Farm health and safety of children: An investigation of educational needs through focus group interviews

by

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CHAPTER I. INTRODUCTION

Every year hundreds of children are killed and thousands injured in agricultural accidents in the United States (Woody, 1988). The exact extent of the problem is difficult to determine since no uniform reporting system is available. Rural children face many of the same threats to safety that urban children face such as falls and accidents on bicycles, as pedestrians, and with motor vehicles. However, farm children are also endangered by living in the midst of the most dangerous workplace in the United States (National Safety Council [NSC], 1986), a workplace that is an assemblage of heavy machinery, chemicals, livestock, and numerous other hazards ("Let's 'farmproof'", 1988).

In no other occupation in the nation are children exposed to the types of equipment, livestock, and related dangers on such a consistent basis as they are in production agriculture. Children often play close to or actually in areas where work is being done. Many children accompany their parents in working situations because of a lack of available child care, which may be due to finances, distance, or immediacy of a situation, or so the family can spend time together.

Farm children are also exposed to dangerous

chemicals, livestock confinement dust, and contaminated water supplies as well as other types of chronic health risks. At this time, there is still much uncertainty about the long term health effects of such exposure. It is known that farmers and farm workers suffer from chronic lung disease, certain types of cancers, hearing loss, and skin disorders (National Coalition of Agricultural Safety and Health [NCASH], 1988). Because of their smaller size and developing bodies, children may actually be more endangered than adults in contact with the same risks.

Farm safety is a unique type of safety problem. Many farm accidents occur far from medical help or even far from a means of contacting help. Farmers work long, physical hours and that affects their alertness and reaction time. They work around powerful, dangerous machines, unpredictable animals, and hazardous chemicals in all types of weather (Schafer & Kotrlik, 1986). Their safety program is entirely self enforced. Even with unlimited funding, it would be impossible for a safety engineer to supervise each farmer (Florio & Stafford, 1969). The Occupational Safety and Health Administration (OSHA) has no input into farms with ten or fewer employees. Proper engineering of safety features on equipment and safety education for farm families are the

best tools available at this point.

The problem is not unique to the United States; it is worldwide. At an international labor meeting held in Geneva in the 1960s, farm safety was considered a serious enough concern to develop a book of guidelines detailing farm safety procedures. Included in those guidelines were mandates that everyone who works on a farm should possess necessary training and education in order to work safely and that the farmer has the main responsibility for safety (International Labour Office, 1969).

Neither is this a new problem. Graham L. Shanks made reference to it in his 1931 thesis, quoting a bulletin from Canada covering the period from 1919 to 1928. The number of fatalities to young people under age 18 who were involved in farming during that time period was more than 2 1/2 times greater than the rate of fatalities occurring in the next highest age group. In contrast, all other industries listed either had similar rates for young and old workers or higher fatality rates among older workers (Shanks, 1931). Shanks says, "This is due doubtless to uncontrolled home employment more than to any special hazard, but constitutes one of the special problems of farm accident prevention" (pp. 26-27).

Very recent research has also recognized the unusual inclusion of children in farming's occupational hazard statistics. A conference entitled "Agricultural Occupational and Environmental Health: Policy Strategies for the Future" was held in Iowa City and Des Moines, Iowa, in late September 1988. Approximately 170 scientists, policy makers, and private citizens participated in this first attempt to draw together the various disciplines involved in agricultural health and safety issues. From this, the National Coalition for Agricultural Health and Safety (NCASH) was formed. In their "Report to the Nation", they acknowledged that education on farm safety and health issues needs to begin at an early age (NCASH, 1988). Education at a young age is necessary partly because of the high number of deaths and injuries occurring to that age group, but also to prepare future agricultural workers for the types of hazards they may face if they become part of the agricultural work force.

A large part of the education of farm children comes from observing adults working on the farm. Therefore, education in health and safety issues for both adults and children is necessary. Anytime a task is initially introduced, it must be taught safely and correctly (Bettis, 1972). Only then will working

conditions, equipment, supplies, and tools be maintained safely and correctly. If not, unsafe attitudes and practices will continue to be reinforced.

Another source of training could come from educational programs. Unfortunately, almost nothing exists specific to farm safety until a child becomes 14. At that point, anyone between the ages of 14 and 16 must attend a tractor driving course in order to work for hire for someone other than his or her parents (Federal Register, 1970). That federal law does not apply to individuals working on the family farm, working without pay, or trading labor. In addition to the required training, 4-H (the youth organization of the Cooperative Extension Service), Vocational Agriculture classes and the accompanying youth organization, FFA, all provide some information through their regular programs.

Clearly, the problem of health and safety for farm children is interdisciplinary. It involves occupational health professionals and agricultural engineers to deal with the occupational and equipment aspects. Unfortunately, those fields generally focus on the problems from an adult perspective. Therefore, family life and child development educators are needed. They can provide input on how family patterns and

developmental stages relate to healthy behavior. Another area that could benefit from their expertise is the evaluation of age appropriate educational material. In addition, medical personnel are important contributors of information on emergency preparedness, first aid information, and health research.

In the past, engineers, educators, and medical professionals have not had a central communication system for discussing the interrelatedness of the research or educational work they are doing. At the same time, declining farm population removes agricultural health issues from the top of priority lists in fields that could provide the necessary forum, such as home economics or safety. Until the development of the still infant NCASH, the farm health and safety issue was not a cause that had been adopted by any major effort, possibly due to lack of funding and to the complicated interrelationships among children, environment, caregivers, and culture (Garling & Valsinger, 1985).' With so many fields involved and no clearinghouse, it is difficult to ascertain what kinds of programs are being conducted to combat the problem of agricultural risks to children's health and safety.

Safety and health issues are management functions. In order to develop an effective educational program

addressing these concerns, it is important to get facts, determine and assign priority to needs, develop an action plan and obtain support (Strasser, Aaron, Bohn, & Eales, 1967). A systems analysis approach is helpful, one which will clarify strengths and weaknesses (Hayes & Linn, 1977). All this points to a needs assessment, in other words, discovering the difference between "what is" and "what should be" (Charlson, 1983).

The purpose, therefore, of this study is to discover what types of educational resources are needed and/or available in this interdisciplinary field. Several different perspectives will be considered:

1. What is the extent of the problem of accidents and fatalities occurring to farm children?
2. What types of educational programs are available to teach agricultural health and safety?
3. What types of educational programs have been shown to be effective in safety education?
4. What needs are not being addressed by educational programs currently available?

Operational Definitions

Accident - unplanned act or event causing injury, death, or damage to property that results from an unsafe condition (Wayne, 1982).

Farm - a rural place from which $1000 or more of agricultural products were sold or normally would have been sold in the reporting year (National Safety Council, 1986).

Farm children - children from ages 0 to 18 who reside on a farm.

Needs assessment - process of ascertaining and documenting the discrepancy between "what is" and "what should be" (Charlson, 1983).

Objectives

There were several objectives for this project. They include the following:

1. To summarize available research on the types and frequency of farm related accidents occurring to children.

2. To ascertain the most critical needs existing in the area of farm safety and health as perceived by professionals working in the field in Iowa.

3. To determine the most appropriate target audience(s) for educational programs relating to the safety and health of farm children.

4. To develop a resource list of organizations, programs, and materials existing in Iowa available to assist with farm health and safety education as a pilot

project for possible national use.

5. To investigate educational programs used effectively for other types of children's health and safety issues in order to make recommendations for farm health and safety curricula.

Limitations

This research was conducted in Iowa with Iowa people. Caution must be taken when applying the results to other areas of the country which might have significantly different needs and/or resources than those reflected here.

CHAPTER II. LITERATURE REVIEW

Needs Assessment

The process of problem solving involves six widely accepted steps (Kaufman & English, 1979). First, it is necessary to identify exactly what the problem is. The second step is to determine various alternative solutions. Third, the most viable solutions must be chosen from the list of alternatives. The chosen solution must then be implemented. The fifth step is to evaluate the effectiveness of the chosen solution. Finally, any revisions must be made and the cycle begins again.

It seems logical to assume that in order for the solution to be effective, it is important that the problem be identified as precisely as possible. In fact, Daniel L. Stufflebeam said in a 1978 interview:

> Misdirected activities often waste large sums of money and do disservice to people. We have to make sure that our goals are justified and responsive to the needs of the people to be served. The best way to do it is on a prospective, proactive basis.... It means that before we arbitrarily set off in a certain direction, we have thought about who we are serving, what we want them to be able to do, what

> they want to be able to do, and what they can and cannot do (Brandt, 1978, p. 250).

In other words, before methods of solving a problem can be chosen, it is important to know as much as possible about the problem from a variety of perspectives.

Both the validity and usefulness (Kaufman & English, 1979, coined the term "ulidity", p. 71) of solving the problem must be recognized by several very different audiences; the learner, the educator, and the community (Kaufman & English, 1979). The learners must agree that the problem ought to be solved or they can block the solution. The educators' viewpoints must be included so that appropriate solutions can be devised and implemented. The involvement of the community is sometimes overlooked, but is important for at least two reasons. In many situations, it is the community that will pay for either what is or what is not accomplished. If the community does not believe the chosen problem is valid, they will not be as supportive of the solution. A second concern of the community is the fact that they will receive and evaluate the learners as they function in the community setting. Therefore, how effectively the problem is solved directly impacts the community's future.

Needs assessment, then, becomes the first critical

step in making certain the appropriate problems are identified. But what exactly is "needs assessment"? Kaufman and English (1979) define needs assessment as "a formal process which determines gaps between current outputs or outcomes and required or desired outputs or outcomes; places these gaps in priority order; and selects the most important for resolution" (p. 8). When defined in this manner, needs assessment becomes an integral part of a systems approach for constructive and positive change. A similar interpretation is that needs assessment serves to clarify intent, determine the current status of a situation, and identify the areas of strengths and weakness within that situation (Hayes & Linn, 1977).

There are several pitfalls of which to beware. One is that determining the gaps between current outcomes ("what is") and required outcomes ("what should be") implies that one knows what the ideal state should be. A closely related concern is that there is little distinction between "needs" and "wants". "Need" is a term that is largely context sensitive with no absolute standard. One interpretation is that "need" stops and "want" begins just at the level of adequacy (Scriven & Roth, 1978). People may want things that they do not need. Conversely, people many times need something they

do not want.

Another concern is that a needs assessment should identify the desired end first. Then, that is used as the basis for determining the most effective means to satisfy the need (Kaufman & English, 1979). That does not always occur; the problem has been documented. In a study of how teachers of health curricula plan their lessons, it was discovered that the instructors focused more on materials used and the instructional process than they did the content and objectives for the course (Carter & Lee, 1989). By neglecting to identify and justify the end first, an instructor takes the chance that good ideas and tools may fail for the wrong reasons. Another risk is wasting resources, both time and effort, on the part of educator and learner (Kaufman & English, 1979).

Another matter of consequence is that both met and unmet needs be identified as such. By concentrating only on unmet needs, one may be setting the stage for a future where currently met needs become unmet needs (Brandt, 1978). That can result in the pendulum swinging from this season's unmet needs to next season's unmet needs and back again. Progress made under those circumstances is circular. Such a view implies that needs assessment is difficult to distinguish from evaluation - where does

each begin and end?

Such a model is one subscribed to by many. The "International Charter for Health Education" (Association for the Advancement of Health Education [AAHE], 1989), says needs and goals provide the basis for evaluation. It goes on to say that the assessment of program results should be used to determine future directions. Daniel Stufflebeam agrees. His CIPP model of evaluation contains four main components that form the acronym of its name. It evaluates a program by context or planning decisions, by input or structuring decisions, by process or implementing decisions, and by product or recycling decisions (Stufflebeam, 1983). The intended use of the model is to help the responsible leadership and staff promote growth of their learners by obtaining feedback on a systematic basis in order to most effectively meet their needs with the most efficient use of resources. Again, it is a never-ending process of needs assessment and evaluation. Hayes and Linn (1977) agree that it is a difficult distinction to make. Perhaps the most useful view of the relationship between needs assessment and evaluation is that needs assessment is "an imperfect tool which is perfected with successive applications" (Kaufman & English, 1979, p. 276).

A final important difference exists between

community needs and individual needs (McMahon, 1970). While the needs of either can be assessed, it is important to determine which needs are being investigated before appropriate action can be taken.

Having justified the reasons for a needs assessment and the potential dangers of one, how exactly should a needs assessment be conducted? Kaufman and Harsh outline three different models (Kaufman & Harsh, 1969).

1. Inductive. Existing behaviors are compared to broad goals. Based on discrepancies, detailed objectives are set and educational programs developed.
2. Deductive. Goals are developed as well as criteria for expected behavior. Changes necessary to attain expected behavior are identified, objectives set, and educational programs developed.
3. Classical. Goals are generated (using no particular system) and programs developed.

A model that was developed especially for the health field is the Health Interests and Practices (HIP) Framework (Downey & Feldman, 1986). It combines both interest needs and performance needs of the target audience in a matrix that makes program focus recommendations. For example, any time performance is positive (desired behavior is exhibited), programs should

focus on reinforcing, refining, and/or refreshing types of activities. With negative performance and high interest, programs should help encourage behavior adaptation by providing opportunities to initiate and incorporate healthy behavior into the learner's lifestyle. With negative performance and low interest, the program ought to concern itself with awareness activities before any of the other levels can be reached. In other words, an interested attitude is a precursor to a positive behavior change. This model can be a helpful tool for placing needs in priority order, yet provides a progressive system for addressing changing needs.

Stufflebeam lists six steps in needs assessment (Brandt, 1978). First, the purpose for conducting a needs assessment must be established. Second, variables of interest should be identified, pertinent to policies, audience, and subjects. Obtaining judgements about the importance of each of the variables is the third step. Next, it is necessary to verify the current status of the variables, for example, measuring a student's performance on a desired outcome. Conclusions must then be drawn. Finally, findings should be applied to the program. Kaufman and Harsh closely parallel these steps in their "Function Flow Diagram of a Planning Model" (Kaufman & Harsh, 1969); however, they add the concept of

a maintenance program.

Models and theories provide a useful lens with which to view needs assessment, but they need to be held together with specific methods. What techniques are available to conduct a needs assessment that has "ulidity"? Advisory committees, personal or telephone interviews, consultations, community studies, suggestion boxes, and surveys are a few techniques (McMahon, 1970). Others include tests, group problem analysis, job performance reviews, record and report analysis, the Delphi technique, and cybernetics (Charlson, 1983). A technique that is gaining popularity in health fields is the focus group interview (Basch, 1987).

Focus Group Interviews

Focus group interviews are "carefully planned discussions designed to obtain perceptions on a defined area of interest in a permissive, nonthreatening environment" (Krueger, 1988, p. 18). Another more specific definition is "a discussion in which a small number (usually 6-12) of respondents, under guidance of a moderator, talk about topics that are believed to be of special importance to the investigation" (Folch-Lyon & Trost, 1981, p. 444). The discussions are then analyzed and used to obtain qualitative information about a

product, problem, or procedure.

Qualitative research tries to answer "why" questions instead of "how much" usually addressed by quantitative methods (Folch-Lyon & Trost, 1981). Qualitative research may be used alone. Other times it is used in conjunction with more quantitative techniques. Both types have appropriate places in research. It is imperative that they be chosen for the correct purposes so the two types can enhance one another.

Focus groups are a unique research technique because they allow for group interaction, provide insight into why opinions are held and, how ideas are formed. They differ from other types of group procedures in that they do not aim for any type of group consensus or decision making. Instead, they center around describing and understanding rationales and feelings, defining a problem, or reacting to proposed solutions (Basch, 1987).

A wide variety of purposes have benefited from use of focus group research. Focus groups have been used to generate new ideas, as a prelude to refining or defining quantitative research, to develop more effective questionnaires, as input into new product development or to evaluate existing products (Greenbaum, 1988). Other uses include to develop political campaigns, acquaint researchers with appropriate language, detect problems,

educate the public, and test clarity or comprehension of a publicity campaign (Goldman & McDonald, 1987). Generating hypotheses (Fern, 1982), providing background on a product, or interpreting previously obtained quantitative data are several other uses (Bellenger & Greenberg, 1978), as are planning membership recruiting techniques, discovering how people make decisions, and conducting needs assessments (Krueger, 1988). Some uses directly related to health education include pretesting messages and materials, gaining insight about consumers' perceptions, developing services responsive to consumers, and studying concerns and barriers to implementation (Basch, 1987).

The following generalizations about the above uses can be made: focus groups can be used to gain insight into dynamic relationships among opinions, attitudes, motivations, concerns, and problems related to current and projected human activity. They are valuable in determining basic behavior such as reactions to a specific stimuli (Folch-Lyon & Trost, 1981). Gordon Black, a market researcher for a firm in Rochester, New York, said of focus groups, "Their best use is to help you avoid doing really dumb things," (Kelleher, 1982, p. 91). Many projects as diverse as launching a new product, enhancing educational materials, and determining

why physicians adopt certain medical practices have been spared costly mistakes on the basis of information gained through focus group research.

The technique has its roots in social science in the early 1930s (Krueger, 1988). Scientists doubted the accuracy of many methods used at that time. Of special concern was the extreme influence held by the interviewer or survey designer who directed the type of information received by using close-ended questions and limited answer selections. More non-directed types of interviews were conducted to shift the emphasis from the interviewer to the responder. During World War II, groups of people in directed interviews were used to help increase the morale of the military.

Market research circles recognized the impact focus group research could have in their field. In 1957, Dr. Herbert Abelson, a psychologist with Opinion Research Corporation decided to collectively interview several participants who happened to arrive at the same time for individual interviews. "The additional information yielded by the interaction among the respondents prompted his further development of the technique," (Goldman & McDonald, 1987, p. 5). It has been within market research that the bulk of developing literature comes.

Social scientists have fairly recently rediscovered

focus group interviews. They have found important uses for focus groups in the fields of education and health (Keller, Sliepcevich, Vitello, Lacey, & Wright, 1987), (Heimann-Ratain, Hanson, & Peregoy, 1985) as well as economics (Catalyst, 1983). In such fields, people quite often do not know how they feel about an issue or their opinions are strongly influenced by others. A group interview can help discover a client's perceptions, feelings, and attitudes in those situations where a survey would be inadequate.

One of the main advantages of focus group interviews is that it is a socially oriented research procedure that reflects the dynamics of the social interactions of people (Krueger, 1988). Participants tend to be less on guard against personal disclosures, members help facilitate strong expression by the support they give one another, and the dialogue tends to activate memories, feelings, and experiences that might otherwise be forgotten (Folch-Lyon & Trost, 1981). The group dynamics give insight into how peer pressure affects acceptance of a new product, concept, or idea (Greenbaum, 1988).

A second advantage is that a focus group moderator has the opportunity to ask probing, clarifying questions that would not be possible through a survey or a more structured interview. If confusion or discrepancy

arises, the moderator has the flexibility to rephrase the question or ask for follow-up information (Krueger, 1988).

Focus groups are valuable means of beginning research in areas where little information is available. It can help provide impressions, generate hypotheses, and give form to kernels of ideas (Keller et al., 1987). Multifaceted problems can be addressed with more complete, accurate decisions that are responsive to client's needs and wishes (Catalyst, 1983).

Partly due to the possibility of more clearly defining both questions and answers, the validity of information received through focus group interviews tends to be high. In fact, a 1978 study estimated predictive validity in that focus group series in excess of 90% (Reynolds & Johnson, 1978). Goldman and McDonald say "...we can say that qualitative findings, though certainly not subject to precise replication, are a more psychologically valid representation of how people think and feel than survey responses" (1987, pp. 10-11). However, it is not accurate to say that research is valid simply because focus groups were conducted. "Focus groups are valid if they are used carefully for a problem that is suitable for focus group inquiry" (Krueger, 1988, p. 41).

Although no research is inexpensive, focus groups have a relatively low cost when compared to other techniques. The size of a sample can be increased without dramatically affecting costs in terms of dollars or time by simply increasing the number of participants per group (no more than 12 are recommended) or by adding another group (Krueger, 1988).

Results can be received very rapidly when compared to other types of research. Part of the speed depends on the analysis procedures used and the purposes of the study (Fern, 1982).

In spite of the many advantages, focus group interviews are not without limitations. Perhaps one of the biggest is the difficulty of analyzing the reams of diverse data obtained (Bellenger & Greenberg, 1978). How should it be done? Who should do it? In what form should it be reported? There are a wide variety of procedures available. In order for the results to be useful, appropriate analysis techniques must be based on purposes for the study. Qualitative data are more difficult to categorize than quantitative data.

By using open-ended, non-directive methods, the researcher may have less control of the process, particularly if the researcher and the moderator are different people. While that technique can give greater

insight into the thoughts of the participants, many traditional researchers have a difficult time coping with the free reins that requires (Krueger, 1988).

Trained interviewers (generally referred to as moderators) are needed to do a good job of focus group interviews and are not always easy to find. A good moderator must be knowledgeable about sociology, psychology, communications, public relations, and familiar with the subject matter of concern. At the same time, too polished or expert a moderator can compromise the open, accepting atmosphere required by focus groups (Bellenger & Greenberg, 1978).

Another aspect that concerns researchers accustomed to quantitative techniques is that results cannot be generalized to a larger population because focus groups are rarely comprised of a random or representative sample (Basch, 1987). Although the validity tends to be high, reliability can be a problem. Each group contains a different mix of people who interact in a unique way. No two groups are alike. Neither is the same group alike at different points in time.

The logistics of setting up focus groups can be a problem. Finding the right combination of people and a time and location that is both convenient for them as well as conducive to good discussion can be a real

challenge. Some communities are blessed with excellent facilities while others have few options (Bellenger & Greenberg, 1978; Krueger, 1988). In some cases, the physical requirements of a focus group virtually exclude certain populations such as the very young or very old, speech or hearing impaired, and people with other types of handicaps (Basch, 1987).

Because of their flexibility, focus groups can easily be misused. For example, preconceived ideas can be more easily supported with an untrained or unethical moderator (Basch, 1987). In some cases, focus groups can even be turned into more of a sales group for promotion rather than a research group (Goldman & McDonald, 1987).

The initial step in conducting a series of focus group interviews is to decide the purpose for doing so. Calder has identified the following three distinct types of focus groups based on their purpose (Calder, 1977).

1. Exploratory groups are usually classified as prescientific. Such groups are generally followed or preceded by some type of quantitative research. They help obtain reactions to stimulus changes (Folch-Lyon & Trost, 1981).
2. Clinical groups are usually classified as quasiscientific and can be considered phony scientific if incorrectly used. Clinical groups are

used to find out how and why people behave as they do, sometimes probing into their subconscious (Folch-Lyon & Trost, 1981). Often, clinical judgements are based on the findings.

3. Phenomenological groups are highly interactive, intersubjective groups to help the researcher "experience the experiences of the consumers" (Calder, 1977, p. 360). Once the purpose is clearly defined, the planning process can be undertaken.

Chronological and fiscal plans should be made (Krueger, 1988). The organizers face the following decisions:

How many participants should be in each group?

There needs to be enough so that a diversity of opinions are available, necessitating at least six participants. More than 12 participants tend to have diminishing returns (Folch-Lyon & Trost, 1981). People need to feel their opinions are important and that there is an opportunity to share them. Large groups can inhibit both conditions.

Many researchers overbook participants by about 20% to ensure a minimum number in case anyone forgets or drops out at the last minute (Greenbaum, 1988). If so, a decision must be made on what to do if too many people arrive on the day of the interview.

Who should participate?

The members of the group are usually unfamiliar to each other and are selected because they are homogeneous in terms of the research topic. Socioeconomic status and in some cases age, race, and/or sex can be important considerations (Folch-Lyon & Trost, 1981). Purposive rather than probability samples may be used in choosing participants to yield the most effective discussions (Basch, 1987).

How many groups should be held?

A series of two to eight groups are generally conducted for any one purpose (Goldman & McDonald, 1987). Less than two is generally considered unacceptable and more than ten are rarely worth the cost. However, within that range, it will depend on the purpose and the diversity of the population to be studied. One guideline is to conduct groups until similar groups give similar results (Bellenger & Greenberg, 1978).

Where should the groups be held?

The location must be easy to find and as convenient as possible for the participants. It needs to be comfortable and pleasant. Steps should be taken to ensure that both the physical and psychological atmosphere is encouraging and non-threatening (Greenbaum, 1988).

How long should a session last?

A common length is 1 1/2 to 2 hours. Longer time periods can be successful under certain circumstances such as with persons who have traveled large distances or in the case of some professionals who are committed strongly to the research. On the other hand, focus groups consisting of children or teens should be kept to no longer than an hour (Greenbaum, 1988).

What questions should be asked?

Although flexibility is a key, a specific line of questioning must be developed in order for focus groups to be effective (Greenbaum, 1988). Questions should be open-ended and non-judgemental. A common mistake is to try to discuss too many questions (Goldman & McDonald, 1987). The line of questioning should proceed from general to specific.

When the planning is completed, the actual interviews are ready to be conducted. When conducting the interviews, the moderator must help the participants feel at ease and encourage involvement while keeping the group on task (Bellenger & Greenberg, 1978). It is important that participants know the overall goals of the discussion so they can assist the moderator in staying focused (Basch, 1987).

Generally, the discussions are audiotaped. In some

instances, participants are observed through a one-way mirror or video taped as well. Participants should be informed of any such "surveillance" and assured of anonymity.

An assistant moderator can be helpful in dealing with a variety of logistical concerns such as making certain audiotaping equipment is properly functioning, handling outside interruptions, and helping to act as host (Basch, 1987). Such assistance frees the moderator to concentrate more efficiently on questioning and listening duties. The assistant moderator can also play an important role in validating the analysis of the focus group proceedings.

Analysis and reporting of focus group results can take a variety of forms. Audio recordings of the sessions can be transcribed and analyzed by several different methods. In some cases, repeated listening to the tapes can provide the basis for analysis, eliminating the need for costly, slow transcriptions. In most cases, at least two people should separately analyze the proceedings to ensure the validity of the analysis (Archer, 1988). It is helpful if those who do the analysis were able to view the interviews so they have more insight into non-verbal forms of communication that took place, something difficult to capture in the

transcription of an audiotape.

One way to analyze written transcripts is to formulate categories based on key words, quotes, and ideas. Categories can be grouped into general themes and further refined into subtopics forming an outline of concerns and findings (Basch, 1987).

Another method of analysis is to develop a data collection guide (DCG) for each question. DCGs are instruments to help simplify and condense content analysis and are based on literature reviews of what is known about the topic. After each question is analyzed, the results are looked at collectively for formulating final conclusions (Keller et al., 1987).

Content analysis has been conducted by such basic means as cutting transcripts apart and grouping comments by topic (Krueger, 1988), and by such sophisticated means as computerized analysis (Archer, 1988).

Whatever method is chosen, the resulting report must address the purposes developed during the planning stage. It should be easy to read and logically organized so that it synthesizes, structures, and interprets data rather than merely presenting a sequential summary of what occurred at the interviews. "In our view, the ideal qualitative report lies somewhere between good science and good journalism: carefully structured and precisely

but gracefully written" (Goldman & McDonald, 1987, p. 171).

Farm Health and Safety Research

Although most sources agree that agriculture is now the most dangerous occupation in the United States, that is where the agreement stops. In spite of, indeed, perhaps because of, the many disciplines involved in farm health and safety issues, there is no single, consistent data collection agency. Each agency has a slightly different definition for farm accidents, somewhat different purposes for collecting statistics, and various methods and guidelines for developing them. Obviously, there are problems in obtaining reliable statistics.

At the 1987 summer meeting of the American Society of Agricultural Engineers (ASAE), Mark Purschwitz and Bill Field presented an overview of various types of collection systems and sources of data used at that time. They discussed eleven sources of data most frequently utilized by the state agricultural safety specialists. Among them are, in order of most frequent use; newspaper clippings, death certificates, reports from county agents, workmen's compensation claims, police reports, and various types of medical reports (Purschwitz & Field, 1987).

All of the sources have problems. None of them

gives a complete picture of the occurrence of fatal and non-fatal farm accidents. For example, newspaper clippings only report accidents considered newsworthy. Death certificates often lack adequate information in order to appropriately categorize statistics. Most injuries are not reported in any consistent manner.

The collection systems Purschwitz and Field review do not fare much better. Specific agricultural systems include National Safety Council surveys which rely on interview surveys of farm families, worker's compensation surveys which focus only on employees, the North Dakota Fatal Agricultural Injury Circumstances and Epidemiology program which includes only fatal injuries and is confined to one state, and various types of survey studies that attempt to verify how well survey data coincides with other records such as hospital data. The acronyms of the many agencies involved sound like alphabet soup.

In his own attempt to summarize accident data, Arnold Skromme, retired agricultural engineer, chronicles the dead ends he encountered in his endeavors. He lists the many agencies and organizations that were either unwilling or unable to assist him either due to lack of financial and/or personnel resources (Skromme, 1988). In desperation, he finally decided to assemble his own

report, based on data received from states with farm safety specialists who were able to respond to his request.

Funding is one of the major problems. In a comparison of 1985 Federal funding for safety programs in agriculture and mining (the two most dangerous occupations), and an average of all occupations, agriculture came up the loser with less than $.32 per worker compared to mining's $188.78 and an overall figure of $4.44. The funding levels per disabling injury were $6.00 for farming, $4,719.00 for mining and $236.00 overall. None of these figures included accidents occurring to children under age 13 who may account for about 10% of farm related injuries. That would result in an even smaller proportion to farming. As it is, farm safety accounted for less than one half of one percent of federal occupational safety spending (Purschwitz & Field, 1986).

In order to facilitate more efficient use of sparse federal funds by eliminating duplication and incompatible efforts, the National Coalition of Agricultural Safety and Health recommended targeted appropriations. In doing so, they tried to assign various tasks connected with agricultural health and safety to those agencies best equipped for it. Their recommendation is for

surveillance responsibilities to be handled by the National Institute of Occupational Safety and Health (NIOSH), the Center for Environmental Health and Injury Control (CEHIC), and the National Center for Health Statistics (NCHS) all within the Centers for Disease Control (CDC) (NCASH, 1988).

A problem with most injury surveillance systems is that the data have been initially collected for other purposes (such as death certificates or insurance claims) and is therefore missing information that could be helpful. A good quality surveillance system is one that is acceptable to those who are operating it, timely, representative of its defined population, simply designed, and flexible. In addition, it should correctly identify all the true cases within its population (i.e., if a grain suffocation death occurred, was it classified as farm related or simply a suffocation) as well as correctly identify and eliminate the false cases (i.e., a household accident that had nothing to do with being on a farm) that may be included (Graitcer, 1987). Another condition necessary to be most useful is that a surveillance system must be able to be generalized on a national basis yet able to be broken down on a local basis. If properly collected, health surveillance information can be used to provide morbidity and

mortality rates, detect clusters of health abnormalities, identify factors in occurrence, stimulate epidemiologic research, and determine effectiveness of preventive programs (Graitcer, 1987).

With the understanding that existing surveillance statistics are estimates at best, it is time to look at what some of the estimating studies have shown with regard to farm health and safety concerns for children. Although there are few studies that concentrate on children, there are many that include components relevant to children's problems.

A study in Indiana reported in 1982 focused specifically on farm children (Field & Tormoehlen, 1982). When adjusted for hours of exposure to farm hazards, children ages 5-14 were almost three times as likely to be involved in a farm accident as any other age group. The majority of the fatalities that occurred to children were male. Although 79% of the fatalities occurred to children who lived on a farm, at least 18% of the victims were non-farm residents, most likely visiting friends or relatives.

In the same study, over 60% of the fatalities involved either extra riders on a tractor or extremely young (age 5-10) tractor operators. Another 20% of the accidents involved becoming entangled in a power take off

(PTO) shaft, auger, or other moving equipment part. The third major cause of death was asphyxiation at 8%, nearly all in flowing grain. An analysis of accidents by ages indicated peaks at ages 2 and 15.

Another study conducted in Wisconsin focused on children who were fatally injured in farm accidents from 1970-1984 (Tormoehlen, 1986). A total of 247 children died during that period, an average of over sixteen deaths per year in one state. They accounted for nearly 29% of the farm fatalities. Tractors were the most frequent cause followed by farm machinery and asphyxiation. Accidents peaked at ages 2-3 and age 13 with the vast majority of victims being male. Most (78%) lived on the farm, although 18% were visiting. Approximately 30% of the children fatally injured in tractor or machinery accidents were extra riders. Forty-four percent of the accidents occurred to children under age 9.

Although most farm accident studies do not focus only on children, many include information and conclusions that pertain to children. Some of them are summarized below.

1. Over half (66 of 129) of the deaths where the victim was not doing work occurred to children (Skromme, 1988). Families must be encouraged to keep children away

from the work place. Another large number of fatal accidents involved children riding ATVs (all terrain vehicles). Skromme lists ages and causes of accidents in cases where they were known. The list is gruesome - "male, age 1, fell off tractor; male, age 3, fell into grinder; boy, fell off tractor into disk; female, age 2, fell out of loader, run over; male, age 4 ran over by chisel plow" (Skromme, 1988, pp. 37-39).

2. A 21-state summary of farm accidents showed more than the expected frequency of injuries, based on hours of exposure, among 5-24 year olds (Hoskin & Miller, 1979).

3. In Maryland from 1969-1973, 17 of the 89 agriculturally related deaths were children under age 15. In addition, 23 of 58 reported personal injury accidents were children under age 15 (Massie, 1979). Massie stated that children frequently help their parents with farm work either alone or in small groups with little supervision. "They are constantly in the presence of hazards without the hazards being identified. Because they are familiar with the surroundings they do not recognize conditions as being dangerous" (p. 45). He also attributed an increased risk of accidents to the extreme noise that accompanies many types of farm work. Noise is distracting and fatiguing.

4. Youth of less than 15 had the highest accident rates in a 1976 study in Iowa (Silletto, 1976). These findings were similar to those reported by other states. Another function of this study was to correlate accidents with formal safety training received. There was no significant difference between persons who satisfactorily completed training and those who did not. Training considered included 4-H safety training, vocational agriculture safety training, and hazardous occupations training.

5. A summary of farm accidents in Nebraska showed that 20% (154) of the farm fatalities during the time of the study were to children (Schnieder, 1986).

6. A look at fatal Iowa farm accidents from 1947-1971 showed that children under age 15 comprised 32.9% of the population and were involved in 19.1% of the fatal accidents (Wardle, Hull, & Kennedy, 1975). However, the figure was not adjusted for exposure. Children's exposure hours are much lower than adults'.

7. Often, certain segments of the farm population, such as youth, women, or new employees, are targeted for safety education more than experienced workers. Although this seems logical, more research is needed to see if that is indeed true (Williams, 1983). In his survey of Iowa farm accidents, persons ages 5-14 were more

susceptible to agricultural accidents. Williams also found no significant relationship between formal safety education and lower accident rates.

8. In an attempt to understand why farmers behave as they do regarding safety, Robert Aherin applied the theory of reasoned action (Aherin & Murphy, 1987) to several farm safety behaviors. Two were directly related to children's issues (Aherin, 1986). The first concerned extra riders on tractors. He found that attitudes were the primary determinants of safe behavior in this instance. In preventing 12-year olds from operating a tractor, the average farmer was neutral in his attitudes. This could mean a high percentage of farmers may be willing to allow their 12-year olds to drive tractors. Aherin emphatically states, "It is strongly felt by safety specialists and many child psychologists that youngsters at this age level do not possess the maturity to safely operate a tractor. This is in addition to often times not having the physical stature to handle tractors safely" (p. 13).

9. A survey conducted by Successful Farming magazine with assistance from Robert Aherin and Christine Todd from the University of Illinois showed that in the families surveyed, 65% of boys ages 10-12 were allowed to drive tractors by themselves as were 30% of boys ages 7

to 9 (Tevis & Finck, 1989). Driving a tractor at that age was considered by 42-47% of parents to be a moderate to high risk.

However, 70% of parents felt the risk to a child riding along on a tractor is very low. Aherin says, "As parents feel more in control, they perceive less risk" (p. 18I). Todd, a child development specialist says, "Parents need to know that what a child experiences and remembers when they are around equipment is much different than what an adult learns" (p. 18I).

10. A study conducted at the Mayo Clinic (cited in Tevis & Finck, 1989) gives three reasons why so many children are involved in traumatic injuries: increased mechanization, new safety hazards, and stressful economic conditions. Old machinery causes accidents because many were manufactured before safety standards were developed. New machinery causes accidents because it is easier to operate and younger children are doing so. Technology creates new hazards such as ATVs, where half of the accident victims are children. Hard economic conditions usually mean more children working on the farm and more farmers and their wives working off the farm, leaving children with less supervision.

11. Approximately 300 children die each year in farm-related activities (NCASH, 1988). Children are at

risk due to increased chemical contamination of the groundwater. Youth should be primary targets for farm health programs, but to date, there are very few programs that are consistent or in depth enough to have a great impact.

"Agriculture is the largest, oldest, most fundamentally important of the nation's industries. Yet, it's the only major industry without a safety program of national scope," said C. M. Seagraves at the 1937 National Safety Congress (Burke, 1987). Burke chronicled the history of agricultural safety. He states that voluntary safety committees of the 1950s and '60s had a strong impact when they concentrated efforts on a specific area. However, the gains often reverted back to their former rates when the program was no longer emphasized.

Recently, there has been a flurry of activity in farm health and safety areas. The advent of NCASH in fall of 1988 may be able to provide the central leadership that has been lacking to this point. Their Report to the Nation (NCASH, 1988) included a large number of recommendations for organizing efforts and developing programs. Those that have either direct or indirect effects on children's issues are listed below.

1. A clearinghouse and health information network

for farm health and safety information should be established.

2. A comprehensive set of materials on agricultural health and safety for use by kindergarten through high school aged children should be developed and evaluated.

3. A major evaluation effort should be done so that effective educational models can be retained and ineffective materials abandoned.

4. Awareness must be increased among the agricultural workforce and the general public concerning the loss of life and productivity from farm health risks.

Recommendations for similar types of programs were made by Durkes (1982). He suggested a directory of all available farm safety resources should be developed, additional teaching modules should be added, and awareness activities conducted.

Children's Health and Safety Programs

Childhood deaths and injuries resulting from accidents is a problem for all children, not only those on the farm. In fact, there is much knowledge that can be transferred from general safety practices and educational methods to agricultural situations. With limited funding available, it is important to study research in child development, accident prevention, and

health education to see which avenues could potentially produce the greatest results.

Though health and safety are often treated as two separate issues, they are really very much the same. Both require an interaction among a host (the victim), an inciting agent (germ or other causal factor), and a predisposing environment (Garling & Valsinger, 1985). Altering any of the above three will affect the other two (McKnight and Hetzel, 1987). In addition, both can be unexpected and both can be prevented to a certain extent. Still, society seems more committed to eradicating diseases than to eliminating accidents.

The interrelationships between children and others in their environment are important. Accidents rarely are the result of a single cause. On the positive side, that allows many opportunities for intervention to prevent accidents and health problems. The example of dominoes can be a useful model (Yost, no date). Removing even one strategically placed domino can prevent the rest of the line from falling. This view is much different than the strict behavioral approach where the accident proneness of an individual was believed to be the main factor (Waller, 1989).

Relationships between children and their caregivers are a prime target for safety intervention.

Unfortunately, children do not perceive situations in the same manner as adults. When children think "safety", they are often thinking of the avoidance of unsafe situations, the strategical approach. Adults more often employ a tactical approach, handling dangerous situations safely. Failure to recognize the difference between the perspectives can lead to an environment that is safe for some, unsafe for others (Stratton, 1985). A caregiver must try to see the situation from the child's point of view.

Some research has shown that many adults tend to underestimate a child's ability while overestimating his performance (Spencer & Blades, 1985). There are several guidelines that can be of great help in developing effective safety behavior. An adult must be aware of the relevance of tasks posed to the children and the way the child's knowledge is tapped. A problem may be the result of processing information rather than lack of spatial awareness or coordination. One technique that can help overcome such problems is called "enhancing" (Spencer & Blades, 1985). It uses storytelling and other techniques to teach a child about an unfamiliar environment by relating it to familiar aspects. In this way, a child's environmental knowledge is linked to their activity patterns.

Care must be taken not to interpret the adult's viewpoint as right and the child's viewpoint as wrong. They are both right (Sheehy & Chapman, 1985b). One of the most important points of child safety is that for a child to want to live a safe, healthy live, she must view herself as a person worthy to live safely and worthy to make her own plans and decisions (Yost, no date).

In order to act safely, children must feel some degree of control over their environment (Stratton, 1985). It is up to the parent to structure the child's environment so that the child's challenges are set at or slightly above the child's present competency level. Too many challenges result in a feeling of helplessness. Too few challenges result in no skills being developed. Stratton says:

> A contingently responsive and predictable home is likely to produce a child oriented to acquiring skills and competences and who is alert to those features of any environment that are likely to impinge on him or her for good or ill. Reciprocally, a chaotic, unresponsive home in which the caretakers demand rather than offer contingent responses may produce children who are less able to manipulate their environment successfully and less likely to anticipate the need for action. (p. 139)

Sheehy and Chapman (1985a) say that although parents have a great concern for their child's safety, they do not reflect that in their behavior. Their article questions the validity of many safety programs since those are developed from a different perspective than the child's. In fact, in an Australian study, the main cause of children's playground accidents was that children did not use the equipment the way the manufacturer thought they would. Still, the adult was viewed as correct and the child as immature and incompetent, even though it was an environment for children (Sheehy & Chapman, 1985a). Garling and Valsinger (1985) report that accidents should be viewed from a systems approach. "In this view, accidents are seen as dysfunctions of a system in which the child-environment relationship is embedded within a culture-caregivers context" (p. 244).

The Surgeon General wants to reduce childhood accidents and injury (Surgeon General, 1979). One of the goals for improving America's health by 1990 was to reduce children's death rates to below 34 per 100,000. Yet, children and youth remain disadvantaged with regard to health care (Nelson & Hendricks, 1988). Since health damaging behaviors are more difficult to change as children grow older, Nelson and Hendricks propose that formal health education should begin before children

reach school age. In their poll of child care facilities, nearly all directors said they would use additional materials if they were available.

Education can be effective. One study showed that students who have comprehensive health education have more knowledge, better health-related attitudes, and more positive behavior than students with little or no health education. However, it took a minimum of 50 hours of health education per year to be most effective (Pigg, 1989). The goals of safety education are to increase an individual's knowledge, develop attitudes of safe living, and build a repertoire of skills about safety (Wayne, 1982). It should result in an individual's ability to recognize potentially hazardous conditions and appropriate methods of dealing with them.

What types of educational programs have been shown to impact health and safety behaviors? One approach that has been implemented more frequently is a combination of home and school education. Parental involvement seems to be a critical factor in the adoption of healthy behaviors for young children (Perry et al., 1988). Parents act as role models. If a family's attitudes and behaviors change, it leads to longer lasting individual behaviors. A family system provides communication and support networks for its members (Nader et al., 1982).

As young children become adolescents, the influence of peers and school become more important. When implementing a parent involvement program, it is probably wiser to begin with younger children (Nader et al., 1982). Adolescents have been found to have a measurable influence on their parents' health and lifestyle decisions, though. Mothers appeared to be more affected than fathers. Some research shows parents exhibit more of their own behavior changes when interventions are aimed at their children (Perry, Crockett, & Pirie, 1987). There were a number of ways that occurred. Parent/child discussions were more often child initiated and concerned more intervention topics. The example of the child making improvements in his own behavior helped develop more credibility for the child being in control of his own health decisions. Communications from school were another factor.

The interaction between school and parent can be difficult, largely because of scheduling problems. Alternative methods should be sought. Newsletters, resource lists, suggested activities and other more flexible methods have more impact than a meeting at school (Perry, Crockett, & Pirie, 1987). A system that proved effective in a Minnesota project was a combination of correspondence packets, 10 minute weekly meetings with

a coordinator and school children, and an incentive for participation, in this case a drawing for a trip to Disney World (Perry et al., 1988). This method was combined with a school unit on the same topic. While all groups made significant improvements in knowledge and skills, the group using both home and school education showed much greater change in behavior.

Many other techniques have been successfully utilized besides parent involvement. Peers teaching peers have proven effective in substance abuse and seat belt usage (Kalishman, Bernstein, & Fredrikson, 1987). Their successful formula allowed students to perform tasks the students and community saw as important; their decisions had real consequences. The students were able to acquire the knowledge and skills necessary to consider real ethical and social problems. A side effect was a strong impact on the student's personal and social growth. Safety Pals is a program in the California schools that uses a similar philosophy (Dawson, 1987). It makes use of high school age students teaching elementary children.

Other methods that proved successful were the use of community wide incentives (Foss, 1989), having students develop community resource pamphlets (Giarratano & Burhansstipanov, 1988), and use of simulation games

(Renaud, 1989). Research has shown that simulation games "...are inherently conducive to the transfer of learning because they give learners a chance to test their knowledge and skill in an environment similar to reality" (Renaud, 1989, p. 309).

One final method that bears mentioning is the use of a protocol-based system of self-care (Coons, 1989). Coons defines, "Protocols are sets of rules which are to be followed in a prescribed order to solve specific types of problems" (p. 36). His study investigated students' reactions to using protocols to help them determine if they needed medical assistance. Eighty-six percent of students said they would use them and they preferred a printed version to a computerized one.

Summary

Currently existing research into more general children's health and safety issues can be helpful in planning educational efforts to combat the problems specific to agriculture. Being aware of the differences in how children and adults perceive risk, the way children relate to their environment, and the importance of a child's sense of control over a situation as well as other important findings can have strong implications for the development of successful educational programs

relative to an agricultural population. Looking at ways successful programs in other areas can be adapted may save valuable resources.

Literature reviewed in this paper has shown that rural children are indeed at risk, with tractors or other types of power machinery involved in a majority of their accidents. A great many of the victims are not actually doing farm work at the time of the accident and may be either farm residents or visitors. Social and economic conditions on the farm can contribute to the problem.

The area of farm health and safety for children is interdisciplinary, complex, and largely ignored. Since so few educational resources and programs currently exist, it is necessary to integrate the preceding literature with further research in order to maximize the efficient and effective use of funds and personnel available. In order to be most useful, further research should try to look at the problem from a variety of perspectives. Focus group interviews can be a valuable tool to get input not only from a variety of sources, but with interaction among those sources so the data obtained has in a sense been synthesized to include a variety of viewpoints. Such a method can help to improve the validity of the findings as well as increase its reliability from one discipline to another.

After verifying the current status of the situation through literature review and research, plans can be made to develop educational programs to combat the problem. It is important to consider existing research related to theories and programs concerning the health and safety of children.

CHAPTER III. METHODOLOGY

Several assessment techniques were used to look at educational needs in the area of agricultural safety and health for children. First, an extensive search of existing public and professional literature was conducted to determine what types of research have been done as well as what types have not. It was necessary to search engineering, educational, and medical sources to determine documentation available concerning the following:

1. needs assessment guidelines.
2. use of focus group interviews.
3. extent of the problem of farm safety and health, including accident and disease rates for children as well as circumstances under which the problems occur.
4. general health and safety educational research that could give insight into developing appropriate and successful educational programs on farm health and safety for children.

Another important component was to find out from personnel associated with farm health and safety issues what types of concerns they consider most important and how those could be best addressed.

Focus Group Procedures

The focus group interview is a qualitative research method borrowed from market research circles. It aims to obtain data about opinions and feelings of small groups of people about a given problem (Keller et al., 1987). It is not meant to determine the depth of those feelings, but is sometimes followed up by some sort of quantitative method. Several successful past uses of focus groups relevant to this study have been to develop more effective questionnaires (Greenbaum, 1988), acquaint researchers with appropriate language (Goldman & McDonald, 1987), and conduct needs assessments (Krueger, 1988). They are a valuable means of investigating fields with little existing research (Keller et al., 1987) and are especially helpful in addressing multifaceted problems in a setting where group interaction is possible (Catalyst, 1983). Considering the interdisciplinary nature of the field of farm health and safety education for children and the lack of available research, focus group interviews satisfied many of the conditions existing in this study.

The focus groups conducted for this study included representatives from industry, education, medicine, policy making groups, agricultural engineering, and farm families. The synergistic effect

of their discussion aided in developing a more comprehensive deliberation of issues than would have been possible through individual survey techniques. Through group interaction, participants had the opportunity to question, clarify, or confirm ideas presented by people from other disciplines.

A second function of the focus groups was to assist in the development of a survey instrument to identify educational material and programs that are currently available.

For this study, a series of three focus group interviews were conducted in late March of 1989 at different locations in Iowa for the convenience of the participants. Locations included North Liberty, Grinnell, and Earlham. Each interview lasted approximately two hours.

Sample Selection

Participants for the focus group were chosen by a purposive sampling technique rather than a random sample, consistent with research guidelines presented earlier in this paper. Focus group participants were recruited through the Iowa Farm Safety Council and Iowa participants in the Agricultural Occupational and Environmental Health Conference held on September 18-21

and 27-30, 1988, in Iowa City and Des Moines. Both sources included representatives from industry, education, medicine, agricultural engineering, media, government agencies, and farm families. Each of the three groups included a mix of men and women with at least one representative from medicine, education, agricultural engineering, and farm families included in each group. Although representing a wide variety of occupations, the group was homogeneous by socioeconomic background. All had post high school education or professional experience and were considered leaders in their fields. Representatives of farm families had either served in leadership capacities within a farming organization or held off farm, professional positions. Since the population from which the sample was drawn was relatively small, it was impossible to avoid having some acquaintances. Except in one case where two people worked together, the acquaintances were of a casual nature.

Volunteers were first contacted and screened by phone. When the purpose of the study was explained to them, most were very willing, in fact eager, to participate. The main reason given for not participating was scheduling conflicts. When someone was not able to participate, they were asked to give a reference of

another person similarly qualified and that person was contacted. The only other reason given for not participating was perceiving someone else within the same organization as being more involved in farm health and safety issues. In those cases also, references were requested for other persons who were then contacted. One drawback of the scheduling of the focus groups was that no vocational agriculture instructors were able to miss school during that time and so were not represented.

Those who were able and willing to participate were sent a follow up letter detailing the procedure, their rights as research subjects, and information concerning meeting details (see Appendix A). Two people who had agreed to participate did not do so. One was due to illness, the other absence was not explained. Each group consisted of seven or eight participants, still within the recommended range.

Conducting the Interviews

The discussions were held conference-style in community meeting rooms. For the third group, room size necessitated tables being placed end to end rather than side by side. The long, narrow configuration of the seating arrangement hampered participants' views of one another and occasionally resulted in two conversations

happening simultaneously. Participants were offered coffee, juice, and donuts or cookies as they arrived. The assistant moderator acted as hostess. Each participant was provided with a notepad and pen.

During the introductory comments, participant were again informed that the proceedings were being taped. The discussions were audiotaped with two tape recorders simultaneously. One recorder was placed at each end of the table. By doing so, it was possible to pick up voices better and provide a backup in case of a power outage or recorder failure. The beginning times were staggered somewhat so that one recorder was taping while the other tape was being changed to eliminate any gaps in recorded proceedings. The assistant moderator took care of changing tapes and also handled outside interruptions.

Development of Questions

All three focus group interviews were conducted following the same discussion outline (see Appendix B), although the discussion took different directions depending on the combination of individuals represented. Questions were chosen based on literature reviews of farm safety and health research and safety and health education research. Only a few simple, unbiased questions were chosen, in accordance with recommended

procedures for focus group interviews. The decision was made not to have the questions refer specifically to the issue of children but rather to farm health and safety concerns in general. One reason was so as not to bias the group to overplay child related issues in order to please the moderator. The second reason was that child, family, and occupational issues are so interrelated in farming situations that it is difficult to discuss one without including the others. Attempting to do so could result in an incomplete picture of the situation.

There were two major purposes addressed in the interviews. The first was to identify the major issues in planning and conducting educational programs in the area of farm health and safety as perceived by the participants. The second was to assist in the development of a survey to determine educational programs that exist. The director of this study acted as moderator of the interviews, serving to clarify questions and keep the group on task.

Survey Development

During approximately the last quarter of the interviews, participants were given an example of a survey that could be used to compile a directory or database of educational resources (see Appendix C). The

initial sample of the survey was developed with the assistance of the person who conducts database searches at the Institute of Agricultural and Occupational Health at the University of Iowa. It was based on some of the formats of databases most useful in agricultural health and safety. Participants were given an opportunity to read the form and then were asked to critique the survey from a number of different viewpoints. They were asked if the information requested on the survey instrument would satisfy the needs of their organization. Another concern was to insure that the wording had the same meaning to the various disciplines involved so that the instrument would be collecting valid information that would be reliable from profession to profession. Also, participants were requested to evaluate whether the survey instrument was in a form they would be willing to complete and return should their agency be surveyed. Input was also obtained on how to organize and distribute the data so the resources would be most usable for organizations or individuals wishing to access it.

A final contribution of focus group participants was a list from their respective fields of potential names and addresses to survey. Besides helping to form an eventual mailing list for the survey, the list of potential resource organizations was forwarded to a

Minneapolis advertising agency. They will screen it for the most umbrella-type organizations to include in a directory of health and safety resources to be distributed at the National Pork Expo in Springfield, Illinois, in June of 1989.

The recommendations of the three focus groups were used to make a second draft of the survey instrument (see Appendix C). The second draft was presented individually to a panel of four experts, also members of the Iowa Farm Safety Council representing fire safety, water quality, product safety liability, and production agriculture. Their suggestions were incorporated into the third draft (see Appendix C) that was sent out in the pilot survey along with a cover letter and an addressed, stamped envelope. In order to further refine the survey instrument, a question was included asking for comments on its structure and contents. This question was eliminated in the final draft of the instrument (see Appendix C).

The population for the pilot survey included 38 Iowa based addresses from the suggested target list. As an incentive to return it, those who did so within the first week were offered a resource directory compiled from the survey. Two (5%) were returned as undeliverable with no forwarding address. That left a sample size of

36 agencies surveyed. A total of 21 were returned after one week for an initial return rate of 58 percent. A reminder was sent to those who did not return the survey within two weeks. Five additional responses were returned for an overall return rate of 72 percent. That left 10 agencies, or 28 percent, who did not respond.

Replies to the survey were summarized into an Iowa directory of organizations offering farm health and safety resources. Completed surveys were evaluated for questions that elicited unclear or no response. Those items were changed or eliminated in the final draft of the survey (see Appendix C).

Focus Group Analysis

A written transcript of the tapes was prepared following the completion of the focus groups. That transcript was analyzed separately by the moderator and assistant moderator. Those results were then compared to help insure the validity of the analysis. The method of analysis used was the method described by Zemke and Kramlinger as explained in Basch (1987):

> Transcripts were then read and the tapes are listened to with the intent of: generating a list of key ideas, words, phrases, and verbatim quotes that capture sentiments; using the ideas to

> formulate categories of concerns and placing the ideas and quotes in the most appropriate categories; examining the contents of each category to search for subtopics and to select the most useful quotes and substantiation for the various ideas; and attempting to cluster the categories containing the various ideas and quotations into themes. (p. 417)

Agreement between the moderator's analysis and the assistant moderator's analysis was high, especially on the major categories. Six ideas within subtopics were included in the assistant moderator's analysis that were not included by the moderator. The moderator's analysis was more detailed than the assistant moderator's, however.

CHAPTER IV. PRESENTATION OF RESULTS

Results are described separately for focus group discussion concerning issues and development of the survey form. Analysis of the discussion concerning issues is presented according to questions on the discussion guide. However, in the actual group discussion, topics overlapped a great deal.

Focus Group Analysis

Both of the issue oriented questions are presented with an analysis of the discussions that took place. A table accompanies each question outlining the major topics that surfaced as well as similarities and differences among the responses of the three focus groups.

Question 1. What types of agricultural health or safety problems do you see as most pressing? (See Table 1)

Surveillance data and statistics The problem of inadequate surveillance of farm health and safety was the first item brought up in two of the three focus groups. Participants felt that they need to know what injuries and health problems are occurring in order to develop effective educational programs as well as in order to determine directions for research. "It's hard for me to go out there and say this is how many people died last

Table 1. Comparison of focus group responses to Question 1. "What types of agricultural health and safety issues do you see as most pressing?"

Problem	Group N. Liberty	Grinnell	Earlham
Surveillance data and statistics	SS	SS	0
Children on the farm	SS	S	SS
Getting people interested in safety	SS	S	SS
Special considerations of farming	S	S	0
Food safety	0	0	S

S = Support

SS = Strong Support

0 = Not Mentioned

year because you can't put your finger on it." "In order to direct a program, you need to know what type of accidents are occurring. And those statistics really are not available in great quantity. It's kind of like a plant that puts on a safety program geared toward safety shoes, when you look at their statistics and they're head injuries. You're wasting your time. You need statistics." Several participants also felt that information needed to be relayed back to engineers so they could design safer equipment or features based on statistical hazard rates.

The dispersion of the farming population makes statistics even more important. One participant commented that in sparsely populated areas, even the most common problems may not occur frequently enough to predict a pattern. Statistical information can help them prepare for "emergencies that haven't happened yet" by predicting what types of accidents might happen and what causes them.

Participants said that even knowing trends in the types of injuries is not adequate without knowing what the causes are. Being able to accurately describe risky situations and the resulting problems helps make the potential danger seem a more personal concern to people. "...say that a particular person was doing such a thing

in such a manner and this is the accident or injury that resulted and you will see half a dozen people in the audience say, 'Why, I do that all the time!'"

A good data collection system should have some basic characteristics. Those specifically requested include:

1. Collection and interpretation of data should be coordinated through a national organization.

2. The data should be able to be broken out on a regional or local level to help pinpoint local program needs.

3. It needs to identify frequency and severity of the situations and be analyzed from a preventive nature.

4. The entire age span must be included. Many current systems ignore the very young and the very old, two groups who have many accidents.

5. The definition of farm related health problems and injuries must be credible as should be the source of the data. Death certificates are not credible because they depend on the person filling them out and interpreting them.

"There are little pockets of data being done by all sorts of different groups and they really need a coordinated effort." Agencies that are currently or collecting data or are considering beginning data collection are diverse. The two national agencies that

seemed preferred were the National Safety Council (NSC) and National Institute of Occupational Safety and Health (NIOSH). Both were considered to have the necessary computer equipment and personnel. NIOSH was seen as having the best methods and most credible statistics. However, they do not include persons under age 16 in their data and that was perceived as a serious drawback. It was proposed that NIOSH could benefit from linking with other federal agencies. NSC was cited as having the most widespread data collection, but also as having problems with credibility partly due to their definition of a reportable farm accident (any accident that occurs to any person living on a farm regardless of where the accident occurs, working on a farm, or visiting a farm, [NSC, 1982]). They also did not include children under age five. NSC's perceived strengths were their long history, their attempts at trying to evolve a more effective method of data collection for farming, and the fact that they are set up for other industries and can provide comparable data. One other national effort that may be underway soon is national trauma registries.

Several state programs were mentioned and evaluated. The Iowa Department of Public Health recently declared that pesticide poisonings and illnesses are reportable. They also keep other types of statistics, but some

participants thought those were derived from death certificates and not considered a credible source. The State Emergency Response Commission requires notification if hazardous materials are stored on a farm. However, enforcement is a problem.

The opinion was expressed that a system could be set up fairly easily through the state Emergency Response System (EMS). An individual rescuer does not get so many farm accident victims that the paperwork would be a problem. Many ambulance crews are local people, even volunteers. They were perceived as remembering the incidents in great detail for a long time, perhaps because they know many of the people they rescue. It was generally felt that the data needed to be collected at some point before the hospital. However, many farm accidents that occur do not come in through the EMS and would go unreported. Concern was expressed as to whether data gathered through medical channels would be considered confidential and not able to be utilized by educational agencies. Several people felt that the appropriate form was vital.

Confidence in existing statistics was low. As one group member said, "The state of the art now is a news clipping service."

Children on the farm In every focus group, the

special dangers to farm children were brought up by participants. The first time the issue surfaced was in a discussion of surveillance statistics. Participants felt it was necessary to include very young children in accident statistics. Some systems do not include children at all, others include only older children. Several people cited farm accidents they were familiar with involving children of preschool age or younger.

Another issue debated was when a child should begin to drive tractors. Opinions varied from "at 10 ours started driving the water wagon...on a small tractor" to "I've seen a lot of 16 year olds who couldn't drive it". A couple of people commented that age is not a definitive criterion, that each case is different.

Several participants felt children were especially at risk on a farm because they are so familiar with the farm environment, they do not recognize it as hazardous. "That's where the problems lie, because many have been out there trailing behind since they were able to walk." A variety of family situations were recognized. In some, children were not allowed near the equipment part of the operation. In another, a "two or three month old got run over by a tractor because he (the father) had him in the tool box". Some children were actively involved in doing farm work on their own farm, such as chores and grinding

feed. Other children were employed by non-family members spraying pesticides from a bean bar (a bar with an attached seat where people ride above the growing soybeans) or detasseling corn. More examples offered included children who were simply along for the ride, "Grandpa having them riding on the fender".

Although dangers were cited in all three cases, it was the last situation that was seen as the most preventable. The danger comes in a child too young to be in a hazardous situation and from the distractions to the driver often caused by the demands of looking after a young child. "I shuddered last fall to see the young neighbor man had a five month old in a car seat with him in the tractor, and the other little guy was three, driving down the road. And he'd been working in the field!"

Many ideas were given for involving children in safety education. One of the programs mentioned was a national pesticide safety program for youth sponsored by the United States Department of Agriculture (USDA) and the Environmental Protection Agency (EPA). The need for such a program was supported by mentioning the high demand for a publication concerning safely riding a bean bar apparatus. Other discussions of educational programs for children are covered in greater depth in the

following section on target audiences.

Getting people interested in safety A third pressing issue identified was how to get people interested in safety. "The main problem we have, as most educators do, is to get someone interested enough to make an effort to find out about it."

Some reasons were expressed as to why people are not interested in safety. Many feel "it won't happen to me, I'm careful" so they do not need safety. Another reason cited was that improvements in design and safety features give farmers a false sense of safety. For example, tractors with cabs are perceived as safer, but without using seat belts, they can be just as dangerous as cabless tractors - with the added feature of shattered glass. The acceptability and perceived inevitability of accidents can prevent them from being seen as a legitimate threat.

One way several agencies have coped with the lack of public interest in safety has been to incorporate it into existing meetings of potential audiences. Another is to keep including timely reminders in media presentations such as radio broadcasts, news articles, and magazine features.

One person said he saw three approaches to education. The first was via traditional educational

agencies such as schools and the Cooperative Extension Service. The second was through hospital based services or other types of health services. The third included farm associations and producer groups.

Two hospital based pilot programs were conducted in Iowa in 1988, and representatives from both were at two different focus groups. While traditional education agencies presented a picture that showed lack of interest in safety, these two programs reported good crowds at their programs despite charging a rather hefty membership fee. The differences of their approach were discussed to see what made it work. One possible explanation; the program included both farmers and health professionals. For example, at one meeting on emergency preparedness, about half the crowd was farmers, the other half from the health field. Many of the health professionals received continuing education credits for attending and so were not there solely because they were interested in the topic. Another proposed reason was since the farmers had paid a membership fee, they felt they should participate in programs to get their money's worth. A potential reason given for so many willing to pay the membership fee was that the fee included a variety of general health screenings (such as cholesterol) as well as medical tests more specific to agriculture (such as pesticide residue),

consulting services, and educational programs. By focusing on many health risks as well as safety, the program may be perceived as having immediate, tangible health benefits whereas in safety programs, the perception is that "it might prevent an accident someday". Hospital based programs were said to have proven very effective in Scandinavia. However, concern was expressed that because of different forms of government here, generalizations might not be so easily made.

Another avenue reported as relatively new is to offer health and safety components as part of a larger farm organization meeting. Again, rather than being only safety oriented, the topics that were perceived as most popular had a strong health component.

Three attention getting situations were mentioned several times. One time when farm families seriously consider health and safety issues is when it hits their pocketbook. Several perspectives to that were discussed. On the cost side, farmers are concerned about the expense of purchasing and maintaining safety equipment as well as taking time to attend educational sessions. One theory presented was that perhaps instead of quoting nameless statistics on injuries and fatalities, farm families would be more likely to listen if accident consequences

were expressed in terms of how much they cost the victims in cold, hard cash. Factors to be considered were lost time, damaged equipment, medical costs, rehabilitation costs, and lost opportunity costs. However, several participants recognized that farmers often have difficulty justifying the expense of safety against the elusiveness of payback in tough economic times such as have occurred in Iowa in the past several years.

Another idea that received a significant amount of discussion was to use economics as a positive incentive. A program scheduled to begin in Minnesota was described. It provided for insurance premium rebates if an audit of the farm showed certain safe practices were being used. Many participants felt such an incentive was worth pursuing, especially since various types of prevention activities, such as drivers education and wellness program participation, are sometimes rewarded with lower premiums. Tax incentives for farmers and machinery dealers were another avenue suggested. "The thing I like about that (positive economic incentives) is that it's the farmer himself making the effort. It's not the other side making it mandatory. I can't see that's the answer."

The second area that gets people's attention is enforcement. "OSHA really got their attention, because

they thought they were going to come under OSHA." "If EPA gets control over the worker protection act, if farmers have one employee, then they will be subject to the recommendations." Most examples given, however, were not positive. Pesticide applicator training for restricted use pesticides was cited. Participants required to take that training were observed to be "clock watchers", "reading the paper, just putting in their time". Participants attested to seat belt legislation and resulting behavior change as the one positive comment related to enforcement.

The third occasion when people sit up and take notice was considered to be when something happens to them or someone close to them. "I had a gentleman (who had been affected by a particular accident) who came down through our board of directors. The board came to see me and said, 'Why haven't we done something?' This was about '85 and I said, 'My God, we've been doing it since 1964!' I put on programs in that man's area. Now he's lost his son. Now he's concerned." "You lose a hand, there's certain things you just can't do." Some suggestions of preventive measures that could capitalize on those feelings included safe demonstration models of how impossible it is to escape some situations (such as how rapidly clothing is entangled in a PTO shaft, how heavy

flowing grain is, how quickly an accident can happen) and the use of pictures to personalize fatality and injury statistics. "To me that works because you can see that this was a real live person and she is dead because of...(a drunk driver)."

On a more positive note, participants did seem to see a trend of more young farmers interested in safety and health issues. One theory is that many of today's young farmers are more accustomed to education and realize the need to continually be updated concerning the high technology in agriculture. The current high level of interest in health issues was discussed as another factor in young farmer's receptiveness.

One idea broached was to take advantage of mankind's tendency to take the path of least resistance and try to make it easier to use safe procedures. An example of how that works negatively in engineering included an instance where a safer PTO shield was developed, but the shield made it very difficult to connect and remove the shaft. The farmer eventually cut off part of the shield resulting in one that was much less safe than its predecessor. A positive example was a chemical company that packaged disposable protective gear with each product sold, so the farmer always had clean, undamaged protection available wherever the product was to be used.

A third example was the increased use of respirators in the Cedar Rapids area after farmers became aware of where to buy them and how to choose the correct type. The idea seemed to have much merit and some brainstorming ensued. More convenient delivery methods, such as video tapes for home viewing and the whole issue of incorporating safety into existing meetings and media, were considered viable possibilities.

Question 2. What is the most important target group for education? (See Table 2)

The immediate answer to that question was the same in all three groups - farm wives. Although further discussion supported that farm wives are indeed an extremely important target audience, others were perceived to be very important also. One of the strongest convictions seemed to be that there is no single most effective audience, that if farm safety education is to have an effect on accident occurrence, it must concern itself with a broad spectrum of audiences. "I think it's a matter of, you have to educate the whole-anybody who's dealing with that sort of thing. So, you have materials (aimed) towards me as a doctor, towards the hospital personnel, toward the EMS personnel, toward the farmer, the farm wife, toward the safety people,

Table 2. Comparison of focus group responses to Question 2. "What is the most important target audience for education?"

Audience	Group N. Liberty	Grinnell	Earlham
Children	X	X	X
Engineers	X		
Farm wives	X	X	X
Farmers		X	
Medical personnel	X	X	X
Rural public		X	X
Integrated approach[a]	X	X	X

[a]Integrated approach refers to targeting a range of audiences rather than zeroing in on only one.

children...." "Maybe we need to start with the preschoolers and work our way up to the doctors." A related comment was that education methods need to be combined with engineering and enforcement in order to have the greatest impact. Participants discussed reasons why certain target audiences might be more effective than others.

Farm wives The reasons for choosing the farm wife were many. Farm wives are often seen as "family health monitors", concerned about long term health risks as well as safety for their children. They were perceived as having the most effect on how husbands react to safety features, although a couple of participating farm wives disputed that. Another reason is that farm wives need to know the information themselves. They often do not attend the agricultural meetings where safety is incorporated into topics such as swine confinement, pesticide application, etc., and need to know pertinent information for their own safety as well as their family's. Caring for pesticide contaminated clothing was one of the examples cited. Also, farm wives have much at stake should a family member be injured. Financial concerns, caretaking issues, and handling the day to day responsibilities often fall to their jurisdiction.

Children Children were identified as another important target audience for several different reasons. One reason is that children currently suffer many accidents and need to know how to evaluate risks.

A second reason is because children often relay what they learn to their home situation and can help change the attitude and behavior of adults. An example brought up several times in this context was the anti-smoking crusade and the way children remind their parents of the dangers of smoking. In fact, a total family approach seemed to be a popular theme. "Our focus is really on the family as a whole because you can't teach one person, you've got to educate everyone."

A third reason is to create a more safety conscious future generation. Teaching children emergency preparedness skills can help save their own or someone else's life and is a fourth reason.

A couple of limitations of children as the major target audience were discussed. Since their safe adult behavior is a long term effect, one person felt it should perhaps not be considered as high a priority as some other target audiences. A second concern was that changing technology may make much of the safety knowledge obsolete by the time the children are actually in the workforce. Although these were minority views, such

opinions can be powerful roadblocks for educational programming in an area where competition for dollars is keen.

Most opinions reflected a strong need for safety education from a very young age. However, it was suggested that perhaps the focus in lower elementary grades needs to be on general safety and health guidelines and not confined to agriculture. "It's a long term thing that society has to recognize that this may be a solution and they simply work it into the curriculum as we have some other basic things such as how to read, spell, write, and so on." Some important considerations were that safety programs used to be an important part of school curricula, but budget cuts eliminated some of the sources of material. Comments indicated teachers used and appreciated the material in the past. Possible methods included providing bulletin board materials or implementing 4-H school enrichment programs on health and safety.

Another issue was that it is not only farm children who need to know farm safety. Many children visit grandparents' or friends' farms and are exposed to the same risks as farm children. In fact, one person commented that anyone traveling in a rural area ought to know at least something about farm safety in order to

share the road with farm vehicles.

A suggested general outline of children's safety and health education more or less evolved at one of the focus groups. It started with basic attitude development to build a strong safety foundation during the early elementary years. Mid to late elementary students would participate in more sophisticated curricula that could include poster or essay contests, drills, and activities to be done with their family. A hope was expressed that by teaching basic safety, the children would be able to generalize the principles to other more specific situations they might encounter on the farm. In high school, the emphasis focused more on youth organizations and much more specialized information.

4-H, FFA, and vocational agriculture were all cited as good possibilities to disseminate farm safety and health information. Several people indicated they knew vocational agriculture instructors who were very interested in such issues. Examples were given of FFA chapters who sold safety equipment as a fund raiser and had to learn about their product in order to successfully market it. Another instructor had contacted one of the focus group participants for project ideas for his students. There seemed to be a feeling that most vocational agriculture teachers developed their own

safety units and often did not have much formal education in the area. A suggestion was made that lesson plans could be distributed through the Iowa Vocational Agriculture Teachers Association at their annual meeting.

Farmers Agriculture instructors were also mentioned along with Cooperative Extension, producer groups and hospitals as probable sources from which farmers could get information. Actually, farmers along with engineers were mentioned less frequently than any other target audience.

Medical personnel Medical personnel were named as needing specialized education in dealing with farming health needs. Teaching ambulance personnel such basics as how to turn off a combine in order to rescue a victim were discussed (The same concern was expressed for some family members.). Participants felt that a growing awareness of chronic illnesses related to farming has created a need for medical personnel to have better access to information so that appropriate diagnosis and treatment can be started as soon as possible.

One comment suggested that instead of focusing on one target audience, appropriate audiences should be assigned to certain agencies based on that agency's interests and capabilities.

"There's real value in the education of the

children, and I look at that as a preventative type of focus, but yet there's this immediate feeling that we need to combat what the issues are. People are reading about and talking about today issues that are in the public view. Those would be the two areas I might possibly single out, but I don't know for sure how I could pick between the two of them."

Survey Development and Analysis

First draft

During the last portion of the focus group discussion, participants were shown an initial draft of a survey. The purpose of the survey is to discover exactly what types of educational and organizational resources are available in the area of farm health and safety and to develop a resource list. The initial draft was developed in conference with the librarian who conducts literature searches at the Institute of Agricultural and Occupational Medicine at the University of Iowa. Focus group participants were asked to give any input that would make the instrument more useful to them, improve the survey's chances of being returned, clarify language, or recommend format.

The first draft of the survey form consisted of two distinct parts (see Appendix C). The top portion

included information about the organization: name, address, phone, contact person, who is eligible to use resources, 25 word abstract about organization. The bottom portion was intended to be completed separately for each piece of resource material available. It included title, publication date, media type, length, 25 word abstract, and descriptor check lists of 22 topics, nine intended audiences, and four types of distribution.

Participants asked many clarifying questions about the proposed use of the survey, indicating a high level of interest. Although nearly all felt such a resource directory would be helpful, their opinions on the most useful publication format varied widely as did their need for certain information on the survey form. Many considered it a task of great magnitude and with many stumbling blocks.

One concern expressed frequently was how difficult it would be to keep a directory of resource materials current. Utilizing a computer database would simplify updating, but many felt it would complicate the distribution of the directory. On the other hand, several mentioned printed directories that were outdated even before they were printed. One person expressed a strong desire for a looseleaf publication that could be updated one page at a time rather than having to reprint

the entire book. Another suggested a database with a hotline so people utilizing the database would get immediate feedback.

Another issue was whether to emphasize organizations that provided certain resources or to emphasize the resource materials themselves. Again, opinions varied. Several participants were not interested in any organizational information, only specific resource materials. Others were more interested in general information about the organization and types of assistance offered rather than specific titles. It was suggested that two separate forms be used, one for the organization and a separate form for resource materials.

Several agreed that the final form would depend on who the intended audience was. If the audience was to be the general public, a more general, easily distributed format such as a booklet, was preferred. For professional users, a more detailed format that could be easily updated seemed necessary. One suggestion was to combine a database available for computer searches with a regularly updated hard copy distributed to those who desired it. An unresolved problem was how to efficiently obtain the updates from contributing agencies.

Quality control was another issue discussed briefly. One professional indicated that was not a problem since

the decision could be made upon previewing the item, a routine procedure for him before using any new resource. One criterion on which to base decisions of quality was the credibility of the item. A specific instance was cited of an agency stating something so obvious, the intelligence of the users was insulted.

One condition was agreed upon immediately. The survey form needs to be kept as short and quick to fill out as possible. Checklists were recommended wherever feasible, for ease of completing the survey and for consistent responses. Asking for key words was suggested to simplify database searches.

A related issue was completing a survey form regarding specific resource materials. Participants seemed to feel that some agencies with few resources relevant to farm health and safety issues would have a fairly simple task to complete the survey. Other agencies have a myriad of information and completing a page for each would be prohibitive. Also, many resources were mentioned that contained some safety or health information integrated into a more specific issue such as grain handling or livestock confinement. Should such publications be included or not? The suggestion was made that when a catalog for an agency exists, it could be submitted instead of completing a sheet on each resource.

Two more issues were brought out. They were how to inform people of the existence of the directory and whether to include only original material or material available from the agency but produced by others.

Many specific suggestions were made as to what topics to include. Potential additions to the existing list were: anhydrous ammonia, machine safety, planting safety, safety liability, youth employment such as detasseling or bean walking, water quality, prenatal, household safety, laundering, auger, PTO, waste management, mowers, rehabilitation, hand and power tools, traffic safety, bicycles, and ATVs (all terrain vehicles). Suggested adaptations included expanding safety equipment to include devices, clarify cumulative health risks, and separate tractors out of machinery safety. Clarification of age classifications of children was suggested to make any single group less diverse. A suggestion was to follow school groupings as a guide. One person suggested using the Farm and Industrial Equipment Institute listing as a guideline for safety topics.

Several suggestions were made relative to the intended audience. It was felt that child classifications should be kept consistent with those listed under "topics". "Professionals" needed to be

broken down into categories. Ideas were health professionals, educators, engineers, and agribusiness. Designations of farm people was a difficult topic. Many farm people wear a variety of hats and finding wording to eliminate confusion was a struggle. For example, does a farm manager mean a professional who manages a number of farms for other people or the farmer who manages his own? Farm wives, farm women, and farm spouses were all ideas since there is a wide range of involvement of women on the farm. Off farm owners were a classification added since it was felt they needed safety and health information for liability and insurance purposes as well as to be responsive to their renter's health needs.

Participants brought names and addresses of potential survey targets. Some also suggested other previously attempted directories as sources for possible assistance.

Draft 2

Based upon suggestions given in the focus group interviews, the survey form was revised. One major change was to make it two separate surveys, one for an organization directory, the other for a specific resource list. Agencies were give the option of including a catalog or their own directory rather than complete the

final sheet. On the organization survey, a question was added asking for referrals of other sources of educational resources. On the resource material survey under media type, checklists were included rather than open ended questions. The intended audience and topic lists were expanded.

The revised surveys were submitted to be critiqued by four members of the Iowa Farm Safety Council including an agricultural engineer, a fire safety specialist, an air quality researcher, and a farmer. Their comments on the resource materials form concerned adding, clarifying wording and organizing of the topics. Input was given for clarifying some wording on the organization directory form so as to avoid misinterpretation. Also, the inclusion of some other bits of information was suggested such as the occupation of the person completing the form. Another suggestion was to add more clarification as to how and when to complete the resource survey or submit a catalog.

Draft 3

Based on the experts' suggestions, a third draft was developed (see Appendix C). A cover letter was written and the survey was mailed to a pilot study of 38 Iowa addresses. The mailing list was developed by choosing

all Iowa addresses from the listings focus group participants had brought, eliminating duplication. A request was included in the cover letter for comments on the wording or other aspects of the survey instrument. Survey forms returned were summarized into a directory of Iowa organizations. When feasible, a list of all the titles available from the organization was included in a summary of resources. Otherwise, a summary of types of resources available (including catalogs) and how to obtain more complete information was listed.

Final draft

No comments were received concerning survey changes. In fact, the only comment written was a thank you for undertaking the project. However, some conclusions could be drawn from the responses to various items. More concrete guidelines were needed as to what was expected for type of organization. The target audience almost never differed from the eligibility list. Key words varied greatly not only by content (which was expected) but also by style. Some wrote more descriptive phrases than key words. No responses included references to other agencies or organizations for further surveying.

Based on the above list, a final draft of the survey was developed (Appendix C). If used on a national basis,

further refining may be necessary based on different types of farming and different organizations existing in other parts of the country.

Pilot directory

The content of the returned pilot surveys was analyzed. Of the 26 returned, 3 had no resource materials specifically related to farm safety or health except of a tangential nature (i.e., nutrition is related to health, but is not specific to farm health). Of those who did have health and safety materials, 12 agencies had resource materials intended for children. Topics aimed at children were: ATVs, fire safety, electrical safety, pesticide safety, grain handling, cumulative health risks, tractor driving, emergency preparedness, school bus safety, bicycle safety, traffic safety, moped/cycle safety, pedestrian safety, rehabilitation, general farm safety, and safety foundations.

Summary

In a field as complex as farm health and safety, frequent and effective communication between the disciplines involved becomes imperative. Unfortunately, that has not been the case in this field and, partly as a result of that, there are many people reinventing the wheel, each a little differently. With so many

disparate, disjointed efforts, it is difficult to reach a common destination. While most of the factions involved are friendly toward each other, all have their own idea of what needs to be done. Without any central agency or prescribed communication procedure to facilitate more cooperative efforts, the vehicle of safety education may not arrive precisely where it needs to, how it needs to.

In many cases, agencies find out about each other's programs by very serendipitous means. If no umbrella agency emerges soon, some type of communication system needs to be developed. At the very least, more interdisciplinary conferences and group activities must be undertaken. By being more aware of programs and projects in other fields, more efficient use of resources can be made by all. The end result can be a better, safer environment for children as well as adults.

The issue of child safety is one that can easily fall in the cracks. While many organizations recognize the inordinate dangers farm children are facing, most existing organizations focus on adult issues. The programs that do exist regarding children are piecemeal and do not form any type of comprehensive program. Although such efforts can help increase awareness of the problems, they will probably not result in any significant behavior changes. If professionals from each

of the disciplines could pool their expertise and plan a long range program based on sound educational principles aimed at specific developmental ages, a comprehensive program could be developed that would have a much larger impact than all of the scattered programs available now.

The family is a key in helping to provide a safe environment for farm children, in developing healthy attitudes, in role modeling, in support, and in education. Effective educational programs must be developed for use in a family context by experts who understand how the family functions. So far, that seems to be a missing ingredient. Families want to protect their children. They need help in learning to provide a healthy environment and develop appropriate attitudes and behaviors in order to adapt the lifestyle of farming to live more harmoniously with the occupation (and accompanying hazards) of farming. The lives of their children may depend on it.

The National Coalition for Agricultural Health and Safety (NCASH) may provide the coordinating effort needed. Since it is still so young, long term predictions concerning its effectiveness are difficult. However, there has been an increasing amount of interest shown this past year in farm health and safety concerns in general and those of children in particular. Overall

health concerns about the effects of long term risks may be one factor in the increase. Accurate and current media coverage is another.

With the increasing activity, coordination becomes even more important to avoid duplication of effort. The potential is great for the many agencies, each with their special niche to fill, to cooperatively plan who is best suited to do what. A list of recommendations was begun by the National Coalition of Agricultural Safety and Health. It is now time for those to be acted upon, evaluated, and revised, if need be.

CHAPTER V. CONCLUSIONS

These conclusions are presented following the corresponding objective. Results of the literature review as well as the focus group interviews were taken into consideration when making these conclusions.

Objective 1. To summarize available research on the types and frequency of farm related accidents occurring to children.

Children on farms suffer extraordinarily high rates of fatal and non-fatal injuries. The most severe generally involve tractors or other types of machinery. Many occur to children who have no business being in the dangerous environment at the time of the accident. This was expressed in the focus groups and supported by findings in the review of literature.

Objective 2. To ascertain the most critical needs existing in the area of farm safety and health as perceived by professionals working in the field in Iowa.

The educational needs in the area of farm health and safety can be divided into two camps, immediate and long term. It is important to consider both when developing programs.

Based on the literature reviewed and the results of the focus groups, immediate concerns are keeping children away from dangerous work areas, developing a more

effective tractor safety program for young operators, and teaching farm family members appropriate emergency procedures to minimize the potentially devastating effects of accidents. Long term education efforts must be aimed at developing healthy attitudes and practices for a lifetime. People must learn to feel worthy of living a safe, healthy life. They must develop decision making skills to help them evaluate safe and unsafe situations. They must learn the behavioral skills to help them deal with the situations they face. It is important to begin learning those at a very young age. Developing the basic attitudes of respect, self-worth, and concern for others form the basis for adding in more specific skills of safe behaviors at an older age.

One critical need identified was that of accurate, credible statistics about farm accidents and incidence of disease. The system must take into account all members of the farming community, not just the workers. It needs to be consistent from location to location so national summaries can be made. At the same time, it requires the capability of being broken out on a local level so that educational efforts and resources may be directed where they are most needed.

A second critical need is to motivate farm families to be interested in and learn about farm health and

safety issues. Competition for time is keen and any program must be flexible and of outstanding quality to attract an audience. Today's hectic schedules, off farm employment, and the 24 hour a day nature of farming necessitate looking at alternative means of reaching audiences. Fortunately, advances in media technology offer new options that were not available several years ago. Farming is a high tech industry these days and people who wish to educate the farm families must respond with up-to-date, research based information. New methods of education must be adopted that attack the problem from a variety of angles, yet in coordinated fashion.

Objective 3. To determine the most appropriate target audience(s) for educational programs relating to the safety and health of farm children.

Because children are subject to the ways and wishes of the adults in their lives, it is difficult to choose one target audience. Children need age appropriate educational programs to increase their ability to make safe, healthy decisions about behavior. Parents need guidelines to help their children develop that ability. Parents also must be taught to create an environment where the risk of accidents and health problems is minimized. Parents and educators must learn to look at the world through the eyes of a child in order to

accomplish this effectively.

Developing parent's own healthy behavior and attitudes can have a profound effect on the examples they set for their children. Obviously, children are affected by their own accidents, but accidents occurring to their parents have drastic consequences for the children, also. Besides targeting parents and children separately, a family education approach can help to integrate the information into more completely understood behaviors and expectations.

Along with the individuals in the family, health care systems need to be acquainted with the problems and procedures to more easily help develop preventive actions and to best combat accidents or disease problems when they occur. Farming has many facets that make it a unique situation. Professionals working with farmers need to develop an understanding of those situations so they are better equipped to assist. That knowledge may range from something as small and simple as how to turn off a tractor to something as complex as developing an understanding for the financial and societal problems farm families face and how that impacts on their adopted behaviors.

Objective 4. To develop a resource list of organizations, programs, and materials existing in Iowa

available to assist with farm health and safety education as a pilot project for possible national use.

Developing a database of resource materials for farm health and safety programs involves many of the same problems as developing a sound surveillance system. In order to be effective, it needs to be standardized nationally since many organizations only exist on a national level. Yet, it needs to address local needs and availability. Each discipline has certain uses for the materials and different approaches to education. The whole purpose of a resource list is to share information available from other sources.

Before an all out effort can be undertaken to develop a clearinghouse of information, it is necessary to have an agency to sponsor it with expertise and funds available to maintain it. Until that is found, a national database for educational materials may have to wait. However, there is much to be learned from each attempt at cataloging all the information. Local and regional directories can serve a very important function. When an umbrella agency is found to initiate and maintain a database, the smaller resource lists can serve as a solid foundation upon which to build.

Objective 5. To investigate educational programs used effectively for other types of children's health and

safety issues in order to make recommendations for farm health and safety curricula.

Successful educational methods in health and safety are ones which integrate knowledge with activity. Since interaction with the environment is such a vital aspect of health issues, it makes sense to conduct at least part of the educational process in the environment where the problems occur, in this case home and farm. Successful curricula do have several things in common. Many of the examples quoted in this review involved the student doing some teaching, either to parents, peers, or younger students. Having to pass information on to someone else forces a higher level of synthesis.

Learning experiences should be challenging yet not burdening. That helps to reinforce old knowledge and create a confident learner. Integrating the educational process into various aspects of a student's life (such as home and school) can show the interrelationships in our lives and how they can compliment one another. It also helps promote a supportive atmosphere that is more conducive to learning.

CHAPTER VI. RECOMMENDATIONS

The following recommendations have been made based the results of this study:

1. The efforts and expertise of various fields involved in farm safety and health must be better coordinated in order to improve the situation. Since the National Coalition of Agricultural Safety and Health (NCASH) is already established, it makes sense for them to provide the coordination. Support for NCASH, both financial and membership, should be provided from the variety of organizations concerned with the issues, including the federal government. It is important that farmers be represented in NCASH, perhaps through involvement of commodity organizations.

2. Two resources that are desperately needed are a good statistical collection and reporting system and a clearinghouse for educational resources and research. NCASH is a logical group to oversee the development.

3. A comprehensive plan for education should be developed. One model that may be especially useful is that presented by Downey and Feldman (1986) which considers awareness needs as well as informational and maintenance needs. Once the comprehensive plan is completed, it will be possible to evaluate existing

programs and develop new ones that will fit into a single, overall effort.

4. A safety curriculum should be developed for use in public schools. The early years should be devoted to general safety, using at least some examples from the farm. At the junior/senior high level, the curriculum should focus on topics more detailed and specific to agriculture. A preschool component could also be developed. The curriculum should be based on successful programs from general health and other related fields and should include family involvement. It is vitally important that people with expertise in family environment, child development, and education have an integral part in the development of such a curriculum.

5. A second series of focus group interviews concentrating on farm families' perspectives to the same issues presented in this study could provide valuable information from another angle. A second purpose of such a study would be to provide information on the possible adoption of farm health and safety programs by farm families.

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APPENDIX A: FOCUS GROUP CORRESPONDENCE

Iowa State University of Science and Technology Ames, Iowa 50011-1120

Department of Family
& Consumer Sciences Education
219 MacKay Hall
Telephone: (515) 294-6444

Dear Participants,

Thank you for agreeing to participate in the group discussion concerning agricultural health and safety educational materials. It is a long neglected field that has been further fragmented by the number of disciplines involved, each doing their own work. You will be helping to build bridges of communication between the disciplines that should help strengthen all the efforts.

The locations, times, and participants are listed on the enclosed sheet. Feel free to contact other participants for carpooling. The discussions will last 1 1/2 to 2 hours. The proceedings will be audio taped for later transcription with individual identifications eliminated. The tapes will then be erased. You may withdraw at any time. I only ask that you please let me know so that another participant can be invited.

The major topics we will be discussing include what your organization considers priority issues and target groups in agricultural health and safety education, research and educational materials available, and what types of information should be gathered to make a data base most helpful. You will be asked to critique a suggested survey.

A potential outcome of this project will be a directory of educational resources to be distributed at the National Pork Expo in June 1989. Due to the short time frame, we are asking you to help us establish a list of contacts to poll when the survey instrument is perfected. We would like you to list any organizations, agencies, or companies which distribute agricultural health and safety related educational materials. The list needs to be as up-to-date and accurate as possible and should include:

Organization name
Contact person
Complete address
Telephone

If you have any questions or comments or need to reach me for any reason, please do so at 319-257-6967 by phone or R. R. 2 Box 147, Winfield, Iowa 52659 by mail.

Your assistance with this project is greatly appreciated. All of us can be more effective in agricultural health issues if we can identify and use existing materials and apply our resources to build upon and strengthen that base.

Sincerely,

Gayle Olson

Sally K. Williams, Ph.D.
Associate Professor
Family and Consumer
Sciences Education

enclosure

Iowa State University of Science and Technology Ames, Iowa 50011-1120

Department of Family
& Consumer Sciences Education
219 MacKay Hall
Telephone: (515) 294-6444

April 12, 1989

Dear Farm Safety Discussion Participants,

This letter is to convey my most sincere thanks for taking time from your busy schedule to participate in the group discussions on farm safety and health. I was very pleased with the way the two days went and especially gratified by the caliber of you people who were willing and able to come. Farm health and safety issues have some talented and committed proponents.

The transcripts are not back yet, but based on your suggestions and comments, I anticipate the survey will take place in a two step process. The first will be to discover what types of programs and resources the various agencies have to offer as well as any existing directories of those resources. A follow up questionnaire will be sent in the second step to get more specific information on individual pieces of resource material and/or to supply missing portions of information concerning materials listed in the directories or catalogs. That should help eliminate some of the problems of duplicate materials and simplify the procedure for the person filling out the survey.

If you have any questions or wish to reach me for any reason, feel free to do so at R. R. 2 Box 147, Winfield, IA 52659 or phone 319-257-6967. I hope to share with you the summary of my thesis when it is finished in June.

All of you, in your own fields, have a great deal to contribute to the whole arena of agricultural safety and health. I think it is vitally important in finding solutions to those problems that we continue to share ideas, resources, and information among the disciplines involved. Thank you again for your willingness to do so in this situation.

Sincerely,

Gayle Olson

Sally K. Williams, Ph.D.
Associate Professor
Family and Consumer
Sciences Education

APPENDIX B: FOCUS GROUP DISCUSSION OUTLINE

FOCUS GROUP DISCUSSION OUTLINE

I. Introduction

   A. Statement of Purpose

      1. Needs assessment in area of agricultural health and safety, especially for children

      2. Develop questionnaire to survey professionals

      3. Need interdisciplinary input

   B. Introduction of Group Members

      1. Name

      2. Background

      3. Why interested in this area

II. Discussion Questions

   A. What types of agricultural health and safety issues do yu see as most pressing?

   B. What is the most important target audience for education?

III. Revisions and Advise

   A. Who would be a good informational contact?

      1. Individual

      2. Agency

   B. How would you revise this list of questions for a survey?

IV. Thank You For Participating

APPENDIX C: SURVEY INSTRUMENTS

Draft 1

Agricultural Safety and Health Educational Resources Database

Organization Name:

Contact Person: Phone ( )

Address:

City: State: Zip:

Who is eligible to use your resources?:

Please write a 25 words or less description of your organization _____

_____

_____

****

Title:

Publication Date:

Media Type:

Length:

Abstract (25 words or less): _____

_____

_____

Descriptors - Check all that apply:

Topics	Intended Audience	Distribution
___Emergency Procedures	___Professionals	___Purchase
___First Aid	___Farm Workers	___Rental
___Safety Equipment	___Farm Wives	___No Charge
___Fire Prevention	___Youth (ages 14-18)	___Other (Please explain)_____
___Harvest Safety	___Children (ages 5-13)	_____
___Electrical Safety	___Preschool (ages 0-4)	
___Livestock	___Young Adults	
___Grain Handling	___Farm Managers	
___Farm Chemicals	___Other_____:	
___Farm Structures		
___Shop Safety		
___Machinery Safety		
___Storage Safety		
___Farm Ponds and Water Safety		
___Cumulative Health Risks		
___Traumatic Injuries		
___Poisonings		
___Farm Workers		
___Preschool (ages 0-4)		
___Children (ages 5-13)		
___Youth (ages 14-18)		
___Other _____		

Draft 2

Farm Safety and Health Educational Resources Organization Directory

Organization Name:

Contact Person: Phone:

Address: Fax:

City: State: Zip:

Type of Organization:

Please describe in 25 words or less what your organization does:

_____

_____

_____

Key Words describing programs resources your organization offers:

How are your resources obtained?:

Who is eligible to use your resources:

Does your organization have a directory or catalog of resources? _____

If so, please send a copy or instructions on how to obtain one along with this survey to Gayle Olson
R. R. 2 Box 147
Winfield, IA 52659
Phone 319-257-6967

Do you know of any other organization, agencies, or companies that offer educational resources in the area of farm health and safety? If so, please list their names, addresses, and phone numbers along with the name of the appropriate contact person (if known) below or on the back of this sheet.

Thank you for your help.

Farm Safety and Health Resource Materials

Organization Name:

Person Completing Survey: Phone:

Title of Resource:

Publication Date:

Length:

Abstract (25 words or less):_____

_____

_____

Key Words:

Descriptors - Check all that apply.

Topics

___Emergency Procedures
___First Aid
___Safety Equipment, Devices, & Clothing
___Fire Prevention
___Tillage & Planting Safety
___Harvest Safety
___Electrical Safety
___Augers
___Livestock
___Manure Handling/Waste Management
___Grain Handling
___Hay and Forage
___Farm Chemicals
___Anhydrous Ammonia
___Farm Structures
___PTO
___Shop Safety
___ATV Safety
___Machinery Safety
___Tractor Safety
___Storage Safety
___Farm Ponds and Water Safety
___Traumatic Injuries
___Poisonings
___Laundering
___Farm Workers
___Preschool Safety
___Elementary Safety
___Jr. High Safety
___High School Safety
___Post Secondary
___Safety Liability
___Human Factors
___Youth Ag Employment
___Water Quality
___Rehabilitation
___Power & Hand Tools
___Motor Vehicles
___Cumulative Health Risks (respiratory, hearing loss, cancer risk, etc.)

Intended Audience

___Health Professionals
___Educators
___Engineers
___Agribusiness
___Farmers
___Farm Women
___Farm Employees
___Farm Family Members
___Farm Owners
  ___on farm
  ___off farm
___Adult
Please indicate age level if geared to a specific age group. _____

Media Type

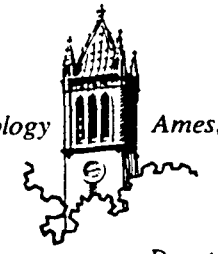
___Slide set
___Video
  ___ 1/2"
  ___ 3/4"
___Pamphlet
___Book
___Poster
___Other _____

Distribution

___Purchase
___Rental
___No Charge
___Single Copy Free
___Other _____

_____

Iowa State University of Science and Technology Draft 3 Ames, Iowa 50011-1120



Department of Family
& Consumer Sciences Education
219 MacKay Hall
Telephone: (515) 294-6444

Dear Colleague,

A project is being conducted at Iowa State University to assess educational needs in the area of farm health and safety for children. An important part of the project is to identify agencies and organizations that provide educational assistance for any age group and to discover what types of educational programs are available. Your organization has been identified as one which may have some type of educational programs or materials in this area.

Enclosed with this letter is a two part survey. It was developed with the assistance of an interdisciplinary group of professionals like yourself with an interest in farm health and safety issues. The first page of the survey concerns your organization and what types of services it offers. The second part of the survey is to discover specific educational resources that are available. That information may be submitted in any of three ways:

1. Send a catalog, directory, or listing of the resources you have available.
2. Photocopy the enclosed "Farm Safety and Health Resource Materials" survey so that you have one sheet for each resource.
3. Indicate on the "Farm Safety and Health Organization Directory" survey form how many of the resource materials survey you need and that number will be sent to you by return mail.

This survey is being conducted as a pilot study in Iowa. There is a possibility that it may be adapted and conducted on a nationwide basis. If you have any comments or suggestions for improvement, please include them on the bottom of the organization survey.

The information will be entered into a database. A directory of organizations will be printed. Any of you who return the surveys by May 20 will receive a complimentary copy of the directory to show our appreciation of your prompt reply. If you need more time to complete the materials survey, please return the organization survey by May 20. We value your input and hope this will be a helpful tool for you, also.

If you have any questions or comments concerning the project, please feel free to contact the project director, Gayle Olson at 319-257-6967. We look forward to hearing from you.

Sincerely,

Gayle Olson
Gayle Olson
Project Director

Sally K. Williams
Sally K. Williams, Ph.D.
Associate Professor
Family and Consumer

Farm Safety and Health Organization Directory

Organization Name:

Contact Person: Occupation:

Address: Phone:

City: State: Zip:

Type of Organization: Fax:

Please briefly describe the primary function of this organization:

Please list key words describing programs and resource materials you offer:

Who is eligible to use your resources:

Please list target audience(s) if different from above:

How may your resources be obtained?:

Does your organization have a directory or catalog of resources? _____
If so, please send a copy or instructions on how to obtain one along with this survey. If not, please make as many photocopies of the following page as are needed to complete a page for each resource. An alternative method is to indicate here how many copies you need mailed to you: ____
Please supply the information requested and return to: Gayle Olson
R. R. 2 Box 147
Winfield, IA 52659.

If you know of any other organizations, agencies, or companies that offer educational resources in the area of farm health or safety, please list their names, addresses, and phone numbers along with the name of the appropriate contact person (if known) below or on the back of this sheet.

Thank you for your help.:

Farm Safety and Health Resource Materials

Organization Name:

Person Completing Survey: Phone:

Title of Resource:

Publication Date: Length:

Abstract (25 words or less): _____

_____

_____

Key Words: _____:

Descriptors - Check all that apply.

TOPICS:

Accident Response
__Emergency Procedures
__First Aid
__Human Factors
__Rehabilitation
__Traumatic Injuries
__Other_____

Cumulative Health Risks
__Cancer
__Hearing
__Respiratory
__Other_____

Farm Chemicals
__Anhydrous Ammonia
__Handling
__Pesticides
__Storage
__Other_____

Farm Equipment Safety
__ATV
__Augers
__Grain Handling
__Harvest
__Hay & Forage
__Manure Disposal
__Manure Storage
__Motor Vehicles
__PTO
__Tillage & Planting
__Tractor
__Other_____

Farm & Home Safety
__Electrical
__Fire Prevention
__Livestock
__Laundering
__Poisonings
__Ponds
__Power & Hand Tools
__Protective Devices
__Shop
__Structures
__Water Quality
__Other_____

Safety By Age
__Preschool
__Elementary
__Jr. High
__High School
__Post Secondary
__Other_____

Safety Responsibilities
__Farm Workers
__Liabilty Issues
__Youth Employment
__Other_____

INTENDED AUDIENCE:
__Health Professionals
__Educators
__Engineers
__Agribusiness
__Farmers
__Farm Women
__Farm Employees
__Farm Family Members
__Farm Owners
__on farm
__off farm
Please indicate age level if geared to a specific age_____

MEDIA TYPE:
__Slide Set
__Video
__1/2"
__3/4"
__VHS
__Beta
__Pamphlet
__Book
__Poster
__Other _____

DISTRIBUTION
__Purchase
__Rental
__No Charge
__Single Copy Free
__Other_____

_____:

Thank you for your help. Please return this to:
Gayle Olson, R. R. 2 Box 145, Winfield, IA 52659:

Final Draft

Farm Safety and Health Organization Directory

Organization Name:

Contact Person: Occupation:

Address: Phone:

City: Zip:

Type of Organization: Fax:
__government
__education
__research
__medical
__policy
__service
__non-profit

Please briefly describe the primary function of this organization:

Please list key words describing programs/resource materials offered:

Who is eligible to use your resources:

How may your resources be obtained?:

Does your organization have a directory or catalog of resources? ___
If so, please send a copy or instructions on how to obtain one. If not, please make as many photocopies of the following page as are needed to complete a page for each resource.

Do you know of any other organization that should be included in this directory? If so, please list their name and address below.

Thank you for your help. Please return this completed survey to:
Gayle Olson
R. R. 2,
Winfield, IA 52659:

Farm Safety and Health Resource Materials

Organization Name:

Person Completing Survey: Phone:

Title of Resource:

Publication Date: Length:

Abstract (25 words or less): _____

_____

_____

Key Words: _____:

Descriptors - Check all that apply.

TOPICS:

Accident Response
__Emergency Procedures
__First Aid
__Human Factors
__Rehabilitation
__Traumatic Injuries
__Other_____

Cumulative Health Risks
__Cancer
__Hearing
__Respiratory
__Other_____

Farm Chemicals
__Anhydrous Ammonia
__Handling
__Pesticides
__Storage
__Other_____

Farm Equipment Safety
__ATV
__Augers
__Grain Handling
__Harvest
__Hay & Forage
__Manure Disposal
__Manure Storage
__Motor Vehicles
__PTO
__Tillage & Planting
__Tractor
__Other_____

Farm & Home Safety
__Electrical
__Fire Prevention
__Livestock
__Laundering
__Poisonings
__Ponds
__Power & Hand Tools
__Protective Devices
__Shop
__Structures
__Water Quality
__Other_____

Safety By Age
__Preschool
__Elementary
__Jr. High
__High School
__Post Secondary
__Other_____

Safety Responsibilities
__Farm Workers
__Liabilty Issues
__Youth Employment
__Other_____

INTENDED AUDIENCE:
__Health Professionals
__Educators
__Engineers
__Agribusiness
__Farmers
__Farm Women
__Farm Employees
__Farm Family Members
__Farm Owners
__on farm
__off farm
Please indicate age level if geared to a specific age_____

MEDIA TYPE:
__Slide Set
__Video
__1/2"
__3/4"
__VHS
__Beta
__Pamphlet
__Book
__Poster
__Other _____

DISTRIBUTION
__Purchase
__Rental
__No Charge
__Single Copy Free
__Other_____

_____:

Thank you for your help. Please return this to:
Gayle Olson, R. R. 2 Box 145, Winfield, IA 52659:

APPENDIX D: IOWA DIRECTORY OF FARM HEALTH AND SAFETY ORGANIZATIONS

Farm Safety and Health Organization Directory

Organization Name: AAA Iowa

Contact Person: Doug Woolf **Occupation:** Manager of Safety

Address: 1500 30th St. **Phone:** 515-223-4104

City: West Des Moines **State:** IA **Zip:** 50265

Type of Organization: **Fax:**

Please briefly describe the primary function of this organization: To provide safe and efficient means of travel (road, air, water, rail) to our members.

Please list key words describing programs and resource materials you offer:

Who is eligible to use your resources: members, civic groups, schools, etc.

Please list target audience(s) if different from above:

How may your resources be obtained?: contact above address or phone

Does your organization have a directory or catalog of resources: no

Summary of resources available: A number of free pamphlets are available including the following titles: "Safe School Bus Riding Tips", "Safe Walking Tips", "Tips for a Safe Halloween", "What Bike Driving Skills Do You Need to Know?", "Iowa's Bicycle Law", "Parents' Buying Your Child a Bike?", "Operating While Intoxicated or Drugged", "Sharing the Road" (motorcycle tips).

Farm Safety and Health Organization Directory

Organization Name: AgriCare

Contact Person: Marcia Heggen **Occupation:** Director

Address: Marshalltown Medical/Surgical Centr **Phone:** 515-

City: Marshalltown **State:** IA **Zip:** 50158

Type of Organization: hospital based ag health and safety progra **Fax:**

Please briefly describe the primary function of this organization: AgriCare is an occupational health and safety progra for farmers, agribusiness, and their families.

Please list key words describing progras and resource materials you offer: Accident response, cumulative health risks, protective equipment, farm safety,

Who is eligible to use your resources: farm families, agribusiness, health professionals, service & community groups

Please list target audience(s) if different from above:

How may your resources be obtained?: contact at above address

Does your organization have a directory or catalog of resources: no

Summary of resources available: AgriCare personnel are available to give presentations. A membership is available that includes health screenings, consultations, and educational progras

Farm Safety and Health Organization Directory

Organization Name: American Lung Association of Iowa

Contact Person: Bonnie Kay **Occupation:**

Address: 1025 Ashworth Road #410 **Phone:** 800-362-1643
515-224-0800

City: West Des Moines **State:** IA **Zip:** 50265

Type of Organization: non-profit volunteer health **Fax:**

Please briefly describe the primary function of this organization: Promote lung health through education, support, and advocacy.

Please list key words describing programs and resource materials you offer: repiratory diseases, agriculture hazards

Who is eligible to use your resources: all Iowans

Please list target audience(s) if different from above: health professionals, farm workers, farmers

How may your resources be obtained?: Contact above address

Does your organization have a directory or catalog of resources: brochure

Summary of resources available: The Agricultural Respiratory Hazards Education Series was produced by the American Lung Association of Iowa in collaboration with the University of Iowa's Institute of Agricultural Medicine and Occupational Health. The series consists of an introduction and a nine unit set for health professionals and a nine unit companion set for the lay community. Topics include: agricultural structures; dusts from decaying grain, hay, & silage; grain dust; livestock confinement dusts and gases; silo gas; applied agricultural chemicals; infectious diseases; measurement of ag dusts and gases; and personal protective equipment. The booklets are available individually or in a set from the American Lung Association of Iowa or through county extension offices.

Farm Safety and Health Organization Directory

Organization Name: ATV Safety Institute

Contact Person: Terry Appenzeller **Occupation:** Area Administrator

Address: 103 N Buxton, Box 243 **Phone:** 515-961-8627

City: Indianola **State:** IA **Zip:** 50125

Type of Organization: Education **Fax:**

Please briefly describe the primary function of this organization: Set up ATV rider safety courses to teach with licensed instructors how to correctly ride an ATV.

Please list key words describing programs and resource materials you offer: ATV training, safety

Who is eligible to use your resources: Ages 6 through adult (some ages must be accompanied by an adult)

Please list target audience(s) if different from above:

How may your resources be obtained?: by contacting above address for local training info or 1-800-852-5344 for information on ATV safety issues

Does your organization have a directory or catalog of resources: brochure

Summary of resources available: A 4-8 hour training course is provided free of charge to those who have purchased new ATVs since December 31, 1986. Others may obtain coupons to participate from Terry Appenzeller at the above address. The training is taught by certified instructors and includes a video, take home safety book, and hands on experience under controlled conditions. For those who have purchased a new ATV since April 29, 1988, a payment of $50 check, $100 Savings Bond, or $75 merchandise certificate (Hondas only) will be issued per new ATV purchased by an individual upon completion of the ATV RiderCourse.

Other resources include group presentations concerning training programs, and the following publications: "Tips and Practic Guide for the ATV Rider", "Parents, Youngsters, & ATVs", and "How to Form an ATV Club". Single copies are free from: ATV Safety Institue
National Resource Office
2 Jenner Street, Suite 20
Irvine, CA 92718

Farm Safety and Health Organization Directory

Organization Name: Cooperative Extension Service, Agriculture

Contact Person: Mark Hanna **Occupation:** Ext. Agricultural Engineer

Address: 200 Davidson Hall **Phone:** 515-294-6360

City: Ames **State:** IA **Zip:** 50011

Type of Organization: Education **Fax:**

Please briefly describe the primary function of this organization: Educational outreach and service from Iowa State University in the areas of agriculture and natural resources, home economics, youth development and community resource development.

Please list key words describing programs and resource materials you offer:

Who is eligible to use your resources: public

Please list target audience(s) if different from above:

How may your resources be obtained?: by contacting county extension offices in Iowa

Does your organization have a directory or catalog of resources: yes

Summary of resources available: a listing of publications related to Farm and Home Safety and a separate listing of Water Quality publications are available. Single copies of most of the titles listed are available free at county extension offices.

A number of safety slide/tape sets are available in area extension offices. Included in that listing is a series used for 14-15 year old tractor operating program as well as "Miscues with Machines", "Safe Storage and Handling of Grain", "Tractor Overturns", "Caution: Look Up Before it's Too Late", "Large Round Bale Safety", "Case History of Personal Injury Accidents".

Farm Safety and Health Organization Directory

Organization Name: Cooperative Extension Service, Home Economics

Contact Person: Dr. Janis Stone **Occupation:** Textiles & Clothing Extension Specialis

Address: 141 LeBaron Hall **Phone:** 515-294-6712

City: Ames **State:** IA **Zip:** 50011

Type of Organization: University Extension **Fax:**

Please briefly describe the primary function of this organization: Adult and youth education related to household hazardous wastes, protective clothing for pesticide application, care of pesticide contaminated clothing, farm clothing safety.

Please list key words describing programs and resource materials you offer: pesticide exposure, laundering, protective clothing

Who is eligible to use your resources: public, some to extension professionals or volunteers
Please list target audience(s) if different from above:

How may your resources be obtained?: most are available by contacting county or area extension offices

Does your organization have a directory or catalog of resources: yes, available from Publications Distributions, ISU, Ames, IA 50011

Summary of resources available: See also Cooperative Extension, Agriculture

Slide sets entitled "Protective Clothing for Pesticide Applicators" and "Dress for Safety: Clothing Safety on the Farm" are available on loan from county extension offices if reserved in advance. These can be duplicated at cost for other educational units.

In addition, Dr. Stone has had a number of research articles published concerning pesticides and clothing on the farm.

Farm Safety and Health Organization Directory

Organization Name: Easter Seal Society of Iowa, Farm Family Rehabilitation Management (FaRM) Program
Contact Person: Terry Willkomm **Occupation:** Director

Address: P.O. Box 4002
401 N. E. 66th Avenue **Phone:** 515-289-1933
City: Des Moines **State:** IA **Zip:** 50333

Type of Organization: Rehabilitation **Fax:**

Please briefly describe the primary function of this organization: This organization helps provide rural rehabilitation services to Iowa farm facilies affected by physical disabilities so they can return to farming and their home community. Assistance provided includes technical assistance, counseling, community awareness, specialized services, and networking.

Please list key words describing programs and resource materials you offer: Rehabilitation, Traumatic injuries,

Who is eligible to use your resources: Farm family members age 4-85, technical assistance provided to health professionals and consumers.
Please list target audience(s) if different from above:

How may your resources be obtained?: Contact above address or phone

Does your organization have a directory or catalog of resources: order form

Summary of resources available: Pamphlets are available on the FaRM Program and Arthritis and Farming. A variety of services are provided including worksite modification consultation, independent living and community services coordination, health care services coordination, peer support services, vocational counseling/job placement, follow up feedback. An "Agricultural Worksite Assessment Tool & User's Guide for Farmers & Ranchers with Physical Disabilities" is available for $10.

Farm Safety and Health Organization Directory

Organization Name: Farm Safety for "Just Kids"

Contact Person: Marilyn Adams **Occupation:** Farm Safety Consultant

Address: P. O. Box 458, 716 Main Street **Phone:** 515-758-2827

City: Earlham **State:** IA **Zip:** 50072

Type of Organization: non-profit **Fax:**

Please briefly describe the primary function of this organization: Disseminate materials related to farm helath and safety. Consultant to other organizations doing community projects on injury prevention on the farm. National farm family information center for safety and health.

Please list key words describing programs and resource materials you offer: farm safety, grain handling safety, tractor safety, child safety on the farm

Who is eligible to use your resources: anyone: agricultural organizations, 4-H, FFA, legislators, universities, farm families
Please list target audience(s) if different from above:

How may your resources be obtained?: Call or write. SHipping and handling charges plus some materials have a charge

Does your organization have a directory or catalog of resources: currently incomplete

Summary of resources available: A video is available on grain handling safety aimed at farm workers and family members for a $10 donation. Two types of large warning stickers are available for $.50 each. One is to be put on grain wagons to warn of possible entrapment. The other is "Danger - Don't Play Here" and has a logo young children should understand. It is intended to put anyplace a playing child would be at risk. An 18 page special insert from Successful Farming magazine called "We Kill Too Many Kids" is available and includes a farm family survey and articles about accidents involving farm children. A related video is expected soon.

Farm Safety and Health Organization Directory

Organization Name: Grinnell Mutual Reinsurance

Contact Person: Gary Downey **Occupation:** Safety\Loss Prevention

Address: P.O. Box 790 **Phone:** 515-236-6121

City: Grinnell **State:** IA **Zip:** 50112

Type of Organization: Insurance Co. **Fax:** 515-236-6121, 8 pauses ext. 512

Please briefly describe the primary function of this organization: Grinnell Mutual was organized to provide insurance for the hundreds of farm mutual insurance companies organized during the Civil War to protect farmers against financial loss due to fire. Experiencing much growth and diversification over the years, the company now offers educational materials to combat the problems in addition to insurance products.

Please list key words describing programs and resource materials you offer: Films, slide sets, pamphlets, loss control bulletins

Who is eligible to use your resources: Anybody

Please list target audience(s) if different from above:

How may your resources be obtained?: by contacting the Public Relations and/or Industry Relations departments

Does your organization have a directory or catalog of resources: yes

Summary of resources available: A listing of loss control bulletins is available, primarily dealing with specifications relative to fire prevention. A catalog of films is available, including many topics relating to farm health and safety. Also available is a listing of slide sets, brochures and pamphlets.

Farm Safety and Health Organization Directory

Organization Name: Institute of Agricultural Medicine and Occupational Health
University of Iowa

Contact Person: Jane Gay **Occupation:** Health Educator

Address: Oakdale Campus **Phone:** 319-335-4415

City: Iowa City **State:** IA **Zip:** 52242

Type of Organization: research, education **Fax:**

Please briefly describe the primary function of this organization: Provides outreach educational and hygiene or safety services to farms and agribusiness. Provides training and consultation services to safety and health professionals. Research in agricultural health and safety issues.

Please list key words describing programs and resource materials you offer:

Who is eligible to use your resources: public, professionals

Please list target audience(s) if different from above:

How may your resources be obtained?: contact above. For medical or industrial hygiene consultation call 319-335-4433. For educational or Worksafe Iowa, call 319-335-4422.

Does your organization have a directory or catalog of resources: brochures

Summary of resources available: A variety of resource materials, consultations, and presentors are available. Worksafe Iowa provides on-site safety and environmental monitoring and consultation in hazard control measures as well as information, and literature searches. Presentations lasting from 1/2 hour to 2 1/2 hours are available for large groups including health professionals, educators, agribusinesses, farmers, and farm family members. Topics include accident response, cumulative health risks, farm chemicals, farm equipment safety, protective devices, confinement structures, water quality, and preschool through adult safety. Phone 335-4422.

A number of videos are available for $10 rental fee on accident response, eye safety, hazardous workplace, hearing & respiratory risks, zoonosis, anhydrous ammonia, grain handling, combine safety, tractor safety, mowing (13 yr olds), weather's effects, electrical, chain saw, rural lifestyles, elementary and jr. high safety, and family safety. Videos include a teacher's guide as well as pre and post tests. A listing is available.

In depth programs for use by teachers or organizations will be available soon on these topics: traumatic injuries, hearing, respiratory, anhydrous ammonia, pesticide handling, grain handling, harvest, tractors, general equipment safety, grain wagons, confinement structures, and child safety for elementary, jr. and sr. high. Rental cost will be $20 - $30 and will include teacher's guide, manipulatives, audio/visual materials, and handouts.

Farm Safety and Health Organization Directory

Organization Name: Iowa Association of Electric Cooperatives

Contact Person: Ken Moore **Occupation:** Director of Safety and Loss Control

Address: 8525 Douglas, Suite 48 **Phone:** 515-276-5350

City: Urbandale **State:** IA **Zip:** 50322

Type of Organization: Service Association **Fax:** 515-276-7946

Please briefly describe the primary function of this organization: A service association to our members

Please list key words describing programs and resource materials you offer: Safety & Loss Control, Regulatory & Technical Services, Publications & Public Information
Who is eligible to use your resources: members

Please list target audience(s) if different from above:

How may your resources be obtained?: through membership

Does your organization have a directory or catalog of resources: yes

Summary of resources available: A directory is available for $12.00 plus tax and UPS charges. Contact Janet Rorebeck for a copy.

Programs and printed material are available for farm families and elementary through high school children for purchase or at no charge. Topics include accident response, hearing and respiratory risks, pesticides, electrical safety, and fire prevention.

Farm Safety and Health Organization Directory

Organization Name: Iowa Citizens for Community Improvement

Contact Person: Joe Fagan **Occupation:** Staff Director

Address: 1607 E Grand **Phone:** 515-266-5213

City: Des Moines **State:** IA **Zip:** 50316

Type of Organization: non-profit **Fax:**

Please briefly describe the primary function of this organization: Iowa CCI is a non-profit grassroots organization involved in a variety of urban and rural issues throughout the state. We act as a vehicle to inform, mobilize and empower low and moderate income people. Some of the urban issues which have been addressed include rising utility costs, substandard housing, zoning changes, crime and safety. Fair farm prices, farm credit and groundwater quality are farm issues that have been undertaken.

Please list key words describing programs and resource materials you offer: practical, resourceful, educational, grassroots, community involvement

Who is eligible to use your resources: anyone, but most are specifically targeted to low and moderate income people.
Please list target audience(s) if different from above:

How may your resources be obtained?: contact above address or phone

Does your organization have a directory or catalog of resources: no

Summary of resources available: A 13 minute VHS video entitled "Re-thinking Ag Chemicals: Conversations with Iowa Farmers" is available to borrow for the cost of postage. A discussion guide is included. Video is aimed at high school or adult audiences.

A second resource is a book listing 45 Iowa farmers and the methods they have employed to reduce or eliminate their chemical and fertilizer usage. A single copy is free with $1.30 necessary for postage.

Farm Safety and Health Organization Directory

Organization Name: Iowa Department of Agriculture

Contact Person: Sandy Teig **Occupation:** Consumer Educator

Address: Wallace State Office Building **Phone:** 515-281-5952

City: Des Moines **State:** IA **Zip:** 50319

Type of Organization: Government Agency **Fax:** 515-281-6236

Please briefly describe the primary function of this organization: To regulate laws pertaining to agricultural production, processing, marketing, trade, consumption, and resource conservation as stipulated by the Iowa Legislature.

Please list key words describing programs and resource materials you offer: agriculture education, agriculture awareness, agriculture promotion

Who is eligible to use your resources: anyone

Please list target audience(s) if different from above: rural and urban youth and adults

How may your resources be obtained?: contact above address or phone

Does your organization have a directory or catalog of resources: yes

Summary of resources available: A catalog is available listing educational resources provided by the Iowa Department of Agriculture & Land Stewardship, Iowa Farm Bureau Federation, Iowa Beef Industry Council, Sheep Division, Midwest Veal Growers Association, Iowa Pork Producers Association, Iowa Soybean Promotion Board, Iowa Egg Council, Dairy Council, and Iowa Turkey Federation. Most materials are available at a small cost or free loan. Most topics concern nutrition and product awareness. Many are aimed at school aged children for use in the classroom.

Farm Safety and Health Organization Directory

Organization Name: Iowa Farm Bureau

Contact Person: Ray Forsythe **Occupation:** Safety specialist loss control

Address: 5400 University Ave. **Phone:** 515-225-5474

City: West Des Moines **State:** IA **Zip:** 50265

Type of Organization: insurance company **Fax:**

Please briefly describe the primary function of this organization: The loss control department is concerned with preventing losses occurring to property, health and life.

Please list key words describing programs and resource materials you offer:

Who is eligible to use your resources: anyone, especially Farm Bureau members

Please list target audience(s) if different from above:

How may your resources be obtained?: contact above address

Does your organization have a directory or catalog of resources: partial

Summary of resources available: A number of slide sets, films, and videos regarding various aspects are available to borrow free of charge. Some print materials are also available.

Farm Safety and Health Organization Directory

Organization Name: Iowa Farm Safety Council

Contact Person: Dr. William Popendorf, President **Occupation:** Industrial Hygiene Professor
Address: Institute of Ag Medicine, Oakdale **Phone:** 319-335-4415

City: Iowa City **State:** IA **Zip:** 52242

Type of Organization: **Fax:**

Please briefly describe the primary function of this organization: The Iowa Farm Safety Council is a grassroots organization which supports farm health and safety issues. It's activities include: -Farm Safety Week
-Displays at major farm events
-Newsletter
-Displays for use by public

Please list key words describing programs and resource materials you offer: farm safety organization, education

Who is eligible to use your resources: all Iowa farmers and farm organizations

Please list target audience(s) if different from above:

How may your resources be obtained?: through Dr. Bill Popendorf at above address or through Gary Downey, Display Chairman, at Grinnell Mutual Reinsurance (elsewhere in directory)
Does your organization have a directory or catalog of resources: no

Summary of resources available: Annual membership is available for individuals or businesses and organizations. A quarterly newsletter is distributed to all members as well as Iowa county extension offices and vo-ag instructors. An awareness oriented display is available for loan to individuals or organizations desiring to borrow it.

Farm Safety and Health Organization Directory

Organization Name: Iowa Pesticide Applicator Training

Contact Person: Dr. Wendy Wintersteen **Occupation:** entomologist

Address: 109 Insectary, ISU **Phone:** 515-294-1101

City: Ames **State:** IA **Zip:** 50011

Type of Organization: education **Fax:**

Please briefly describe the primary function of this organization: coordinates and provides licensing and continuing education training for persons in Iowa who wish to apply restricted pesticides.

Please list key words describing programs and resource materials you offer: Pesticide safety, protective clothing, integrated pest management

Who is eligible to use your resources: pesticide applicators in Iowa

Please list target audience(s) if different from above:

How may your resources be obtained?: contact above or county extension office

Does your organization have a directory or catalog of resources: no

Summary of resources available: Training manuals, handouts, consultations concerning insect and weed pests and the applications of pesticides to control them. Training contains a very large safety component.

Farm Safety and Health Organization Directory

Organization Name: Iowa State Fire Marshal's Office

Contact Person: Jen Worthington **Occupation:**

Address: Wallace State Office Building **Phone:** 515-281-5821

City: Des Moines **State:** IA **Zip:** 50319

Type of Organization: Government **Fax:**

Please briefly describe the primary function of this organization: The promotion and enforcement of fire safety and the elimination of fire hazards and the investigation in the cause and origin of fires and the suppression of arson. Building code enforcement and handicap accessibility functions are within this division

Please list key words describing programs and resource materials you offer: fire safety

Who is eligible to use your resources: Public

Please list target audience(s) if different from above:

How may your resources be obtained?: request from above address. Only fee is return of material by post office or UPS

Does your organization have a directory or catalog of resources: yes

Summary of resources available: Over 80 films, videotapes, and slide sets are available to borrow. The only cost is return postage. Although no titles are specific to farms, there are a number of presentations relating to home fires and fire safety education for children and adults. Request a listing from Karen Shipley, State Fire Marshal's Office, 515-281-7003.

Farm Safety and Health Organization Directory

Organization Name: Iowa State Patrol

Contact Person: Sgt. Frank Fisher **Occupation:** Community Services Coordinator

Address: Wallace Office Building **Phone:** 515-281-5824

City: Des Moines **State:** IA **Zip:** 50319

Type of Organization: Law Enforce./Safety Ed **Fax:**

Please briefly describe the primary function of this organization: The Iowa State Patrol enforces the traffic laws, directs traffic, and investigates accidents. The Community Services Unit presents safety programs to the public and sets up and mans safety displays.

Please list key words describing programs and resource materials you offer: Traffic Safety, tractor safety, crime prevention - residencial & personal

Who is eligible to use your resources: Anyone

Please list target audience(s) if different from above: all ages

How may your resources be obtained?: Contact nearest Iowa State Patrol District Office

Does your organization have a directory or catalog of resources: yes

Summary of resources available: Programs listed in the catalog include a variety of presentations available. Some topics include: Traffic Safety, Bicycle Safety, Pedestrian Safety, School Bus Safety, Motorcycle/Moped Safety, Alcohol/Drinking & Driving, Substance Abuse/Drugs, Seat Belts/Child Restraints, Crime Prevention, and State Patrol/Law Enforcement

Presentations pertaining to farm safety include:

1. "Emergencies in the Making" (15 min) driving emergencies
2. "Farm Safety" (30 min) driving farm implements safely, can be used to educate city drivers about special needs facing farmers.
3. "Make Winter Driving Safer" (13 min) winter driving skills
4. "Snowmobile Safety Savvy" (14 min) proper clothing, pre-trip checks, and operating safety.
5. "The Tragedy of the Mailbox" (5 min) hazards of mailboxes.
6. "Eye Habits" (12 min) how inexperienced and experienced drivers use their eyes.
7. "Home Security Survey" (26 min) making your home more secure.
8. "The Owner's Mark" (20 min) marking farm/household equipment.
9. "Rural Crime" (30 min) how to prevent, most common crimes.
10. "Rustling is Big Business" (14 min) prevention tactics

Farm Safety and Health Organization Directory

Organization Name: Media Resource Center

Contact Person: Al Kent **Occupation:** Director

Address: 120 Pearson Hall, ISU **Phone:** 515-294-8022

City: Ames **State:** IA **Zip:** 50011

Type of Organization: Education **Fax:**

Please briefly describe the primary function of this organization: Provide media service and production support for classroom and informational needs.

Please list key words describing programs and resource materials you offer: film/video library, extension video programs

Who is eligible to use your resources: campus, educational institutions, civic organizations, cooperative extension
Please list target audience(s) if different from above:

How may your resources be obtained?: rental, some purchase

Does your organization have a directory or catalog of resources: yes

Summary of resources available: two catalogs include:
a publications and videotape catalog of items available from Publications Distribution, phone 515-294-5247, on the Iowa State University campus
The Iowa State University Film and Video Collection catalog available from Media Resources.
Both catalogs contain resources pertaining to farm health and safety as well as many other topics. Subject and title indexes are included.

Farm Safety and Health Organization Directory

Organization Name: National Institute for Rural Health Policy

Contact Person: Art Spies **Occupation:** Administrative Director

Address: 100 E. Grand **Phone:** 515-288-1955

City: Des Moines **State:** IA **Zip:** 50309

Type of Organization: **Fax:** 515-283-9366

Please briefly describe the primary function of this organization: The mission of NIRHP is to affect rural health policy and to improve the health status of rural Americans. This is accomplished through the use of policy analysis and applied research, demonstration projects, educational activities, and information dissemination.

Please list key words describing programs and resource materials you offer: Rural occupational health, access to rural health care, care of the rural elderly, and rural maternal and child care.
Who is eligible to use your resources: Library resources are available to the general public Monday through Friday, 8:30 a.m. - 5:00 p.m.
Please list target audience(s) if different from above:

How may your resources be obtained?: Contact at above address or phone

Does your organization have a directory or catalog of resources: no

Summary of resources available: Conference proceedings from "Agricultural Health and Safety and the Community Hospital" held August 21, 1987 are available for purchase. The document is 59 pages, published in Winter, 1988, and aimed at health professionals, educators, engineers, farmers, and farm women.

Farm Safety and Health Organization Directory

Organization Name: North Central Regional Educational Materials Project

Contact Person: Sorrel Brown **Occupation:** Coordinator

Address: 812 Curtiss Hall **Phone:** 515-294-8802

City: Ames **State:** IA **Zip:** 50011

Type of Organization: Midwest Data Base Reference **Fax:** 515-294-9477

Please briefly describe the primary function of this organization: To provide search responses on available Extension resources in the North Central Region: to circulate review manuscripts and/or Audio/Visuals for regional approval and publication so that duplication of effort is minimized and resources have wider distribution and use. The data base contains over 11,000 entries on Extension resources in ag, home economics, community resources, 4-H, and other miscellaneous subjects for the 12 land-grant institutions in the NCR.

Please list key words describing programs and resource materials you offer: data base management, data base search, extension data base, extension resource searches

Who is eligible to use your resources: any professional affiliated with the NCR land-grant universities, including Extension staff in the field.

Please list target audience(s) if different from above:

How may your resources be obtained?: By contacting above address or State Contact in each NCR land-grant institutions.

Does your organization have a directory or catalog of resources: directory

Summary of resources available: Computerized data base searches for educational materials are done free for eligible users or $4.00 per search for others. A Quarterly Update reporting new resources is available for a $5.00 subscription fee. Included in the resources are publications, videotapes, slide-tape sets, packaged instructional materials, and overhead transparencies.

Farm Safety and Health Organization Directory

Organization Name: Sartori Farm Partners

Contact Person: Pam Delagardelle, R.N. **Occupation:** Director of Occupational & Agricultural Health

Address: 6th and College **Phone:** 319-266-3584

City: Cedar Falls **State:** IA **Zip:** 50613

Type of Organization: Hospital based ag health and safety program **Fax:**

Please briefly describe the primary function of this organization: Sartori Farm Partners is a comprehensive occupational health and safety program for farm families and agribusinesses. Working as a partner with existing community and regional services, Sartori Farm Partners focuses on developing support for and awarness of rural health concerns.

Please list key words describing programs and resource materials you offer: Accident resonse, Farm chemicals, Cumulative health risks, Personal protective equipment, Farm safety (elementary, jr. high, sr. high)
Who is eligible to use your resources: Programs offered to farm families, agribusinesses, health professionals, service & community groups
Please list target audience(s) if different from above:

How may your resources be obtained?: contact at above address

Does your organization have a directory or catalog of resources: no

Summary of resources available: The majority of the programs developed at Sartori Hospital are slide shows which are presented by Sartori personnel. They have not been adapted for distribution and do not have the ability to stand alone without the presenter. However, presenters may be available throughout the state of Iowa.

Farm Safety and Health Organization Directory

Organization Name: Social and Behavioral Research Center for Rural Health

Contact Person: Rand Conger **Occupation:** Director

Address: 126 MacKay Hall, Iowa State Univ. **Phone:** 515-294-0862

City: Ames **State:** IA **Zip:** 50011

Type of Organization: Research **Fax:**

Please briefly describe the primary function of this organization: Ours is primarily a research center which shares its findings with educational or medical organizations which can use those findings in developing educational programs.

Please list key words describing programs and resource materials you offer:
Social and behavioral factors influencing rural health risk; health risk reduction; public policy supporting rural health risk reduction
Who is eligible to use your resources: Any type of educational or health related organization
Please list target audience(s) if different from above:

How may your resources be obtained?: contact the above address or phone

Does your organization have a directory or catalog of resources: no

Summary of resources available: Was organized in fall of 1988. Do not currently have resources available for dissemination.

Farm Safety and Health Organization Directory

Organization Name: State Public Policy Group

Contact Person: Tom Slater **Occupation:** President

Address: 100 Court Ave. Suite 321 **Phone:** 515-243-2000

City: Des Moines **State:** IA **Zip:** 50312

Type of Organization: Consulting **Fax:**

Please briefly describe the primary function of this organization: State Public Policy Group is a consulting group that provides technical assistance, education, training, and issue management strategies to public and private organizations, agencies, and associations.

Please list key words describing programs and resource materials you offer: consulting, technical assistance, issue development, education, training, issue management, conference planning
Who is eligible to use your resources: public private agencies, associations and organizations
Please list target audience(s) if different from above:

How may your resources be obtained?: contact above address or phone

Does your organization have a directory or catalog of resources:

Summary of resources available:

Farm Safety and Health Organization Directory

Organization Name: Veterinary Medicine Extension

Contact Person: Dr. Loren A. Hill **Occupation:** Public Health Vet.

Address: 2270 Vet Med, ISU **Phone:** 515-294-8790

City: Ames **State:** IA **Zip:** 50011

Type of Organization: state/federal **Fax:**

Please briefly describe the primary function of this organization: To extend research and other advanced knowledge to benefit individuals and society and serve to focus development. In the context of veterinary public health, this involves diseases and conditions common to humans and animals, food safety, occupational health and safety, etc.

Please list key words describing programs and resource materials you offer: food safety, occupational safety, zoonoses, respiratory, toxicity & infection, water borne disease, foodborne disease.
Who is eligible to use your resources: everyone

Please list target audience(s) if different from above:

How may your resources be obtained?: from county extension offices, publications distribution, or above address

Does your organization have a directory or catalog of resources: yes, available from Publications Distribution, ISU, Ames, IA, 50011
phone 515-294-5247
Summary of resources available: A series of fact sheets are available on the above topics. New ones scheduled for release in 1989 include:

- -Food Safety (series of 10)
- -Lentiviruses (family of AIDS virus in animals)
- -Fleas
- -Feline Leukemia
- -Farmers Lung Disease
- -Water Quality and Health
- -Veterinary Drugs and Human Health

Farm Safety and Health Organization Directory

Organization Name: Young Farmer's Organization

Contact Person: Dr. Robert Martin **Occupation:** Associate Professor

Address: 217B Curtiss Hall **Phone:** 515-294-0896

City: Ames **State:** IA **Zip:** 50011

Type of Organization: educational **Fax:**

Please briefly describe the primary function of this organization: The primary purpose of the Iowa Young Farmers Educational Association is to promote education among young adults engaged in agricultural careers - primarily farming and ranching.

Please list key words describing programs and resource materials you offer: no safety

Who is eligible to use your resources: young farmers,spouses, and their families, primarily between the ages of 20 & 40
Please list target audience(s) if different from above:

How may your resources be obtained?:

Does your organization have a directory or catalog of resources: no

Summary of resources available: No health or safety resources are available. Other resources include two handbooks and a newsletter.