches  
   \_\_\_\_\_ 17 inches or more

Follow recommendations    Did the test results recommend liming?  
                                  Did you lime?        Why/Why not?  
  
                                  How much of each nutrient was recommended?  
  \_\_\_\_\_ lbs. N/acre  
  \_\_\_\_\_ lbs. P/acre  
  \_\_\_\_\_ lbs. K/acre

Fertilizer analysis        What commercial fertilizer did you apply?  
  
                                  (Why?) **[Note: This question is primarily useful to agents in interpreting the farmer's responses and in planning future program efforts.]**

	<u>When Applied</u>	<u>Lbs. Applied</u>	<u>Fertilizer Analysis</u>
Timing	-before planting	_____	_____
	-at planting	_____	_____
	-after emergence	_____	_____

Field history

Do you keep records on this field? \_\_\_\_\_

\_\_\_ NO----Why not? \_\_\_\_\_

\_\_\_ YES----What do you record? \_\_\_\_\_

\_\_\_\_\_ Crops planted \_\_\_\_\_

\_\_\_\_\_ Soil tests taken \_\_\_\_\_

\_\_\_\_\_ Soil test results \_\_\_\_\_

\_\_\_\_\_ Lime applied \_\_\_\_\_

\_\_\_\_\_ Fertilizer applied \_\_\_\_\_

\_\_\_\_\_ Pesticides applied \_\_\_\_\_

\_\_\_\_\_ (nematicides \_\_\_\_\_

\_\_\_\_\_ (herbicides \_\_\_\_\_

\_\_\_\_\_ (insecticides \_\_\_\_\_

\_\_\_\_\_ (fungicides \_\_\_\_\_

\_\_\_\_\_ (seed treatment \_\_\_\_\_

\_\_\_\_\_ Rainfall record \_\_\_\_\_

Are dates recorded when applicable? \_\_\_\_\_ YES

\_\_\_\_\_ NO

\_\_\_\_\_ Yield \_\_\_\_\_

\_\_\_\_\_ Costs of production \_\_\_\_\_

\_\_\_\_\_ Net returns \_\_\_\_\_

From this field, what do you estimate your net return per acre this last year? \_\_\_\_\_

Crop-specific practices (to be determined) \_\_\_\_\_

**[Note: The following is an optional item of interest to state agronomic specialists, and should not be considered as a part of the accomplishment report process.]**

Influences on fertilizer purchases

Farmers have told us that a number of things influence their decisions to buy fertilizer. As you look at this card (below), are any of these important to you when you are deciding what fertilizer to buy?

Which are the most important to you?

INFLUENCES ON FERTILIZER PURCHASES

- a) SOIL TESTS
- b) PAST EXPERIENCE
- c) NEIGHBOR'S EXPERIENCE
- d) FERTILIZER SALESMEN
- e) EXTENSION AGENTS AND SPECIALISTS
- f) ON-FARM TESTS, DEMONSTRATIONS



**08 LEAST COST FERTILIZATION PRACTICES**

**SITUATION** Because our soils in their natural uncropped state are infertile, large amounts of lime and fertilizer nutrients have been applied to produce profitable crops. Some fields will continue to need selected nutrients and lime; most fields need to be evaluated to establish modifications in fertilization programs for several years.

**OBJECTIVES** In order to increase net income and production efficiency, and to preserve a high level of environmental quality, farmers will adopt the following least cost fertilization practices:

1. determine the nutrient needs of crops by testing each field at least once every three years;
2. follow soil tests for applying only the amount of lime and fertilizer suggested;
3. use high analysis fertilizers when appropriate;
4. time the application of fertilizer for maximum utilization by the plants;
5. calculate the anticipated payback of liming for leased fields; and
6. keep field histories of lime, fertilizer, and pesticide use.

**RESOURCES INVOLVED** During the four years 212 cooperators conducted demonstration tests of liming and fertilization practices on their farms. Fertilizer dealers in all counties participated in annual commodity meetings on fertilization practices.

**ACCOMPLISHMENTS/EVALUATION** The number of soil samples reported by the Plant and Soil Analysis Lab has increased from xx,xxx in 1984 to xxx,xxx in 1987 (20% increase), a greater increase than in any previous four-year period. Excess reserve of phosphorous evident in 1984 has been reduced by xx%; during the same period the sales of lower phosphorous fertilizer grades have increased, suggesting that farmers have followed the recommendations from soil analyses. Sales of high analysis fertilizer have increased by x%, although total tons of fertilizer sold has decreased by x%.

A survey of 2849 farmers conducted by county agents revealed the following:

	1984	1987
No. farmers soil testing within 3 years . . . . .	1196 (42%)	1435 (50%)
following recommendations for		
liming . . . . .	803 (67%)	1289 (90%)
fertilizer . . . . .	544 (45%)	791 (61%)
using high analysis fertilizer . . . . .	921 (32%)	1315 (46%)
keeping field records . . . . .	528 (19%)	842 (30%)
recording net returns . . . . .	1253 (44%)	1776 (62%)
Average net return/acre - corn . . . . .	\$xx.xx	\$xx.xx
- soybeans . . . . .	\$xx.xx	\$xx.xx
- tobacco . . . . .	\$xxxx.xx	\$xxxx.xx

**FUTURE IMPLICATIONS** While impressive gains have been made in following recommended practices, there is considerable room for improvement. Survey results indicate that farm record-keeping appears to be related to concern for least cost practices.

**CONTACT**

Sandy Clay, Extension Soils Specialist  
Land-Grant University

Control No. 08  
 State XX  
 Fiscal year(s) 1987  
 Program Area(s) Agriculture  
 (List as many as apply)

Subject matter area Soil Science

Commodity/subject Soil Fertilization, Soil Conservation

Audience Field and Vegetable Crop Producers

Methods Information letters, practice demonstrations, radio & TV, meetings, computer software

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Soil samples taken	xxx,xxx (20% more than 1984)
Liming recommendations followed	90% of soil tests (23% more than 1984)
Fertilizer recommendations followed	61% of soil tests (16% more than 1984)
Increased net return/acre	\$xx-corn, \$xx-soybeans, \$xxx-tobacco

*EXPENDED FTE Year	Expended time (FTE) on program			*VOLUNTEER			*SCOPE
	Prof.	Para.	Vol.	Year	Pers.	Dollar	Co. in St. 70
1984	xx.x		x.x	1984			In report 70
1985	xx.x		x.x	1985			Other
1986	xx.x		x.x	1986			
1987	xx.x		xx.x	1987			

9

**MANAGEMENT OF AGRICULTURAL IRRIGATION AND DRAINAGE**

**SITUATION:** Less than 0.2 million acres of the state's agricultural crops were irrigated in 1982. Of the 6.2 million acres of cropland 0.6 million acres are classified as droughty; short duration droughts severely reduce yields. On many of the remaining 5.6 million acres of cropland, even the 2.25 million acres that require drainage, extended droughts can reduce yields. About 5 million acres of woodland need drainage. Both deficient and excess soil moisture reduce yields, often on the same field in the same year. On poorly-drained soils it is often feasible to combine irrigation and drainage in one subirrigation system. Irrigation needs to be more water and energy efficient. Without proper drainage, yields on poorly-drained soils often average only 40-50% of potential yield.

**OBJECTIVES:**

- 1) The percentage of cropland irrigated will be increased, with particular goals for vegetable crops (from 6% to 12% of total acreage) and small fruits (from 50% to 75% of total acreage);
- 2) Increased number of growers and dealers will be aware and interested re:
  - a) improving the design of drainage and irrigation systems and
  - b) increasing their operating efficiency;
- 3) Dealers will demonstrate more technical skills in the design and scheduling of irrigation systems;
- 4) At least 20 subirrigation systems will be installed in poorly drained soils.

**PLAN OF ACTION:** (State level) Coordinate efforts with other groups and agencies (e.g. SCS, the Irrigation Society, Soil & Water Conservation Districts) to conduct a short course for Extension agents and other agency personnel (1984); develop micro-computer programs to assist in irrigation design (1984-85) and scheduling (1984-86); participate in commodity meetings, field days, and training sessions for agents and growers (1983-87); conduct short courses and training sessions for dealers and provide follow-up technical assistance as needed (1983-87).

(County level) Work with SCS and other agency staff to provide technical assistance to growers & dealers in designing and operating irrigation and drainage systems; to hold meetings, field days, demonstration projects; to conduct biennial irrigation survey in 1984 and 1986; to disseminate irrigation and drainage information through newsletters and the press; to promote the use of microcomputer programs (when available).

**PLAN FOR EVALUATION:** The number of acres of irrigated cropland will be determined by continuation of the biennial irrigation survey in 1984 and 1986. Participation of growers, dealers, and agency personnel in appropriate training opportunities will be used as an indicator of changes in awareness/interest. Dealers attending annual Irrigation Conference and annual meeting of Land Improvement Contractors will be asked to report on sub-irrigation systems installed and other advanced technologies (such as irrigation scheduling) used. Requests for microcomputer programs (when available) will be an indication of increased technical expertise among dealers and growers.

**CONTACT**

Erie Gates, Extension Water Resources Specialist  
Land-Grant University



DEPARTMENT OF AGRICULTURE, IRRIGATION AND DRAINAGE  
 FORM A (BACK)

Control No. 09  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture, CRD  
 (List as many as apply)  
 Subject matter area Water Management  
 Commodity/subject Irrigation, Drainage, Soil conservation, soil science  
 Audience Farmers, Fruit growers, Vegetable crop growers, dealers, agency staff  
 Methods Microcomputer programs, meetings, demonstrations

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Increased acreage irrigated	x.x mil acres (xxx% of 1981)
-vegetable crops	.x mil acres (xxx% of 1981)
-small fruits	.x mil acres (xxx% of 1981)
Irrigation efficiency improved	xx% of systems (from 1981 to 1986)

*ESTIMATED FTE			*REPORTING PLANS			*SCOPE	
Year	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St.
1984	x.x			1984			In Prog. 50
1985	x.x			1985			Other
1986	x.x			1986			
1987	x.x			1987	XX		XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX



**MANAGEMENT OF AGRICULTURAL IRRIGATION AND DRAINAGE**  
**NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING**

1) These objectives, while not written in terms of what learners will do, identify the outcomes that will be considered evidence of accomplishment during the four-year period. Other factors than Extension's efforts may influence growers' decisions to irrigate/drain croplands, or dealers' willingness to apply the latest research on efficiency of design and operation. To the Extension staff working in this area, however, the outcomes identified are "what good looks like."

2) Not included is an objective related specifically to drainage (other than as part of a sub-irrigation system); the assumption is that progress in irrigation is an indication of progress in drainage, which may be much more difficult to observe. The Soil Conservation Service is normally the action agency in drainage work, providing much of the technical assistance to growers in the design and layout of drainage systems. However, the University does have a computer program for design of surface and sub-surface drainage systems that is available to SCS. There is also cooperative work between Extension and SCS in the design of controlled drainage systems (i.e., systems that provide drainage, but also store some water to be used by crops during short duration drought periods).

**PLAN FOR EVALUATION:** Since 1975 a cooperatively planned survey has been conducted in the state every 2-3 years. The agencies involved (Extension, SCS, state departments of natural resources and of agriculture) have relied on Extension agricultural agents to provide the data, occasionally using data collected for other purposes (e.g. river basin studies) as a check on reliability. Agents are asked to estimate, based on their observations, the number of acres irrigated for each major commodity in their counties, by each type of irrigation system, and by major water sources. Trends in extent and type of irrigation are evident from the results of the survey.

The most feasible (easily available) indicator of interest on the part of growers, dealers, and agency staff is their participation in sponsored educational events. Attendance at these events is routinely recorded by the agent or specialist in charge.

The state specialist helps plan the Annual Irrigation Conference and the quarterly and annual meetings of the state chapter of the Land Improvement Contractors of America. Both these meetings are attended by irrigation and drainage dealers and installers and some producers, plus personnel from cooperating agencies. At these conferences, the state specialist can check on the nature and extent of technological changes which dealers have made, recording these observations for comparison from one year to another. In addition, requests from dealers for assistance and visits to selected dealers provide input on changes being made by dealers.

Although routine contact with agents provides a good working estimate of dealer skill level, it tends to be impressionistic and not easily recordable. The most feasible "hard" evidence that appears to be useful is agent reports of use of computer programs (on irrigation design and scheduling, surface drainage and sub-irrigation) with growers and dealers (routinely collected).

9

**MANAGEMENT OF AGRICULTURAL IRRIGATION AND DRAINAGE**

**SITUATION:** Of the 6.2 million acres of cropland less than 0.2 million acres of the state's agricultural crops were irrigated in 1982. Both deficient and excess soil moisture reduce yields, often on the same land in the same year.

**OBJECTIVES:**

- 1) Percentage of cropland irrigated will be increased, with particular goals for vegetable crops (from 6% to 12% of total acreage) and small fruits (from 50% to 75% of total acreage);
- 2) Increased number of growers and dealers will be aware and interested re
  - a) improving design of irrigation and drainage systems and
  - b) increasing the operating efficiency of these systems;
- 3) Dealers will demonstrate more technical skills in the design and scheduling of irrigation systems;
- 4) At least 20 sub-irrigation systems will be installed in poorly drained soils.

**RESOURCES INVOLVED:** State departments of natural resources and agriculture and the Soil Conservation Service have cooperated with Extension on the irrigation survey. Annual Irrigation Conferences and annual meetings of Land Improvement Constructors Association invited Extension specialists to speak.

**ACCOMPLISHMENTS**

INDICATORS	1981	1984	1986
Total number of cropland acres	6.2 mil	6.3 mil	6.2 mil
Percent of total acres irrigated			
Percent of vegetable crops irrigated			
Percent of small fruits irrigated			
Percent of irrigated acres using low efficiency irrigation systems			
Percent using moderate efficiency systems			
Percent using high efficiency systems			
Percent using surface water sources			
Percent using ground water sources			
Attendance at educational events			
Growers			
Dealers			
Agency staff			
Number of subirrigation systems installed			
Proportion of dealers using new technology			
Proportion of agents reporting use of microcomputer programs			

**FUTURE IMPLICATIONS:** While irrigation has increased, along with interest and skill in using new technology of design and operation to increase efficiency, there is an increased demand on ground water sources. This represents a concern which should be addressed in the next planning cycle.

**CONTACT**

Erie Gates, Extension Water Resources Specialist  
Land-Grant University

Control No. 09  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) AG, CRD  
 (List as many as apply)  
 Subject matter area Water management  
 Commodity/subject Irrigation, drainage, soil conservation, soil science  
 Audience Farmers, fruit growers, vegetable crop growers, dealers, agency staff  
 Methods Microcomputer programs, meetings, demonstrations

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Increased acreage irrigated	x.x mil acres (xxx% of 1981)
-vegetable crops	.x mil acres (xxx% of 1981)
-small fruits	.x mil acres (xxx% of 1981)
Irrigation efficiency improved	xx% of systems (from 1981 to 1986)

Expended time (FTE) on program				*VOLUNTEER			*SCOPE
*EXPENDED FTE				Year	Pers.	Dollar	Co. in St. 70
Year	Prof.	Para.	Vol.	Year			In report 50
1984	x.x			1984			
1985	x.x			1985			Other
1986	x.x			1986			
1987	x.x			1987			XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX



10

## REPRODUCTIVE MANAGEMENT IN BEEF CATTLE

**SITUATION:** Beef production in the state involves primarily the cow-calf segment of the industry. With increasing production costs and poor market prices over the past few years, very few producers are turning a profit. The small one-bull cowherd, where the bull remains with the cowherd year round, is the typical operation. Major cowherd reproduction problems in the state are (1) a low calf crop percentage weaned (currently estimated at less than 75%); and (2) a long breeding period and therefore a long calving period (beyond 80 to 90 days), which means lighter weight calves at marketing and a lower return per calf. By increasing the percent calf crop weaned and the percentage of calves born the first 21 days of the calving period, producers should realize an increase of 50 to 100 pounds marketed weight per breeding unit (\$35 to \$70 at current market prices). Continuing emphasis will be placed on nutritional management for heifer development and optimal cowherd production.

**OBJECTIVES** Beef producers, starting with demonstration herd cooperators, will:

- integrate reproductive management techniques with optimal herd nutrition;
- reduce the breeding period to 60 days for mature cows and to 45 days for yearling heifers, beginning 21 days prior to the breeding period for the cowherd;
- achieve at least a 90% calf crop weaned, with 70% of the calves born the first 21 days of the calving period; and
- initiate additional reproductive management techniques to increase market weight of weaned calves.

**PLAN OF ACTION** Training sessions and educational material will be provided to help county livestock agents plan and design 3 to 4-year programs for the establishment of controlled breeding programs, with at least one demonstration herd in at least 25% of the beef-producing counties. County agents will be assisted in setting up field demonstrations, trials, meetings, field days and in-depth reproductive management clinics. These will be coordinated with the work of animal nutrition specialists. Local veterinarians will be encouraged to help with educational activities. A reproductive evaluation program (Calving Sequence Analysis) will be incorporated into the state Beef Cattle Improvement Program (BCIP) computerized record-keeping. At the county level agents will work more intensively with cooperators in planning and implementing the controlled breeding program and setting up appropriate record systems.

**PLANS FOR EVALUATION** Accountability will be based on records of demonstration herds and graded calf sales. Assistance will be given to producers to obtain herd production and economic results. The BCIP records will be used as well as sales data. Requests for information from Cattlemen's Association and individual producers will be recorded as indicators of awareness.

**CONTACT**

Ware S. D. Beef, Extension Animal Husbandry Specialist  
Land-Grant University



Control No. 10  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture  
 (List as many as apply)  
 Subject matter area Animal Science  
 Commodity/subject Beef cattle; reproduction management; nutrition  
 Audience Beef cattle producers  
 Methods Field demonstrations, trials, meetings, field days, clinics, computer records

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Increased no. of demonstration herds	25
Increased % of calf crop weaned	10%
Increase in marketed weight per breeding unit	50 lbs.
% increase in market returns	15% over 1983 sale prices

*ESTIMATED FTE				*REPORTING PLANS			*SCOPE
Year	Prof.	Para.	Vol.	Year	Accom.	St. Impact	Co. in St. 70
1984	x.x			1984			In Prog. 43
1985	x.x			1985			Other
1986	x.x			1986			
1987	x.x			1987	XX		XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX

**REPRODUCTIVE MANAGEMENT IN BEEF CATTLE**  
**NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING**

- 1) The absence of a controlled breeding program limits or prevents the efficient use of many management technologies and opportunities, including a separate breeding period beginning prior to the cowherd for heifers, planning calving in step with forage production, pregnancy checking, estrus synchronization, and artificial insemination. First priority, therefore, will be given to educating beef cattle producers as to the advantages of controlled breeding periods. Once facilities are developed for separating the bull, other management practices will be introduced.
- 2) Additional reproductive management techniques include
  - cow identification
  - record keeping
  - enrollment in BCIP
  - pregnancy checking to cull open cows and heifers
  - breeding soundness exams for bulls
  - estrus synchronization and artificial insemination

**PLANS FOR EVALUATION**

1. County agents will assist each demonstration herd cooperators to set up and maintain herd records. Each year the agent will visit each cooperator to obtain the following information:

Number of virgin heifers, two-year olds, three-year olds, and mature cows (if pastured separately)  
Breeding period for heifers, cows, and individual breeding pastures  
Calving sequence analysis for each group and total herd (**see attached**)  
Percentage of calves weaned for each group and total herd  
Average weaning weight per breeding unit and per cow weaning a calf  
Average marketed weight per breeding unit for each group and total herd  
Number of cows culled in each group, with reasons for culling

Other practices adopted

- e.g. identification program
- enrollment in BCIP
- breeding soundness exams of bulls
- estrus synchronization
- artificial insemination

Nutrition information

- e.g. forage supplementation
- forage testing
- type of pasture
- post-weaning average daily gain of heifers

Farm information

- e.g. production of field crops, other livestock, horticultural crops
- purebred vs. commercial herd
- size of farm--acres owned and leased

These records will be sent to the beef specialist at the land grant university for aggregation across the state. To check on adoption of controlled breeding practices by other beef producers local veterinarians will be asked for names of producers requesting pregnancy checks or breeding soundness exams. These beef cattlemen will be visited by the agent to collect the same data as from cooperators, to encourage enrollment in BCIP, and to recruit the producers as demonstration herd cooperators. **Note: In order to raise producer awareness of the importance of herd record-keeping, attention will be given to working on data from individual producers and not just on results from graded calf sales.**

2. County agents will record the number of requests for information on reproductive management practices, the number of producers named by veterinarians, the percentage of producers visited recruited as demonstration cooperators, and graded calf sales results (including number of producers represented, number of calves sold per producer, and average weight per calf sold for each producer). It may be desirable to record results from sales at local markets, as well.

Analysis - Annual comparisons will be made of awareness indicators and of use of reproductive management techniques. Averages for Calving Sequence Analysis (CSA) and percentages of calves weaned will be analyzed by length of time in the program, nutrition indicators, herd size and breed (purebred vs. commercial), farm size and diversity. **[Note: When the BCIP computer programs include CSA it will not be necessary to collect these data from individual producers enrolled in the Beef Cattle Improvement Program. It may, however, be desirable to maintain the annual check on a producer's record-keeping to avoid systematic errors.]**

CALVING SEQUENCE ANALYSIS - A Program For the Evaluation of Beef Herd Reproductive Management

Calving Sequence Analysis is a simple program that allows cow-calf producers to evaluate their management effort, especially reproductive management. The analysis format as presented below emphasizes the importance of controlled breeding periods, early calving in the calving period and calving in step with forage resources. Most importantly, it allows for the evaluation of how replacement heifers are developed, bred and brought into the mature herd - the key to excellent cowherd reproductive management.

Calving Sequence Analysis (CSA) records present the percentage of the calf crop born in three 21-day periods corresponding to a desired 60-day breeding period for the cowherd. The starting date for determining the CSA records begins with the date that the breeding period begins for the mature herd and the subsequent expected calving date. For herds breeding longer than sixty days, all calves born after 63 days are figured in with the third 21-day period.

Optimal reproductive management and herd fertility will be reflected by herd CSA records of approximately 70-25-5. The example presents a well managed herd where yearling heifers are properly developed and bred beginning 21 days prior to the cow herd and for only 45 to 50 days. Incorporating Calving Sequence Analysis into existing performance testing programs and new micro-computer software will greatly aid the innovation of controlled breeding programs, which are a prerequisite to the widespread and efficient use of other available reproductive management technologies. This program will also provide an excellent evaluation instrument for Integrated Reproductive Management programs.

Calving Sequence Analysis

By 21-day Periods	Two-Year-Olds			Three-Year-Olds			Mature Cows		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
No. calves born	47	---	---	37	13	4	99	35	14
% calves born	100	---	---	69	- 24	- 7	67	- 24	- 9
Herd CSA record				74	- 19	- 9			
Avg. weaning wt.	449	---	---	459	411	387	492	463	401
By age group	---	449	---	---	442	---	---	477	---
Avg. for herd					464				



**REPRODUCTIVE MANAGEMENT IN BEEF CATTLE**  
**OUTLINE FOR INSTRUMENT**

Farm Information

Total acres farmed \_\_\_\_\_  
 leased? \_\_\_\_\_  
 owned? \_\_\_\_\_

Other farm production \_\_\_\_\_  
 field crops? \_\_\_\_\_  
 livestock? \_\_\_\_\_  
 horticultural crops? \_\_\_\_\_

Herd size - total \_\_\_\_\_ animals

virgin heifers _____	} (Pastured and managed separately?)
two-year olds _____	
three-year olds _____	
mature cows _____	
bulls _____	

Breeding period

How long was bull with  
 heifers? \_\_\_\_\_ days - before herd? YES  
 two-year olds? \_\_\_\_\_ NO  
 three-year olds? \_\_\_\_\_  
 mature cows? \_\_\_\_\_

Calving Sequence Analysis

	Percentage of calves born	Percentage of calves born	Percentage of calves born
	First 21 days	Second 21 days	Later
Two-year olds	_____	_____	_____
Three-year olds	_____	_____	_____
Mature cows	_____	_____	_____
Total herd	_____	_____	_____

Percentage of calves weaned

Two-year olds	_____ %
Three-year olds	_____ %
Mature cows	_____ %
Total herd	_____ %

**Average Weaning Weight and Average Marketed Weight per Breeding Unit**

	Average Weight of Calves			
	Weaning Wgt.		Marketed Wgt.	
	All Cows	Cows w/Calf	All cows	Cows w/Calf
Heifers	_____	_____	_____	_____
Two-year olds	_____	_____	_____	_____
Three-year olds	_____	_____	_____	_____
Mature cows	_____	_____	_____	_____
Total herd	_____	_____	_____	_____

Average pre-breeding weight of replacement heifers \_\_\_\_\_

Culling

Number of cows culled, with reason

heifers \_\_\_\_\_  
two-year olds \_\_\_\_\_  
three-year olds \_\_\_\_\_  
mature cows \_\_\_\_\_

Other practices

Check if applicable  
\_\_\_\_ identification program  
\_\_\_\_ pregnancy check  
\_\_\_\_ breeding soundness exam for bulls  
\_\_\_\_ estrus synchronization  
\_\_\_\_ artificial insemination  
\_\_\_\_ other - what?

Nutrition practices

What forage supplement used?      How much?  
Do you test your forage?  
What kind of pasture?  
Pasture fertilization?  
Seasonal forage grasses planted?

Time in program

Years in ECIP \_\_\_\_\_  
Years in Extension demonstration program \_\_\_\_\_  
Years on Extension beef cattle mailing \_\_\_\_\_

[Note: This instrument is designed to be used as an educational tool as well as a means of gathering information from beef producers. That is, some of the questions may be more important as a way of getting farmers to think about a topic than for the farmers' responses. The wording and format should be adapted for use in a particular situation, and agents should be thoroughly trained in using it.]

Average pre-breeding weight of replacement heifers \_\_\_\_\_

Average Weaning Weight and Average Marketed Weight per Breeding Unit		Percentage of calves weaned	
Market Weight	Weaning Wgt.	Mature cows	Total herd
All cows	Cows w/Cal	Mature cows	Total herd
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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## REPRODUCTIVE MANAGEMENT IN BEEF CATTLE

**SITUATION:** Major cowherd reproduction problems in the state were (1) a low calf crop percentage weaned (estimated in 1984 at less than 75%); and (2) a long breeding period and therefore a long calving period (beyond 80 to 90 days), which meant lighter weight calves at marketing and a lower return per calf. By increasing the percent calf crop weaned and the percentage of calves born the first 21 days of the calving period, producers could realize an increase of 50 to 100 pounds marketed weight per breeding unit (\$35 to \$70 at 1983 market prices).

**OBJECTIVES:** 1. Beef producers would (a) integrate reproductive management techniques with optimal herd nutrition; (b) reduce the breeding period to 60 days for mature cows and to 45 days for yearling heifers, beginning 21 days prior to the breeding period for the cowherd; (c) achieve at least a 90% calf crop weaned, with 70% of the calves born the first 21 days of the calving period; and (d) initiate additional reproductive management techniques in order to increase market weight of weaned calves.

**RESOURCES INVOLVED:** Forty-five cooperators demonstrated controlled breeding program and other reproductive management practices. A Calving Sequence Analysis was incorporated in the BCIP record system. Other data were provided by 59 veterinarians across the state.

**ACCOMPLISHMENTS/EVALUATION:** Cooperators' records and survey information, supplemented by records of veterinarians, calf sales, and agents, provided the following evidence:

INDICATORS OF ACCOMPLISHMENTS	1984	1985	1986	1987
Number of demonstration herds	12	19	31	45
% of calves born 1st 21 days (cows calving)	40%	45%	51%	65%
% of calves weaned (total breeding herd)	80%	81%	83%	87%
Average weaning weight	440	445	460	475
Average weaning weight/breeding unit	<380	<390	<411	<457
Average market weight	475	481	495	525
Total number beef producers	25,000	25,000	25,000	25,000
W/ identification program	10%	12%	13%	15%
Breeding yearling heifers prior to cowherd	.5%	.6%	.9%	1.2%
Enrolled in BCIP	1.1%	1.2%	1.3%	1.5%
Using pregnancy checking	.5%	.6%	.9%	1.2%
Using breeding soundness exams	.05%	.06%	.09%	.12%
Using estrus synchronization	3%	4%	5%	6%
Using artificial insemination	4%	4.5%	5.5%	6.5%
Testing forage	2%	2.5%	3%	3.2%
No. requests for controlled breeding info	136	499	1022	1583

The increase in % of calves weaned over the four-year period 7%

The increase in marketed weight per cow-calf unit 77 lbs.

Increase in % of market returns (constant sale price) 20.3%

**FUTURE IMPLICATIONS** Results of the controlled breeding program are evident in the increased calf crop (7% more weaned than in 1984) and average marketed weight (77 lbs. more than in 1984) in the demonstration herds. Interest among other producers is increasing; continued emphasis on this program should yield significant returns to beef producers.

**CONTACT**

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Land Grant University

Control No. 10  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture  
 (List as many as apply)  
 Subject matter area Animal Science  
 Commodity/subject Beef Cattle; Reproduction Management; Nutrition  
 Audience Beef producers  
 Methods Field demonstrations, trials, meetings, field days, clinics, computer records

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Increased no. of demonstration herds	33 more than in 1984
Increased % of calf crop weaned	7% (since 1984)
Increase in marketed weight per breeding unit*	77 lbs. (since 1984)
% increase in market returns (1983 sale prices)*	20.3%
*Data from herds enrolled in 1984 & 1987	

Expended time (FTE) on program			*VOLUNTEER			*SCOPE	
*EXPENDED FTE			Year	Pers.	Dollar	Co. in St.	70
Year	Prof.	Para.					
1984	x.x		1984			In report	43
1985	x.x		1985			Other	
1986	x.x		1986				
1987	x.x		1987			XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX



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## RURAL LAND USE MANAGEMENT

**SITUATION** Combined development pressures, major population shifts from urban to rural areas, changes in economic patterns, infrastructure developments, and on-going changes in agricultural related businesses result in pressures and stresses on land use. Often conflicting needs are represented in a land use decision-making process; agricultural concerns, recreation, environment, open space, economic development, and housing. In the face of these pressures, the most frequent result has been the conversion of prime land into such things as shopping malls, industrial parks, scattered housing, and abandonment. Communities are in desperate need of assistance that will help them balance growth within their city or town, while preserving farmland at the same time.

Of particular concern is the future of a major river basin in the state. About 50,000 acres of prime agricultural land which produce most dairy and vegetable commodities for many of the region's cities and towns, as well as for several urban areas, are threatened by development. If a community education process and land use strategy can be developed for a three-county area of the river basin it can serve as a demonstration project for the rest of the basin and for other agricultural areas of the state.

**OBJECTIVES** Within the three-county demonstration area:

- 1) increased concern for protection of agricultural acreage;
- 2) public participation in local land use planning process;
- 3) use of rural/agricultural data base for local land use planning;
- 4) comprehensive land use plan considered in at least 1 city and 1 rural area.

Beyond the demonstration area:

- 1) increased public awareness of land use problems and solution alternatives;
- 2) interest among local government officials in the processes and strategies used in the demonstration area; *land use planning*
- 3) use of rural land use data base. *(do over view)*

**PLAN OF ACTION** Development & updating of computerized data base (1983-87); organization of multi-agency project advisory committee, regional citizen/farmer advisory committee, and local farmland advisory committees (1983-84); workshops for local officials, landowners, realtors, and farmers in demonstration area (1983-85) and in other parts of the state (1985-87); consultation with local staff of cooperating agencies in demonstration area (1984-87) and other parts of the state (1985-87).

**PLAN FOR EVALUATION** Within the demonstration area, evidence of accomplishment will be the consideration of a rural land use plan in at least one city and one rural town (determined by monitoring local news); percentage of agricultural acreage for which concern is expressed (examination of proposed preservation strategies); establishment of advisory groups (indicated by minutes of at least two meetings per group); and requests from local government for use of the data bank. Requests for workshops, consultation, and use of the data bank will constitute evidence of accomplishment beyond the demonstration area.

**CONTACT**

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Land-Grant University

Control No. 11  
 State XX  
 Fiscal year(s) 1984-87  
 Program Area(s) Agriculture, CRD  
 (List as many as apply)  
 Subject matter area Land Use Planning  
 Commodity/subject Land Use Planning, Public Participation  
 Audience Citizens, Local Government Officials, State Agency Personnel  
 Methods Advisory committees, computerized data base, workshops

Estimated measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*ESTIMATED IMPACTS</b>	
Advisory committees formed	5
Requests from local government	30
Hours of use of rural data bank	500
Land use plans considered	
in three-county area	at least 1 per county

*ESTIMATED FTE				*REPORTING PLANS			*SCOPE
Year	Prof.	Para.	Vol.	Year	Accom	St. Impact	Co. in St. 70
1984	x.x			1984			In Prog. 3
1985	x.x			1985			Other 20
1986	x.x			1986			
1987	x.x			1987			XXXXXXXXXXXXXXXXXXXX
							XXXXXXXXXXXXXXXXXXXX

NOTES ON PLANNING FOR ACCOMPLISHMENT REPORTING  
RURAL LAND USE MANAGEMENT

- 1) While the preservation of farm land is a statewide problem, Extension's major efforts in the four-year period will be focused on the three-county area. Experience in what is possible, what works, what problems are likely to be encountered, etc. will guide expanded efforts in the rest of the river basin and the state. It is recognized that local government officials (e.g. planning board members, town council members) may hear about the project from their counterparts in the demonstration area, but no staff efforts at publicizing the project will begin until the advisory groups, computerized data base, and land use strategy alternatives have been established.
- 2) The term "comprehensive land use plan" has been used to designate any of an array of land use strategies which may be appropriate. At this point there is no basis for judging one to be superior for all local situations. It is considered more important that local government make some policy decisions regarding farm land than that a particular strategy is selected.
- 3) The role of Extension as a cooperator in this program is two-fold: to develop a process for involving various publics in rural land use planning, and to assist local officials in accessing the kind of information (e.g. the computerized data base, features of strategy alternatives) needed to make wise land use decisions. While there is an explicit attempt to get local government and citizens to address problems inherent in loss of agricultural lands, it is not the role of Extension to "push" a particular solution to those problems.
- 4) All of the evidence of accomplishment is available through normal program activities. While it will be necessary to devise a system for recording requests, for example, or actual use of the data bank, and for ensuring that advisory committee minutes are kept, these do not require extraordinary effort.
- 5) Other land use programs might have selected other indicators of results, such as the consideration of rural concerns in local government plans and reports, or having farmers appointed to planning boards and committees.

**PLAN FOR EVALUATION** The following data will be collected as evidence of accomplishments:

<u>Evidence</u>	<u>Data Collection Method</u>
<b>Concern for protection of agricultural acreage</b> (There were 5,000 acres of prime farm land in use in the three-county area and 92,000 acres in the state, according to State Department of Agriculture data for 1983. The goal is to create citizen concern re depletion of these lands.)	Farm land can be protected by a variety of strategies. In the 3-county area the project team will be very much involved and aware of the extent to which each is discussed. Beyond this area they will monitor the consideration of local land use plans, regional ag districting, establishment of conservation land trusts, and purchase of development rights in



locales where they have responded to requests for information. The number of acres affected will be determined by the appropriate Soil Conservation Service office and entered into the data base.

#### **Land use plan consideration**

(Consideration is defined as formal study by a local unit of government of a measure which is intended to preserve land for agricultural purposes.)

See above. Each local unit of government which considers one or more measures of farm land preservation will be counted as a "land use plan consideration".

#### **Public participation in land use**

**planning** (In the 3-county area, this is defined as the establishment of representative advisory committees at project, region, and local levels. When the group is organized and has met at least twice when minutes are kept, it is considered established.)

Project staff will be involved in organizing the advisory committees. Minutes will be sent routinely to the staff as consultants to the committees. Ideally, each township within the 3-county area that has significant farm acreage would organize a farmlands advisory committee recognized by local government.

#### **Public awareness of land use problems**

(Within and beyond the demonstration area, this is defined as sufficient interest to attend a public event such as a meeting or workshop on land use planning.)

Attendance records at program related meetings to which citizens and officials have been invited is the indicator of public awareness. Copies of attendance lists will be kept by the staff.

#### **Local government interest**

(This is defined as requests from local government officials for information and/or assistance regarding land use planning.)

A form will be developed to record and file the date, source, nature, disposition, and time involved in each such request, both within and beyond the demonstration area. While only the frequency of requests will be used as evidence of accomplishment, the other data will be analyzed for staff use in program development and improvement.

#### **Use of Rural land use data bank**

(Any request for information generated from the data base [e.g. disposition of land parcels, patterns in acreage devoted to specific land uses, population trends] or direct access by local planners to the computerized data base will be considered use.)

The computer logs all uses and users of the data base, with date and time. Both the number of entries and the hours of run time will be used as indicators of use each year after the data base is in place.



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## RURAL LAND USE MANAGEMENT

**SITUATION** Combined development pressures, major population shifts from urban to rural areas, changes in economic patterns, infrastructure developments, and on-going changes in agricultural related businesses result in enormous pressures and stresses on land use. Often conflicting needs are represented in a land use decision-making process, resulting in the conversion of prime land into such things as shopping malls, industrial parks, scattered housing, and abandonment. Communities have been in desperate need of assistance that would help them balance growth while preserving farmland. Of particular concern is the future of a major river basin in the state. About 50,000 acres of prime agricultural land have been threatened by development for other uses.

**OBJECTIVES** Within and beyond a three-county demonstration area:

- (1) increased concern for protection of agricultural acreage;
- (2) public participation in local land use planning;
- (3) use of rural/agricultural data base for local land use planning;
- (4) interest in appropriate land use plans by local government.

**RESOURCES INVOLVED** Cooperating agencies included SCS and ASCS; the state departments of agriculture, economic development, and planning; the regional council of governments; local planning departments, other government units, and chambers of commerce.

**ACCOMPLISHMENTS**

INDICATORS	1984	1985	1986	1987
No. acres of prime farmland				
in 3-county area	5,000	4,926	5,003	5,016
in state	92,000	91,127	90,316	90,008
% of acreage for which concern is expressed				
in 3-county area	2%	3%	10%	28%
in state	3%	3%	5%	12%
Land use plans considered				
in 3-county area	NA	1	2	4
in state	NA	NA	1	3
Public participation - No. advisory groups				
in 3-county area	3	3	5	6
Public awareness				
no. attendees at public events	52	88	312	892
no. public events	3	5	16	27
No. requests from local government	8	17	53	62
Use of rural data base				
no. entries	NA	48	146	502
hours computer time	NA	57	197	640

**EVALUATION** Data reported were acquired from public records and records of requests for assistance and computer use.

**FUTURE IMPLICATIONS** While the number of acres of prime farm land in the state has continued to shrink, public concern for protection of agricultural acreage and number of communities considering land use plans have increased in the three counties and the state. Indications of public concern warrant continued emphasis on rural land use planning in the next four year.

**CONTACT**

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 State XX  
 Fiscal year(s) 1987  
 Program Area(s) Agriculture, CRD  
 (List as many as apply)  
 Subject matter area Land Use Planning  
 Commodity/subject Land Use Planning, Public Participation  
 Audience Citizens, Local government officials, state agency personnel  
 Methods Advisory committees; computerized data base; planning workshops

Enter measurable impacts/results--keywords	Enter quantity--(economic or social)
<b>*QUANTIFIED IMPACTS</b>	
Advisory committees formed	6
Requests from local government	62
Hours of use of rural data bank	894
Land use plans considered	
in three-county area	4
in rest of state	3

Expended time (FTE) on program				*VOLUNTEER			*SCOPE
*EXPENDED FTE				Year	Pers.	Dollar	Co. in St. 70
Year	Prof.	Para.	Vol.				
1984	x.x		x.x	1984			In report 3
1985	x.x		x.x	1985			Other 15
1986	x.x		xx.x	1986			
1987	x.x		xx.x	1987			

## ACKNOWLEDGEMENTS

The four state program leaders in the North Carolina Agricultural Extension Service nominated major programs which they believed would be widely applicable across the nation at both state and local level. An external review panel, consisting of one person from each Extension region plus two from ES-USDA, was appointed to assist in the project.

To supplement the major programs nominated in North Carolina, the four-year plans of work from the other states represented on the review panel were examined to find examples of other widely applicable programs and means of assessing program accomplishments. The panel chose the examples to be included and considered carefully what information regarding plans for evaluation might be usefully added. They have reviewed preliminary drafts of this document, providing insightful guidance for revisions.

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Many other persons throughout the country reviewed an earlier draft of these materials. Their constructive criticism is very much appreciated.

Joan Wright