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PROFESSIONAL COMPETENCIES NEEDED
BY TRAINERS IN AGRIBUSINESS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Joe Wright Green Jr., B.S., M.S.

* * * * *

The Ohio State University

1985

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CHAPTER I
INTRODUCTION

The early years of the United States of America witnessed many efforts to insure a strong agricultural foundation for the nation. The Morrill Act of 1862, which spawned Land-grant institutions, was but one example of the commitment of the nation. The Smith-Hughes Act of 1917, which established vocational agriculture, was yet another example of these efforts. Subsequent agricultural and vocational legislation has, for the most part, sought to foster the growth of the agricultural industry through technological developments and education. These and other associated events were chronicled by True (1929).

Agricultural education has long played an important role in the developmental effort by providing vocational agriculture programs at secondary and the postsecondary levels. From the outset, agricultural education embraced the development of adults as well as high school students (Marvin, 1983, p. 8). The profession has continued to support that role today due, in part, to the ever increasing pace of change within the agricultural industry.
One of the major factors which has encouraged change has been the rapid increase in technology. It is widely recognized that many of the jobs for which we are now training did not exist a decade ago. This rate of change will continue to accelerate. Jobs for which people are prepared today may not exist in a few years, and this dynamic situation will continue to gain momentum (Cook, 1983, p. 61).

The challenge was clear, technology will continue to change; and as a society, people must adapt. This economy, this society, indeed, this world has gone through a painful process of change. The jargon of change has been everywhere: high tech, the information age, and knowledge industries were but a few (Reed, 1983, p. 109). Technological developments will have a great impact on current and future jobs.

Clinton estimated that technology will create 15 million new jobs by 1990. Present occupations will be modified to the point that they are unrecognizable (1984, p. 77). Not only will the workforce be influenced, but technology will change how businesses are run and managed (Clinton, 1984, p.71). While it has often been difficult to separate change and technology, one clearly begets the other.
The impact of technology and the related changes in the workplace have brought many predictable outcomes. Not the least of these outcomes was potential unemployment. Whether unemployment was brought on by foreign competition, an obsolete workforce or some other factor; the results were the same: people found themselves without jobs.

The situation has continued to compound itself (Kolde, 1984, P. 36). The way back to stability was clear, but not without its costs. Baker (1979) said it best, "Like obsolete equipment, inadequately trained employees pose a serious threat to our economic growth. Modern management is becoming aware of the competitive disadvantages of inadequately trained people (p. 27)."

In her presentation to a chapter of the American Society for Training and Development, Nelson (1983) stated, "Due to change, business must invest in the human side of things today." Through better training, America will be able to overcome the present disadvantages being experienced.

Throughout society, training has been on the increase in response to the accelerating pace of change which has, in turn, accelerated job
obsolescence (Parker, 1974, p. 191). This was certainly the case when examining productivity. Productivity has been an often used, very important term in the business world. A lack of productivity has numerous negative side effects; however, declining individual productivity must be dealt with if collective productivity was to be improved. This can be effectively dealt with through training.

Johnson (1976) thought that when it comes to individual performance, there can be a gap between actual performance and what is needed, and that training can effectively reduce that gap through changed behavior. This can be accomplished with specific skills, knowledge, and attitudes (p. 21). Improving productivity has become a critical issue at many levels in this country.

Productivity and unemployment were often measured in terms of the economy. Both were interrelated; and depending on the viewpoint, one spawned the other. Evans et al. (1975, p. 293) stated, "Economic productivity and stability depends upon the productivity and stability of the worker." Many times, economic considerations become the driving force which have caused this country to make changes
or deal with situations which must be improved. "It has been characteristic of the United States' economy that its vitality has required massive change. Machines replace people, and the making of the machines creates new and, often, different jobs (Barton, 1983, p. 23).

The commitment to train and educate people would require adequate financing. The size and scope of the commitment of an organization could be clearly indicated by dollars committed per person. The American Society for Training and Development has estimated that over $40 billion dollars were spent on employee training (Nelson, 1983). That was an impressive amount, but it paled in significance when one heard the projected growth rate. By 1990, it has been estimated that $200 billion would be spent on training, nationally (McLagan, 1983, p. 2). Training, a big business, has begun to get the attention of nearly everyone.

Agribusiness has not been different than any other segment of industry when it comes to the need for training as a means of dealing with change. Downey (1982) believed that agribusiness needs to realize that human assets, like fiscal assets, need
maintenance and repair if they are to operate effectively (p. 1). Without an active program to upgrade employees, an agribusiness can quickly lose its edge in the market place (Downey, 1982, p. 3).

Agricultural education has had, as a part of its tradition, a charter to play an active role in educating people in agribusiness. Advantages accrued to agricultural education in taking an active part in the training of individuals in agribusiness. Marvin (1983) stated that the future of agricultural education has its greatest growth potential in adult education (p. 9). Adult education, whether it takes place in the formal setting of a classroom or the informal setting in the back of a plant, has been a growing field which needs to be addressed in a substantial way. However, in the areas of adult and agricultural education, agribusiness training has received little or no attention. In fact, this researcher was unable to find any studies by agricultural educators remotely associated with the topic of agribusiness training.

**NEED FOR STUDY**

This study attempted to more clearly define what agribusiness trainers identify as the critical
knowledge, skills, and abilities trainers should possess. Kenny (1982, p. 7) spoke of all training when he wrote, "At this stage in the evolution process, there is a need to gain agreement on what is required of a training and development person." That which holds true for training in general clearly holds true in specific areas also. The review of literature illustrated that little was known about trainers in the field of agriculture. This researcher contacted numerous agribusiness trainers in the process of defining the problem, and they were unanimous in agreement that a study would be beneficial. It would be a statement of the maturation of a profession when it begins to seek to know more about itself. Training has been a profession which has asked questions and desired greater status and recognition (Kenny, 1982, p. 3).

One of the first problems confronted upon initial exploration of the literature in the field of training was the lack of consistency among job titles in relation to actual job content (Nelson, 1983). This inconsistency created greater misunderstanding and diminished the status of the profession in the eyes of non-trainers, but this was not only the problem facing agribusiness or training.
Throughout industry, there is a common need to better understand the knowledge and skills which underlie effective job performance. Without definitive criteria, recruiters select, managers manage, trainers train and planners plan to different, sometimes conflicting, ideas. (McLagan, 1980, p. 22).

A description of what competencies training personnel required and how these competencies related to personal and organizational characteristics would help the profession describe and explain its training needs. A benchmark would be provided for the comparison of various curricula to determine if the critical core of competencies were addressed. Another benefit of this study was the linking of the training profession to the academic field so that universities can provide graduates with the necessary requirements (Nelson, 1983).

A competency model would serve as a tool which would put the profession more consistently on target (McLagan, 1980, p. 23). The application of such a model was exigent with several applications apparent. "Competency descriptions can be used for succession planning, performance appraisals, personnel selection, or as a job blueprint to aid in the design, building, and implementation of training programs." (Becker, 1983, p. 17).
Additional benefits of a study of this type were outlined by Bratton (1981).

2. Provide a common set of concepts and vocabulary.
3. Provide academic preparation programs.
4. Provide a basis for eventual certification of professional workers.
5. Provide employers with selection tools.
6. Provide a basis for describing this emerging field. (p. 14)

Furthermore, the potential uses of carefully constructed competency models were yet to be fully realized. An accurate competency model would serve as a new way of looking at people and their work.

Perhaps most importantly, competency models may be the only practical vehicle for describing what Peter Drucker calls 'knowledge jobs'—jobs which require high levels of creativity, judgment, tolerance of ambiguity, and which cannot be adequately described other ways. (McLagan, 1980, p. 23)

With these points in mind, this study sought to answer the following research questions.

1. What educational and occupational competencies were perceived as necessary by selected trainers in agribusiness?
2. What were the educational characteristics and occupational characteristics possessed by selected trainers in agribusiness?

3. What were the characteristics possessed by the departments and/or organizations for which these selected trainers in agribusiness work?

4. To what extent did selected trainers in agribusiness differ from vocational agriculture teachers in perceived critical competencies as determined by previous research in vocational education?

5. What was the relationship between the characteristics possessed by agribusiness trainers and their perceptions of the needed competencies?

6. What was the relationship between the characteristics possessed by training departments/organizations and trainers' perceptions of the needed competencies?

DEFINITION OF TERMS

1. ADULT—A person usually beyond teenage years who has become self-directed and responsible for one's own actions.
2. ADULT EDUCATION—The postsecondary development of knowledge and skills that facilitate adult learning.

3. AGRIBUSINESS—A business which directly or indirectly contributes to the production of food or fiber, or handles the products therefrom.

4. CERTIFICATION STANDARDS—The development of specific criteria to establish relevant qualification and performance requirements.

5. COMPETENCY—The specific knowledge, skills, and abilities critical to effective role performance.

6. COMPETENCY MODEL—A grouping of the competency descriptions that collectively define a field.

7. HUMAN RESOURCE DEVELOPMENT—A term to describe the entire field that deals with the utilization of people. This area includes training and development, along with Organization Development, Human Resource Planning, Job Design, Selection and Staffing, Personnel and Information Systems, Compensation and Benefits, Employee Assistance, Union and Labor and Union Relations.

8. PROFESSIONAL COMPETENCIES—The knowledge and skills that apply to specific areas of society and are differentiated from technical competencies.
9. SELECTED TRAINERS IN AGRIBUSINESS—Members of the American Society for Training and Development who have self-selected to be identified with others who have an interest in agri-industry. Furthermore, this group had, either by title, position, or self-assessment, been defined as both a trainer and a member of an agribusiness.

10. SPECIAL INTEREST GROUP IN AGRIBUSINESS—Members of the American Society for Training and Development who had self-selected to be identified with others who have professional and/or training interest in the field of agriculture.

11. TRAINER—A person who assisted others in the purposeful development of the knowledge, skills, and abilities to perform current or future jobs.

12. TRAINING AND DEVELOPMENT IN AGRIBUSINESS—This consisted of providing planned learning opportunities for individuals to gain the needed knowledge, skills, and abilities required by agribusiness now and in the future.

13. TRAINING COMPETENCIES—The knowledge, skills, and abilities which were key to producing the critical outputs of the training and development field.
LIMITATIONS OF THE STUDY

1. Only members of the American Society for Training and Development Special Interest Group in Agriculture were examined in this study.

2. Only those individuals employed by an agribusiness and whose primary job responsibility was that of a trainer were included in the study.

3. Only professional training competencies for agribusiness trainers were included in the study.
CHAPTER II

REVIEW OF LITERATURE

Two extensive mechanized searches were conducted of the ERIC system and Dissertation Abstracts International. Research reports were located which identified the professional competencies possessed by vocational educators, teachers of vocational agriculture, and training and development professionals. These studies provided the support for the theoretical framework to study the competencies required by trainers in agribusiness. A paucity of research existed which dealt specifically with the study question being proposed, and the theoretical framework was developed by synthesizing concepts from other areas.

Nearly every study of competencies in the area of vocational education originates from work by Cotrell et al. (1971). This research has proven, over time, to be one of the most enduring and comprehensive works of its kind. Today, the work has provided researchers in education with the theoretical foundation and methodological framework upon which to build.
Utilizing techniques such as introspection, interview, and critical incidence; Cotrell et al. (1971) identified 384 performance elements for vocational teachers. Shinn (1976) reported these performance elements which were then grouped into ten distinct categories:

1. Program planning, development, and evaluation
2. Instructional planning
3. Instructional execution
4. Instructional evaluation
5. Instructional management
6. Guidance
7. School-community relations
8. Student vocational organization
9. Professional role and development
10. Coordination

(1976, p. 9)

The Role Of Training

All too often, the role which training plays has been misunderstood. Training has been confused and/or associated with many other activities. The label of
trainer has usually been associated with instruction, but that has typically been only one of many important roles (Chaddock, 1976, p. 3.1). A consensus has been difficult to obtain. In 1979, a committee was formed to do initial exploration. Training has been divided by White (1979, p. 4) into nine categories:

1. Analyze needs and evaluate results.
2. Design and develop training programs and materials.
3. Deliver training and development programs and services.
4. Advise and counsel.
5. Manage training activities.
6. Maintain organizational relationships.
7. Do research to advance the training field.
8. Develop professional skills and expertise.
9. Develop basic skills and knowledge.

In a landmark study, Models for Excellence, McLagan (1983) reviewed a broad range of studies and identified 15 roles for trainers. These roles are:

1. Evaluator: Identifying the extent of a program, service, or impact of the product.
2. Group Facilitator: Managing group discussions and group processes.
3. Individual Development Counselor: Helping individuals assess personal competencies, values and goals, and identify and plan development and career actions.


5. Instructor: Presenting information and directing structured learning experiences so that individuals learn.

6. Manager of Training and Development: Planning, organizing, staffing, controlling training and development operations and projects, and linking with other organization units.

7. Marketer: Selling training and development viewpoints, learning packages, programs, and services.

8. Media Specialist: Producing software for and using audio, visual, computer, and other hardware-based technologies.


10. Program Administrator: Ensuring that all necessary components of a learning event are
present and that program logistics are conducted smoothly.

11. Program Designer: Preparing objectives, defining content, selecting, and sequencing activities.

12. Strategist: Develop long-range plans for training.

13. Task Analyst: Identify activities, tasks, and sub-tasks to accomplish specific results in a job or organization.

14. Theoretician: Develop and test theories of learning, training and development.

15. Transfer Agent: Help apply learning.

Value Of Training

Training has not been a cure-all, nor has it always been the most appropriate solution to a problem. As Baker (1979, p. 27) pointed out, "Training will not solve all problems, but it can equip people to effectively cope with continuing challenges." The field of training has much to contribute to the quality of work and life (McLagen, 1983, p. 3). The importance which training has played
in each industry and/or organization has varied widely and the impact of training has often been underestimated (Chaddock, 1976, p. 3, 5). This concept appeared to finally change. Nelson (1983) reported that, today, training and development has taken on greater importance in most organizations.

The field of training, as with many professions, has been in a constant state of evolution. There have been conflicting forces within the profession debating the definition of training. At the same time, the profession continued to change rapidly (Kenny, 1982, p. 3; McLagan, 1983, p. 1).

Training and development professionals have been charged with assisting others to adapt to and prepare for the future. It logically follows that, in the words of Nelson (1983), "One of the key skills of a trainer today is what is termed intellectual versatility, that is the ability to adapt and respond to all types of opportunities." If the profession has the capability to help others, it must first develop the ability to help itself. As the profession evolves, it must be prepared to standardize itself and to identify key skills, knowledge, and abilities which are universal among members of the profession. Gordon
et al. (1984) predicted that by the end of the decade all trainers in the United States will be required to meet professional certification standards (p. 14).

Determining these certification standards would require much thought. Data need to be gathered and analyzed to find the critical core competencies of the profession. This has been one of the reasons why competency models were proposed and studied. There has been little doubt that competency modeling has been accepted by the world of training (Zemke, 1984, p. 81).

Once conceptualized and thoroughly tested, competency models have served many purposes, not the least of which has been the selection of personnel. Selecting a person to do training, by and large, has been a loosely-structured, undisciplined process. Most trainers have been selected from peripheral groups because of their ability to perform certain tasks well. But, as Chaddock (1976) pointed out, "There is a big difference between being good at something and teaching others to do it (p. 3.5)." Trainers have been characterized as knowing a good deal about teaching but little about business. This lack of perceived bottom-line orientation has caused
many decision makers to distrust trainers in general. This detrimental perception must be considered if the profession is to evolve. That point, coupled with the constant challenge for trainers to remain technologically and professionally current, has produced problems for the profession. Knowledge can quickly become outdated, and even the best trainers could lose their effectiveness (Grabowski, 1976, p. 44.4).

All the economic forces which impact this country have been of great concern to agriculture and agribusiness. As one of the most important industries of this country, agriculture must deal effectively with these and other forces. First, in terms of technological advancements, only the so-called high-tech field could begin to match the productivity of agriculture. Hill (1982) outlined the many developments which face agriculture, each requiring new and more sophisticated support services (p. 83).

As technology continues to bombard the industry, much will be needed in terms of training. Individuals already employed will be required to make shifts in careers, be updated, and/or become current. Initial data have illustrated that many adults are, in fact, responding by seeking training from many different
sources. Swanson and Mosier (1983) reported that nearly 28 percent of adults involved in agriculture have enrolled in classes or programs to upgrade their technical expertise (p. 60).

Persons (1981, p. 6) supported the importance of training and/or adult education in this country when he stated:

Adult education in agriculture must shift its aim, or it will no longer be a functional contributor to agriculture production or the vast industry it serves.

This shift must primarily occur in the adult arena. By providing the needed training and developmental activities, individuals and groups, industry-wide, will be better able to address these and other challenges.

Industry And Education

Few would disagree with the continuous need to improve the human resources of this country. Upon examination, most developmental needs fall, logically, into two categories: 1) industry and 2) education. Both groups have commanded great resources, employed vast numbers of people, and have spent huge sums of money in order to achieve nearly the same objective. Little has been accomplished in attempts to coordinate
the two separate components. Coordination must be achieved, according to Cook (1983), if this country is to survive the challenges in the future, more relevant dialogue must be encouraged, focusing on the mutually defined needs of industry and education (p. 62).

Unfortunately, education has been often and unfairly criticized for many of the problems. Statements like: When business supplements the educational investment, it underscores public education's failure to meet the needs of business (Evans, et al. 1975, p. 298). This narrow view should be discouraged. A more positive view has been the idea that education and training are life-long ventures (Barton, 1983, p. 24). The importance of more cooperation in both the public and private sectors cannot be over emphasized (Barton, p. 24 and Clinton, p. 78); however, as Cook (1983) succinctly stated:

The proposed reanalysis of the relationship between education and industry is not radical, nor should it be costly to implement. Much can be accomplished through a redirection of efforts and resources and a new assessment of purpose and goals. So long as educators and industry leaders alike understand that each must be a welcome participant in each other's work, that there is, in fact, a mutuality of interests which binds the two worlds; the challenges posed by the future will be met
to the credit of both and the benefit of all (p. 62).

Many programs, such as the Comprehensive Training and Education Act and others, sought to improve cooperation between education and industry. The recently enacted Job Training Partnership Act showed signs of building the needed consensus in both the public and private sectors (Barton, 1983, p. 24). Cook (1983) thought that industry and education should resolve any problems among themselves without outside influence (p. 61).

There has been much time wasted and effort expended in trying to determine in which area a certain program, project, or issue belongs. A better use of available resources would be to develop a concerted effort between education and industry.

**Teachers Into Training**

Industry obtains trainers from many different sources. Many are successful technicians, sales people, etc. who are brought into the main office of industry and asked to train others. Unfortunately, these neophyte trainers often do not meet with immediate success.
The reasons for such failure have been many and varied. While many may have known the technical field well, there were some who were unable to transfer that knowledge to others. There had to be somewhere else for one to go to find persons with the required ability to enhance the learning of others. The teaching field was one logical choice. However, there were those in the training profession who would disagree. Indeed, a widely-held bias has existed among many trainers that there is little correlation between the ability to teach and being successful as a trainer. This writer has been unable to find research results which substantiated this claim. Therefore, it can be argued that the ability to instruct, when properly applied, would meet with approximately the same amount of success regardless of age or setting.

There has appeared to be a logical migration of teachers into training. Cushing (1980, p. 51) reported that in the business environment, former teachers generally were successful at analyzing, problem solving, managing time, and communicating with others. These successes were evident in teaching of all types. There has appeared to be growing evidence that prime training candidates come from teaching
areas which were pragmatic in philosophy such as home economics, industrial arts, and others (Cushing, 1980, p. 32). This implied that programs which emphasized demonstrable skills tended to produce teachers who adapt more readily to the training environment rather than those who teach academic subjects.

Regardless of discipline, individuals with a teaching background, who were presently involved in training, thought that their experience and education prepared them for work in the training field (Mirabile, 1983, p. 15). Teaching methods have been successfully taught and then transferred to various types of teaching or training situations. It logically followed that people can and should be formally prepared to train.

There were numerous factors which have impacted the migration of teachers into training, not the least of which has been the present challenges facing public education. The decline in student enrollment, budgeting constraints, and socio-economic factors have increased the number of teachers leaving schools (Cushing, 1980, p. 31; Grob, 1983, p. 31; and McLagan, 1982, p. 27). These individuals sought new careers in a host of areas. Training and development employed many former teachers.
Teachers have had a number of biases with which to deal if this career transition was to be sustained. Members of industry have often thought that teachers fall short as trainers because of the lack of knowledge of business and an understanding for the need for profit (Cushing, 1980, p. 31).

**Curriculum Development**

The development of individuals to do training in agribusiness has lacked a formal or easily identifiable discipline. A genuine lack of resource for comprehensive education, either formal or informal for training and development has existed (Collings and Chalofsky, 1979, p. 90). This has kept the profession fragmented and less productive. There is now, at least, an awareness of the problem. Members of the academic community have begun to concern themselves with this situation. In the future, programs could conceivably be designed to aid those wishing to become trainers.

If colleges are going to address the needs of the training profession by designing educational programs, certain elements would be required. College curriculum decisions should be closely studied and
developed around an explicit model (McLagan, 1982, p. 1). This model must be established on hard data, not intuition. "Identified competencies," Fardig et al. (1977, p. 10) thought, "constitute a far more solid foundation on which to build curriculum."

Academicians can better design the curricula which training and development needs through research (McLagan, 1982, p. 3 and McLagen, 1983, p. 105 & 170).

After research has been completed and examined, there may already be in place, among some disciplines, a mechanism to deliver a vast majority of the critical skills trainers need. Once the profession has a better understanding of what it does and what is needed, then it can begin to explore the various vehicles available to optimize the needed growth.

**Adult Education**

Training and development for the purpose of this study has been restricted to working with adults. Because adults comprise the overwhelming majority of trainees, some attention should be paid to adult education. As the recognized pioneer in this field, Knowles (1978, p. 37) coined the word "Andragogy" and
the concept that adults are taught somewhat differently than children. In his works of the 1960's and 70's, Knowles further set forth the following assumptions that set adult education apart:

2. Role of Experience: As people mature, they accumulate a reservoir of experience which causes them to be an increasingly rich resource for learning.
3. Readiness to Learn: As people mature, their learning is based on felt need, not the notion that they ought to learn.
4. Orientation to Learning: Adult learning is problem centered, not subject centered.

Trainers must be able to recognize and allow for the differences between adolescent and adult groups. If one accepted Knowles' (1978, p. 21) broad definition of an adult educator as anyone who helps adults learn, then it followed that trainers are adult educators in the strictest sense.

Related facts about adult education should help establish further the importance it has played in
training. Swanson and Mosier (1983, p. 64) reported that two out of every three adult courses were taken for job related reasons. This fact indicated that a majority of adults wanted and/or needed to develop in their careers. These and other facts support Knowles' principle of adult education.

As our population matures and grows older, the need for adult education should increase. Knowles (1978, p. 34) pointed out that the role of adult education has shifted from marginal status to a central issue in our society. Fourteen percent of all adult education has been conducted by business and industry (Swanson and Mosier, 1983, p. 55). Just where these adults have gone to gather more knowledge and skill has not been determined. Like most things, people have taken the path of least resistance in terms of time and money. If industry provided the training and on-the-job time to the learner, then that would be the vehicle they will most likely choose. Women and white collar workers will continue to demand more growth (Swanson and Mosier, 1983, p. 59). As these and other groups call for more growth opportunities, training must be provided for them.
Competency Evolution

The idea of competency has been around for quite some time and in vocational education it has been a research topic for well over a decade. Cotrell et al. (1971) enumerated a list of 384 separate tasks which a teacher should be able to perform to some degree. Later studies by Hamilton, et al. (1977) and others helped to synthesize these to a more manageable number of 100. This list gave rise to the Competency Based Teacher Education Modules. They have stood as one of the most comprehensive attempts at identifying what a teacher must do.

There have been leaders like Newcomb (1983) who have not agreed with the competency concept (pp. 3-5). There have been those such as Peterson (1983) who supported this approach as adding greatly to the learning/teaching process (p. 6). Hopefully, these professional developments have triggered more self-analysis, more searching for new directions, more certainty, more excitement and hopefulness, more work, more challenges, and more effective teachers in vocational agriculture. The development of secondary, postsecondary, and adult students who are knowledgeable and enthused about production agriculture; agribusiness; and solid, leading citizens
in their communities would be the ultimate result. To that end, Competency Based Teacher Education (CBTE) has challenged the professional preparation of teachers of vocational agriculture (Peterson, 1983, p. 12).

As the list of terminology enumerated, there has been very little difference between operationalizing the definitions of vocational education and training. In fact, these definitions have been very similar, and this study sought to establish the similarity.

Fundamentally, the competency concept was one that impacted all of us. Hall (1980, p. 35) stated that there is a competency motive in us all, in other words, there is a need to demonstrate to others the ability to perform a task. Hall (1980) shared what is termed the self-reinforced cycle of competence (p. 216).

COMPETENCY CYCLE

Conditions for Competence

Managerial Competence     Productive Orientation

Productivity and Health

Figure 1
The Ontario Society for Training and Development made a substantial effort toward the investigation of trainer competency. Developing what has been termed CAT or Competency Analysis for Trainers. The personal planning guide which resulted was the first of its type to try to describe in detail the knowledge, skills, and prerequisites for effective training and development professionals. This study became the first accreditation movement in training (OSTD, 1982, p. 3). Though somewhat loosely-structured, this study provided a foundation for future works and is still utilized today.

**Defining And Refining Competency**

There were almost as many definitions of a competency as any term used in education or training. Not only did definitions vary between disciplines, but within professions. A consensus has been difficult to reach. Gilbert (1978) explained competency in terms of a mathematical formula. "Human competence is a function of worthy performance (W), which is a function of the ratio of valuable accomplishments (A) to costly behavior (B)." (p. 18)
COMPETENCY FORMULA

\[ A \]
\[ W = - \]
\[ B \]

Figure 2

The above definition appeared somewhat simplistic. This writer found that Zemke (1984) used the works of Mager and others to better define training: "There is no difference between Competency Based Education and Criterion Referenced Instruction." Terms like the following are essentially equivalent.

A) Competency-Based Training
B) Performance-Based Training
C) Criterion-Referenced Instruction
D) Performance-Oriented Training
E) Objective-Based Training
F) Mastery Learning

(pp. 81-82)

The interchangeability of these terms allowed for broad interpretation; however, Mager pointed out that the really important thing to remember is that a valuable idea is being called to people's attention,
not that different names are applied to the same useful idea (Zemke, 1984, p. 82).

Pinto and Walker (1978) developed the following definition: "Competencies are the specific skills, knowledge, abilities, and other attributes, such as values and attitudes, necessary for effective role performance (p. 59)." McLagan (1980, p. 24) classified competencies as knowledge, skills, attitudes, and intellectual strategies required of a profession.

McLagan (1982) further defined competence as "The knowledge and skills which are key to producing the critical outputs of the training and development field and its roles (p. 18)." Clearly, as one went deeper into the literature in the field, it was evident that perhaps a definition in this area is the evolutionary process without end.

For the purpose of this study, it was necessary to state as clearly as possible a definition of competency as it relates to the research question; therefore, competencies for trainers in agribusiness were defined as the knowledge and skills required to successfully perform as a training professional in agribusiness.
Related Studies

There have been numerous studies of the professional competencies essential to teachers of vocational agriculture. These studies helped to provide methodological guidance. The studies were generally similar due to parallel methodology, research questions, and data-gathering techniques (Shinn, 1976, p. 3). An example of a recent study on this topic was conducted by Lindahl and Crawford (1980) on the perceived qualifications and professional competencies needed by postsecondary agriculture teachers. Lindahl sought to answer these key questions:

1. What kind of educational and occupational background characteristics are possessed by present postsecondary agriculture instructors?

2. What education and occupational characteristics are perceived as needed by post-secondary agriculture instructors? What professional competencies as perceived by department heads, program coordinator, and instructors are needed by qualified postsecondary agriculture instructors?
3. Do instructors perceive their professional competency needs differently than do their department chairpersons?

The questionnaire (p. 46) was administered to post-secondary agriculture instructors and their supervisors in the state of Iowa.

Shippy (1981) studied the competencies required of beginning agriculture teachers. Using the ten categories developed by Cotrell et al. (1971) study, Shippy focused on the entry level competencies required (p. 30).

The study of competencies in the field of training constituted a relatively new idea. In 1977, Pinto and Walker surveyed the American Society for Training and Development (ASTD) membership to gather basic data about the profession. The memberships of 14,000 completed and returned 20 percent of the long and detailed questionnaire. The study provided demographic data on trainers, for example:

1. Median age was between 35 and 44 years.
2. Ninety-six percent were white.
3. The majority were males.
4. Fifteen percent had a Bachelor of Science Degree, 24 percent had some graduate work,
38 percent had a Master of Science Degree, and 9 percent had a Ph.D as their highest degree.

5. Median years as a trainer was between five and ten.

6. Eighty-four percent of the respondents spent at least half of their time in training and development activities.

(Pinto and Walker, 1978, pp. 60 & 61)

In conjunction with the survey, Pinto and Walker (1978) utilized a panel of professionals to develop a model for training. This model identified five competency areas or roles.

1. Professional Competency: understand training role in society.

2. Consulting Competency: understand training role in industry.

3. Program Management: develop and administer training activities.

4. Learning Facilitator: provide for a learning environment.

5. General Competencies: able to think, problem solve, and confront issues.
Another of the early studies of training competencies was conducted by a subcommittee of the Ontario Society for Training and Development (OSTD). This investigation developed an extensive list of skills, demonstrable abilities, and areas of knowledge or understanding within 11 distinct categories of competence which eventually gave rise to Core Competencies of Trainers (OSTD, 1982). This document has been utilized extensively throughout the world to present an operational model for training and its required competencies (OSTD, 1982, p. 2).

A taskforce, chaired by Bratton (1981), studied the instructional competencies required by training and development professionals. They enumerated the following 16 instructional core competencies:

1. Determine projects appropriate for instructional development.
2. Conduct needs assessments.
3. Assess learner/trainee characteristics.
4. Analyze the characteristics of jobs, tasks, etc.
5. Write statements of learning outcomes.
6. Analyze the characteristics of a setting (learning environment).
7. Sequence learner outcomes.
8. Specify instructional strategies.
9. Sequence learner activities.
10. Determine instructional resources appropriate to instructional activities.
11. Evaluate instruction/training.
12. Create courses, training packages, and systems.
13. Plan and monitor instructional development projects.
14. Communicate effectively in visual and written forms.
15. Demonstrate appropriate interpersonal, group process, and consulting behavior.
16. Promote the diffusion and adoption of the instructional development process.

(pp. 14 - 15)

This study provided a look at the instructional competencies shared by the educational and training field and began to build the case that many characteristics were, in fact, comparable.

Faris (1983, p. 85), in a related study, looked at the actual practices of trainers in a number of occupational areas. By interviewing professionals, the study sought to ascertain what trainers actually did. The study basically found that trainers:
1) assessed needs, 2) developed programs, 3) trained, and 4) evaluated. While the study did not address competencies, it did conclude that the profession needed to do a better job of developing a database and follow-up training activities for professionals (Faris, 1983, p. 93).

The study of competencies has not been restricted to trainers alone. Hall (1980) investigated the competencies needed in the business world. The study focused primarily on the competencies required of managers and then related these competencies to other organizational and professional requirements (pp. 218 - 222). This writer reviewed this study and concluded that, while helpful in the developmental stage of this research project, it was not applicable.

Models For Excellence

Many experts agree that the most extensive investigation of the profession, to date, has been the Models for Excellence study conducted by McLagan and associates. This document represented a three-year effort.
The central objective addressed by this study was to identify the competencies associated with the training and development profession. This was accomplished by enlisting the aid of a study team of noted authorities and researchers to review past studies and project assumptions. After listing the knowledge and skills from other studies, the team clustered them into 36 competencies.

These competencies were then reviewed by a group of nationally recognized experts. These experts assisted in the revision of several competencies in a written questionnaire format. A second-round instrument was then developed and distributed to this same group to assess the criticality of each competency. The questionnaire also asked respondents to rate the level of expertise required in each competency. This study resulted in:

1. thirty-one competencies identified and defined,
2. the compilation of a list of critical competencies for the 15 roles associated with training and development, and
3. a roles/competencies matrix being developed.

The study consisted of seven steps. These steps facilitated a logical foundation and development process for future studies:

1. Determine the domain of the training and development field.
2. Determine the key roles of the training and development field.
3. Identify the major environmental forces expected to affect the field in the near future.
4. Identify the critical outputs which the training and development function is expected to produce.
5. Identify the critical competencies for the training and development field.
6. Develop behavioral anchors for the competencies.
7. Cluster the roles to reflect common competency requirements.

(McLagan, 1983, pp. 7-18)

The investigation proved to be a massive undertaking which required the support of the national association (ASTD), a major consulting firm (McLagan and Associates), along with years of dedicated work
from many professionals. This research produced nine elements that were termed Products of the Study. The products were:

1. A human resource wheel,
2. A definition of the training and development field,
3. A list of 34 highly probable future forces expected to affect work in the field,
4. A list of 15 training and development roles,
5. A list of 102 important outputs of training and development work,
6. A behaviorally anchored competency model for the training and development field,
7. Profiles describing the outputs and competencies important for each role,
8. Four role clusters, and,
9. A matrix of roles and competencies.

(McLagan, 1983, p. 12)

The data will be evaluated and reevaluated for years to come. The research questions will be systematically analyzed. The methodology and the statistical analysis will be critiqued. Perhaps, appropriately so, however, the study stands as a milestone in the profession.
CHAPTER III
METHODOLOGY

The primary purpose of this study was to identify the key knowledge, skills, and abilities required of trainers in agribusiness. An additional intention of the research was to gather demographic data on trainers in agribusiness and the organization for which these individuals work.

Research Design

The research questions were best answered through a descriptive research design. Descriptive methodology enabled the researcher to gather data via mail questionnaire to describe agribusiness trainers and their competencies. The data were analyzed by appropriate descriptive and correlative statistics to describe the magnitude and direction of relationship of the variable in question. Analysis of variance was also utilized.

Surveys and descriptive research require prescribed controls, or the validity of the data could be questioned and the credibility of the results lessened. The major types of errors of concern in a
study of this type were measurement error, selection error, nonresponse error, frame error and sampling error (Kerlinger, 1973). Procedures for controlling measurement error were discussed in the data collection section of this chapter. The section titled Subject Selection contained a detailed description of the methodologies utilized to control frame and sampling error. Nonresponse error was dealt with and was explained in the section on Collection of Data.

**Subject Selection**

The population studied consisted of those individuals who are employed as trainer in agribusiness. The population was identified and defined through the following procedures:

1. The 1984 members of the American Society for Training and Development (ASTD)
2. All ASTD members who self-selected to be a part of the Special Interest Group (SIG) in Agriculture
3. Those individuals who were employed by agribusiness in the United States
4. Those individuals who identified the primary responsibility of their jobs as being the role of trainer.

The initial membership list of 198 ASTD Special Interest Group in Agriculture members was purged of individuals residing outside the United States. At the same time individuals were removed from the list whose organizations would clearly not qualify as an agribusinesses. This resulted in a population of 139 subjects for the purpose of this study.

According to Kerlinger (1973) and others, an acceptable practice in descriptive research was to sample a percentage of the identified population. After consultation with members of the dissertation committee, the decision was made to study the entire population of 134. This was determined because of the relatively small frame, the overall difficulty in identifying the target population, and the lack of previous research in this area.

Since the entire population was studied, sampling error was non-existent. Frame and selection errors were dependent upon the accuracy of the ASTD, SIG list.
Identification Of Competencies

An extensive review of the literature was performed for the purpose of identifying the competencies required of agribusiness trainers. Numerous lists of competencies were examined from vocational education, agricultural education, training, and other fields. Due to the extensive nature of the methods utilized to develop the competency list in Models for Excellence, it was determined that this valid, tested list would serve as the foundation for the competencies developed.

Further evaluation was achieved utilizing introspective procedures which showed the selected competencies to be comparable with the Competency-Based Teacher Education (CBTE) modules which had also been thoroughly researched.

The next validation procedure involved a group of nationally active agribusiness trainers which gathered for the 1984 national convention of the American Society for Training and Development. This panel of training experts (Appendix A) were randomly divided into small groups and asked to select a topic of importance to agribusiness trainers. The panel of
experts was then encouraged to list questions related to the selected topic that, in their opinion, would prove helpful for the profession to explore. After a lengthy discussion, each small group selected an individual to present their list to the entire group for further assessment. The lists and associated comments were recorded by this researcher for a later comparison with the competency list being developed.

A pilot test instrument was then developed and distributed to a randomly selected group of fourteen members from the study population of 139. This pilot group was asked to complete the questionnaire and to suggest any changes they deemed appropriate to the list of competencies or the demographic questions. Two modifications were made in the list of competencies. The final set of agribusiness trainer competencies were categorized by domain and prepared for the final instrument (Appendix I).

Collection Of Data

Data were collected from agribusiness trainers through the use of a mail questionnaire. As discussed earlier, the instrument was pilot tested with ten percent of the identified agribusiness trainers to
review the content, format, organization, and clarity of the questions.

The reliability values were based on the data collected from respondents with regard to the list of competencies. Reliability assessments were conducted to determine the internal consistency of the confidence levels reported by agribusiness trainers. Cronbach's alpha statistic, as derived through the SPSS Reliability procedure, was used as the measure of internal consistency.

An adjusted value of \( r = .95 \) was found as a measure of internal consistency of the total instrument. The remaining data were demographic in nature.

Procedures for preparing and mailing the instrument were consistent with procedures outlined by the doctoral committee and the literature (Dillman, 1978). The instruments were compiled in booklet format, with return address and the postage affixed to the back of the instrument. Respondents simply needed to staple the booklet closed and mail it. The instrument was accompanied by a cover letter signed by the researcher asking the individual to complete and return the questionnaire.
Follow-up procedures included a postcard reminder sent to all participants five days after the initial instrument was sent. Two weeks later, a new cover letter and replacement questionnaire was sent to nonrespondents. A final reminder postcard was then sent seven days later. Questionnaires received after the established deadline of April 25, 1985, were not included in the analysis of the data.

Nonresponse error was controlled by comparing early respondents to late respondents. Research has shown that late respondents are often similar to nonrespondents (Miller and Smith, 1983, p. 48). The respondents were divided into two groups; early returns and late returns, and statistically tested to determine if differences existed between the groups. Examination of the demographic data by a Chi Square Comparison showed no significant difference between the early respondents and late respondents (Appendix C). The pilot test data were also treated in the same fashion and no significant differences were detected. Therefore, results were generalizable to the entire Special Interest Group in Agriculture who were self-selecting members of ASTD.
Data Analysis

Since the study was descriptive in nature, descriptive statistics were used to summarize and analyze the data. Frequencies, percentages, measure of central tendency, measures of dispersion, and measures of association (correlation) were the primary statistics utilized. Pearson correlation coefficients, Spearman rank-correlation coefficients, and point-biserial correlation coefficient were used as measures of association (Appendix D). A simple one-way analysis of variance was also utilized. Data were coded and stored on magnetic tape via computer terminal at Purdue University's Computer Center. Data were analyzed by means of the Statistical Package for the Social Sciences.

Chapter Summary

A detailed description of the research design and methodology utilized in this study were discussed in this chapter. Major threats to the validity of survey research were identified and procedures to minimize errors were followed. The procedures utilized to define the study population were discussed. The steps employed in data collection were
described, including follow-up procedures and treatment of nonrespondent data. Finally, statistics used to analyze and summarize the data were identified.
CHAPTER IV

FINDINGS

The population involved in this study consisted of all 1984 members of the American Society for Training and Development who self-selected to be included in the Special Interest Group in Agriculture. The initial list of members numbered 198. This frame was purged of any member from outside the United States. Also removed from the list were any members who belonged to an organization which clearly would not qualify as an agribusiness. This resulted in a population of 139.

A simple random sample of 14 (10 percent) was drawn to serve as the pilot test group. This group was administered the pilot instrument and asked to complete the questionnaire and make any comments they deemed appropriate regarding the items, format, or content of the questionnaire. Eleven individuals responded, with three disqualifying themselves as not meeting the established criteria. This resulted in a usable response rate of 57.1 percent for the pilot test group. Pilot test data produced an overall Cronbach's alpha reliability coefficient of .95.
TABLE 1

Pilot Test

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected</td>
<td>14</td>
<td>100.0</td>
</tr>
<tr>
<td>Respondents Qualified</td>
<td>8</td>
<td>57.1</td>
</tr>
<tr>
<td>Respondents Non-Qualified</td>
<td>3</td>
<td>21.4</td>
</tr>
<tr>
<td>Non-Respondents</td>
<td>3</td>
<td>21.4</td>
</tr>
</tbody>
</table>

This group suggested two changes of the list of competencies. A specific competency was added to measure the consulting skills required of agribusiness trainers. A second competency was added to measure the ability to conduct surveys and needs assessments. The revised questionnaire was then administered to the remaining 125 individuals as the population of the study. Content validity was established by a panel of experts (Appendix A).

The first mailing was made to the entire 125 to control sampling and selection errors. The mailing was followed seven days later by a reminder postcard. The early responses numbered 44 with the following breakdown: 34 usable questionnaires, 9 individuals responded that they did not meet the criteria established for agribusiness or trainers, and one
envelope was returned unopened marked "Addressee Unknown."

At the specified response deadline, a second mailing was sent to the remaining 81 individuals. The late respondents totaled 27, and the breakdown was as follows: 17 usable questionnaires were returned; nine more reported they could not meet the criteria to qualify as a trainer in agribusiness; and one individual returned the questionnaire, refusing to complete it, stating the information was too sensitive. Two questionnaires were returned after the final deadline and data had been compiled. Careful accounting was made of those disqualifying themselves to account for frame error. Therefore, the agribusiness trainer data sample consisted of 59 questionnaires (42.4 percent). (See Table 2)

Non-Response

Non-response error was controlled by comparing early to late respondents (Miller and Smith, 1983). Comparisons were made on demographic and competency domain data (Appendix C). The data were shown to be not statistically significant between the two groups which improved the generalizability of the results.
Late respondents were assumed (Miller and Smith, 1983) to be most like the non-respondents. When late respondents were shown to be similar to early respondents, data were then generalizable to the entire group of agribusiness trainers.

The findings will be discussed in the same order as the research questions presented in Chapter 1, except for question four which will be discussed in Chapter 5. This provides consistency.

**Professional Competencies**

The respondents were asked to draw from their knowledge of training and development in agribusiness
and rate the degree of importance of each competency listed. In order to help these agribusiness trainers focus more clearly, the following definitions were utilized.

**Training Competencies**

Training competencies are the knowledge, skills, and abilities which are key to producing the critical outputs of the training and development field.

**Agribusiness**

A business which directly or indirectly contributes to the production of food or fiber or handles the products produced therefrom.

**Trainer**

A person who assists others in the purposeful development of the knowledge, skills, and abilities needed to perform current or future jobs.
Training and Development

Training and development in agribusiness consist of providing planned learning opportunities for individuals to gain the needed knowledge, skills, and abilities required by agribusiness now and in the future.

The qualifying respondents were then asked to rate the level of importance of 44 individual competencies. The various levels of importance were differentiated utilizing the definitions listed as follows:

MOST IMPORTANT (5) - Competencies at this level are considered absolutely essential and required to a high degree of every agribusiness trainer.

ABOVE AVERAGE IMPORTANCE (4) - Competencies at this level are considered necessary and required of the majority of agribusiness trainers.

AVERAGE IMPORTANCE (3) - Competencies at this level are considered generally needed and required of many agribusiness trainers.

BELOW AVERAGE IMPORTANCE (2) - Competencies at this level are considered unnecessary and seldom required of any agribusiness trainer.

NON APPLICABLE (0) - Irrelevant or does not apply as a competency for agribusiness trainers.
5 = MOST IMPORTANT
4 = ABOVE AVERAGE IMPORTANCE
3 = AVERAGE IMPORTANCE
2 = BELOW AVERAGE IMPORTANCE
1 = MINIMAL IMPORTANCE
0 = NOT APPLICABLE

In order to aid in the interpretation of the data, this researcher referred to the following scale throughout the discussion of the training competencies.

INSTRUMENT SCALE

Level of Importance

| Most Above Average Average Below Average Minimal Not Applicable |
|---|---|---|---|---|---|
| (5) | (4) | (3) | (2) | (1) | (0) |

| High Area of Importance | | Low Area of Importance |
|---|---|
| 2.5 |

Figure 3

Given the above figure as a basis for interpretation, scores either side of the theoretical
midpoint of 2.5 took on meaning. Importance scores between 5.0 and 2.5 would be interpreted as "High" with appropriate scale adverbs applied; importance scores between 2.5 and 1.0 would be interpreted as "Low" in the same manner.

**Analysis Of Communication Competencies**

The Communication Domain, while consisting of only two items, rated as the highest domain, with an overall score mean of 4.14. Oral skills rated above written skills, with both being of high importance.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(16)</td>
<td>Speak Effectively</td>
<td>4.17</td>
<td>.69</td>
</tr>
<tr>
<td>(17)</td>
<td>Write Training Materials</td>
<td>3.90</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>4.14</td>
<td></td>
</tr>
</tbody>
</table>

**Analysis Of Instruction/Counseling Competencies**

The instruction/counseling domain was rated the second highest of all domains with an overall mean
score of 4.11. This cluster was considered of high importance by agribusiness trainers. Within the domain, the 11 individual competencies were listed in the order of their importance as determined by their mean scores (see Table 4).

**Analysis Of Group Dynamics Competencies**

The Group Dynamics Domain ranked third among all domains with a mean score of 4.03. There was, however, considerable difference between the two competencies that made up this domain with Leadership rated above Assess Group Dynamics (see Table 5).

**Analysis Of Interface/Cooperate Competencies**

The Interface/Cooperate Domain ranked fourth overall among domains with a mean score of 4.01. Item 24, Establish Credibility, rated third among all competencies with a mean score of 4.45, while item 27, Resolve Problems, rated 38th overall with a mean score of 3.53; thereby, establishing one of the the widest ranges within any domain (see Table 6).
### TABLE 4

Instruction/Counseling Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(01)</td>
<td>Plan Training</td>
<td>4.49</td>
<td>.73</td>
</tr>
<tr>
<td>(02)</td>
<td>Utilize a Variety of Methods</td>
<td>4.46</td>
<td>.65</td>
</tr>
<tr>
<td>(04)</td>
<td>Ask Effective Questions</td>
<td>4.44</td>
<td>.60</td>
</tr>
<tr>
<td>(03)</td>
<td>Develop Instructional Objectives</td>
<td>4.19</td>
<td>.80</td>
</tr>
<tr>
<td>(07)</td>
<td>Use Instructional Aids</td>
<td>4.19</td>
<td>.82</td>
</tr>
<tr>
<td>(05)</td>
<td>Provide Developmental Feedback</td>
<td>4.01</td>
<td>.74</td>
</tr>
<tr>
<td>(08)</td>
<td>Identify Attitudes and Goals</td>
<td>4.00</td>
<td>.74</td>
</tr>
<tr>
<td>(06)</td>
<td>Schedule and Sequence Instruction</td>
<td>3.97</td>
<td>.79</td>
</tr>
<tr>
<td>(10)</td>
<td>Implement Productivity Strategies</td>
<td>3.97</td>
<td>1.02</td>
</tr>
<tr>
<td>(09)</td>
<td>Assess Individual Performance</td>
<td>3.76</td>
<td>.84</td>
</tr>
<tr>
<td>(11)</td>
<td>Integrate Career Goals</td>
<td>3.64</td>
<td>1.01</td>
</tr>
<tr>
<td>Overall Domain</td>
<td>4.11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 5
Group Dynamics

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(13)</td>
<td>Demonstrate Leadership</td>
<td>4.31</td>
<td>.86</td>
</tr>
<tr>
<td>(12)</td>
<td>Assess Group Dynamics</td>
<td>3.75</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>4.03</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 6
Interface/Cooperate Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(24)</td>
<td>Establish Credibility</td>
<td>4.45</td>
<td>.68</td>
</tr>
<tr>
<td>(25)</td>
<td>Recognize Individual Differences</td>
<td>4.22</td>
<td>.80</td>
</tr>
<tr>
<td>(28)</td>
<td>Maintain Perspective</td>
<td>4.05</td>
<td>.80</td>
</tr>
<tr>
<td>(26)</td>
<td>Identify Alternate Solutions</td>
<td>3.83</td>
<td>.85</td>
</tr>
<tr>
<td>(27)</td>
<td>Resolve Problems</td>
<td>3.53</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>4.01</td>
<td></td>
</tr>
</tbody>
</table>

Analysis Of Administer/Manage Competencies

The Administer/Manage Domain was fifth ranked overall with a mean score of 3.94. The highest rated competency was item 29, Plan and Coordinate, with a mean score 4.34. The rest of the competencies in this domain were under the mean score of 4.00.
TABLE 7
Administer/Manage Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(29)</td>
<td>Coordinate Resources</td>
<td>4.34</td>
<td>.73</td>
</tr>
<tr>
<td>(30)</td>
<td>Delegate</td>
<td>3.98</td>
<td>.84</td>
</tr>
<tr>
<td>(32)</td>
<td>Maintain Records</td>
<td>3.72</td>
<td>.89</td>
</tr>
<tr>
<td>(31)</td>
<td>Control Finances</td>
<td>3.71</td>
<td>.98</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>3.94</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of Professionalism Competencies

The professionalism domain ranked sixth overall with a mean score of 3.88. The range of means within this domain, 4.41 to 2.86, was one of the widest exhibited. The competency Demonstrate Open Mind had the highest mean, while Interact with Government was the lowest.

Analysis Of Agri-industry Competencies

The agri-industry domain was ranked third from last among all domains. This was due to a mean score of 3.55. However, this score established the domain
### TABLE 8
Professionalism Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(33)</td>
<td>Demonstrate Open Mind</td>
<td>4.41</td>
<td>.67</td>
</tr>
<tr>
<td>(34)</td>
<td>Adjust Approach</td>
<td>4.32</td>
<td>.73</td>
</tr>
<tr>
<td>(35)</td>
<td>Facilitate Change</td>
<td>4.09</td>
<td>.95</td>
</tr>
<tr>
<td>(36)</td>
<td>Identify Trends and Issues</td>
<td>3.88</td>
<td>.87</td>
</tr>
<tr>
<td>(37)</td>
<td>Relate Training to HRD</td>
<td>3.80</td>
<td>.78</td>
</tr>
<tr>
<td>(38)</td>
<td>Interact with Government</td>
<td>2.86</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>3.88</td>
<td></td>
</tr>
</tbody>
</table>

In the high importance area. The overall range of the means within this domain was among the smallest found. There was a great deal of variance with standard deviations of 1.09, 1.18 and a high of 1.23. A standard deviation of this magnitude points out the diversity of perception among agribusiness trainers.

### TABLE 9
Agri-industry Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(39)</td>
<td>Farming Trends</td>
<td>3.63</td>
<td>1.23</td>
</tr>
<tr>
<td>(40)</td>
<td>Agribusiness Challenges</td>
<td>3.55</td>
<td>1.18</td>
</tr>
<tr>
<td>(41)</td>
<td>Organization Challenges</td>
<td>3.44</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>3.55</td>
<td></td>
</tr>
</tbody>
</table>
Analysis Of Assessment/Evaluation Competencies

The Assessment/Evaluation Domain ranked next to last among all domains with a mean score of 3.54. The domain exhibited wide variability with a range of means from 4.09 to 2.81. The first five items cluster closely together with a variance of less than .7 from the top rated competency to the fifth highest. However, the last two competencies in this domain, Conduct Research and Utilize Computers, were rated lower in importance by agribusiness trainers (see Table 10).

Analysis Of Occupational Experience Competencies

The Occupational Experience Domain had an overall mean score of 3.02, qualifying as a domain of high importance being over the midpoint of 2.5. Two competencies were of low importance to agribusiness trainers. The respondents rated both farming and agribusiness experience last and next to last among individual competencies and proved to be of low importance to agribusiness trainers. Trainers
### TABLE 10
Assessment/Evaluation Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(19)</td>
<td>Evaluate Programs</td>
<td>4.09</td>
<td>.84</td>
</tr>
<tr>
<td>(17)</td>
<td>ID Job Competencies</td>
<td>3.81</td>
<td>.91</td>
</tr>
<tr>
<td>(22)</td>
<td>Assess Training Needs</td>
<td>3.77</td>
<td>.86</td>
</tr>
<tr>
<td>(18)</td>
<td>Assess Individual Performance</td>
<td>3.70</td>
<td>.82</td>
</tr>
<tr>
<td>(20)</td>
<td>Assimilate Information</td>
<td>3.59</td>
<td>.80</td>
</tr>
<tr>
<td>(23)</td>
<td>Conduct Research</td>
<td>2.98</td>
<td>1.14</td>
</tr>
<tr>
<td>(21)</td>
<td>Utilize Computers</td>
<td>2.81</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>3.54</td>
<td></td>
</tr>
</tbody>
</table>

exhibited a great deal of variance on these items with standard deviations of up to 1.4. Teaching skills rates as high importance with a mean score of 3.60.

### TABLE 11
Occupational Experience Competencies

<table>
<thead>
<tr>
<th>Item #</th>
<th>Competency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(44)</td>
<td>Teaching Skills</td>
<td>3.60</td>
<td>1.07</td>
</tr>
<tr>
<td>(43)</td>
<td>Agribusiness Experience</td>
<td>2.90</td>
<td>1.48</td>
</tr>
<tr>
<td>(42)</td>
<td>Farming Experience</td>
<td>2.51</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>Overall Domain</td>
<td>3.02</td>
<td></td>
</tr>
</tbody>
</table>
PROGRAM CHARACTERISTICS

Analysis of Trends and Issues Facing Agribusiness Training

The respondents were asked to share their perceptions on major trends and issues impacting training in agribusiness. All items were rated as Unchanged to Increasing. Utilizing the means for each item, the responses can be logically divided into two groups. The first group with mean range of 2.60 to 2.70 were those trends and issues which were substantially increasing. Those items were (1) Employee Interest in Development, (2) Pressure to Hold Training Accountable, and (3) Training Visibility within the organization.

The second grouping of Slightly Increasing to Unchanged with a mean range of 2.26 to 2.20 are the following items: (1) Pressure to Allocate Cost to the End User, (2) Pressure to Decentralize Training, and (3) Funding of Training Activities (see Table 11).

Analysis Of Number of Employees

The size of the organizations for which agribusiness trainers worked varied widely. Thirty
percent of the responses indicated one employee. Ten percent of the respondents reported zero employees. The range of employees was from 0 to 8100. One-third of the trainers worked with 200 or fewer employees, while twenty-five percent worked with 1800 or more employees.

**TABLE 12**

<table>
<thead>
<tr>
<th>Trends And Issues In Agribusiness Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCREASING</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Funding</td>
</tr>
<tr>
<td>Decentralization</td>
</tr>
<tr>
<td>Employee Interest</td>
</tr>
<tr>
<td>Accountability</td>
</tr>
<tr>
<td>Visibility</td>
</tr>
<tr>
<td>Cost Allocation</td>
</tr>
</tbody>
</table>

**Analysis Of Training Programs Conducted Monthly**

The average number of programs conducted per month by agribusiness trainers was 2.9. A little over four out of five trainers conduct three programs or less per month. The range of one to three programs
TABLE 13
Number Of Employees

<table>
<thead>
<tr>
<th>Range of Employees</th>
<th>f</th>
<th>%</th>
<th>Range of Employees</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 500</td>
<td>23</td>
<td>47.5</td>
<td>4501 to 5000</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>501 to 1000</td>
<td>9</td>
<td>15.2</td>
<td>5001 to 5500</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>1001 to 1500</td>
<td>4</td>
<td>6.8</td>
<td>5501 to 6000</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>1501 to 2000</td>
<td>5</td>
<td>8.5</td>
<td>6001 to 6500</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2001 to 2500</td>
<td>2</td>
<td>3.4</td>
<td>6501 to 7000</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>2501 to 3000</td>
<td>0</td>
<td>0.0</td>
<td>7001 to 7500</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>3001 to 3500</td>
<td>0</td>
<td>0.0</td>
<td>7501 to 8000</td>
<td>3</td>
<td>5.1</td>
</tr>
<tr>
<td>3501 to 4000</td>
<td>2</td>
<td>3.4</td>
<td>8001 to 8100</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>4001 to 4500</td>
<td>0</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean = 1672.3  Medium = 600.8  Mode = 0  Range = 8100

accounted for over 70 percent of the programs delivered. The overall range reported was 0 to 40. The median was 2.0 and the mode was 1.0.

TABLE 14
Programs Conducted Monthly

<table>
<thead>
<tr>
<th>Number of Programs</th>
<th>f</th>
<th>%</th>
<th>Number of Programs</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>8.5</td>
<td>5</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>1</td>
<td>18</td>
<td>30.5</td>
<td>6</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>23.7</td>
<td>10</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>16.9</td>
<td>40</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>8.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis Of Typical Program Attendance

The size of the class or group trained varied widely with a range of 0 to 82. One in four typically trained groups of 12 or less. Two-thirds of the programs had enrollment ranging from 12 to 27 (see Table 15).

**TABLE 15**

Typical Program Attendance

<table>
<thead>
<tr>
<th>Class Size</th>
<th>f</th>
<th>%</th>
<th>Class Size</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>3.4</td>
<td>18</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1.7</td>
<td>20</td>
<td>9</td>
<td>15.3</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1.7</td>
<td>21</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1.7</td>
<td>22</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1.7</td>
<td>23</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>1.7</td>
<td>25</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>6.8</td>
<td>27</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>1.7</td>
<td>28</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>6.8</td>
<td>30</td>
<td>3</td>
<td>5.1</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>1.7</td>
<td>36</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>15</td>
<td>9</td>
<td>15.3</td>
<td>50</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>16</td>
<td>3</td>
<td>5.1</td>
<td>82</td>
<td>1</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Mean = 19.0  Median = 16.8  Mode = 15 to 20

Analysis of Determination of Training Needs

The item asked trainers to report how training needs were determined in their organization. This was
TABLE 16
Determination Of Training Needs

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requests by Management</td>
<td>50</td>
<td>84.7</td>
</tr>
<tr>
<td>Personal Observation</td>
<td>43</td>
<td>72.9</td>
</tr>
<tr>
<td>Performance Appraisal</td>
<td>37</td>
<td>62.7</td>
</tr>
<tr>
<td>Subjective Evaluation by Training Staff</td>
<td>30</td>
<td>50.8</td>
</tr>
<tr>
<td>Employee Survey</td>
<td>29</td>
<td>49.2</td>
</tr>
<tr>
<td>Human Resources Planning</td>
<td>26</td>
<td>44.1</td>
</tr>
<tr>
<td>Interview</td>
<td>21</td>
<td>35.6</td>
</tr>
<tr>
<td>Client Survey</td>
<td>15</td>
<td>25.4</td>
</tr>
<tr>
<td>Advisory Committee</td>
<td>14</td>
<td>23.7</td>
</tr>
<tr>
<td>Task Force/Fact-Finding Groups</td>
<td>11</td>
<td>18.6</td>
</tr>
<tr>
<td>Productivity Data/Financial Reports</td>
<td>9</td>
<td>15.3</td>
</tr>
<tr>
<td>Outside Consultation</td>
<td>7</td>
<td>11.9</td>
</tr>
<tr>
<td>Organizational Audit</td>
<td>7</td>
<td>11.9</td>
</tr>
<tr>
<td>Assessment Centers</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>Formal Testing</td>
<td>3</td>
<td>5.1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>6.8</td>
</tr>
</tbody>
</table>

achieved by asking them to check a list of methods provided on the instrument. The respondents could check as many methods as were appropriate for their organization. There were blank lines available also to write in any method not listed. The respondents noted 19 different methods. The highest frequency
reported was Requests by Management with 50. The lowest frequency recorded was Formal Testing with three. Only one of the four most prevalent methods for determining training was an objective measure. Conversely, the least utilized methods tended to be Formal Assessments. Subjective Judgments were selected more often than the factual measurements by the organizations whose representatives were surveyed.

CHARACTERISTICS OF RESPONDENTS

Age Group

Respondents were asked to indicate their age from among eight age categories. Five of the categories reported similar frequencies, ranging from six to eight. Two categories encompassing the ages of 36 to 45 accounted for nearly two out of every five respondents. Just under two-thirds of the agribusiness trainers were under the age of 46. The 20 to 25 age group did not have any individual recorded, while the second smallest group was on the other extreme of the continuum. The Over 60 group comprised only 3.3 percent of the population.
TABLE 17
Age Group

<table>
<thead>
<tr>
<th>Age Groups (years)</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 25</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>26 - 30</td>
<td>8</td>
<td>13.6</td>
</tr>
<tr>
<td>31 - 35</td>
<td>7</td>
<td>11.9</td>
</tr>
<tr>
<td>36 - 40</td>
<td>12</td>
<td>20.4</td>
</tr>
<tr>
<td>42 - 45</td>
<td>11</td>
<td>18.6</td>
</tr>
<tr>
<td>46 - 50</td>
<td>6</td>
<td>10.2</td>
</tr>
<tr>
<td>51 - 55</td>
<td>7</td>
<td>11.9</td>
</tr>
<tr>
<td>56 - 60</td>
<td>6</td>
<td>10.2</td>
</tr>
<tr>
<td>Over 60</td>
<td>7</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>59</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Formal Education

All respondents reported some formal education beyond high school. An Associate degree was the least reported option with only one respondent. Seven agribusiness trainers (11.9 percent) reported less than a Bachelor's Degree. Nearly two out of five (39.0 percent) held a Master's Degree, the same proportion as those holding a Bachelor's Degree. One in ten (10.2 percent) had achieved a doctorate.
TABLE 18

Formal Education

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Postsecondary/Technical School</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>Some College</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>23</td>
<td>39.0</td>
</tr>
<tr>
<td>Master Degree</td>
<td>23</td>
<td>39.0</td>
</tr>
<tr>
<td>Doctorate</td>
<td>6</td>
<td>10.2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>59</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Major Area of Study

While the college majors of the respondents were highly variable, three categories accounted for more than four out of five majors (81.3 percent). The three most frequent majors occurred at 23.7 percent or more and appeared in the following order: agriculture majors were the most prominent among agribusiness trainers at 30.5 percent; the next most prevalent major was education at 27.1 percent, which was followed closely by business majors at 23.7 percent.
Following the top three, the frequency in each category dropped dramatically. The remaining categories accounted for only 8.5 percent of the total with several different majors listed.

### TABLE 19

<table>
<thead>
<tr>
<th>Major Area of Study</th>
<th>Major</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>18</td>
<td>30.5</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>16</td>
<td>27.1</td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>14</td>
<td>23.7</td>
<td></td>
</tr>
<tr>
<td>Math/Science</td>
<td>4</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>Liberal Arts</td>
<td>1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>59</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Analysis Of Education Utilized In Training**

Trainers in agribusiness responded positively when asked the percentage of their formal education they utilize in their present jobs. Only one in ten said they utilized 10 percent or less of their formal education, while three in ten reported they utilized 26 to 50 percent of their formal education. One in three said they utilized 50 percent or more.
TABLE 20
Education Utilized in Training

<table>
<thead>
<tr>
<th>Range of Percentage</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 10%</td>
<td>6</td>
<td>10.2</td>
</tr>
<tr>
<td>11 to 25%</td>
<td>16</td>
<td>27.1</td>
</tr>
<tr>
<td>26 to 50%</td>
<td>17</td>
<td>28.8</td>
</tr>
<tr>
<td>More than 50%</td>
<td>20</td>
<td>33.9</td>
</tr>
</tbody>
</table>

Years of Experience in Training

All respondents had one year or more experience in training. The plurality (40.7 percent) of the agribusiness trainers stated they had ten or more years of training experience. The next most prevalent category was four to six years (30.5 percent). Each of the categories of one to three and seven to nine years of experience registered 13.8 percent. One individual did not complete this item (see Table 20).

Analysis of Prior Occupational Experience

All agribusiness trainers completing item 64 possessed some occupational experience prior to becoming a trainer. Respondents could select more than one occupation which accounts for the frequency
TABLE 21

Years of Experience in Training

<table>
<thead>
<tr>
<th>Years by Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>1 to 3</td>
<td>8</td>
<td>13.8</td>
</tr>
<tr>
<td>4 to 6</td>
<td>18</td>
<td>31.0</td>
</tr>
<tr>
<td>7 to 9</td>
<td>8</td>
<td>13.8</td>
</tr>
<tr>
<td>10 or More</td>
<td>24</td>
<td>41.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>58</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

of 144. Management and supervision was the most prevalent type of experience among agribusiness trainers with over one-half selecting that response. Sales and marketing was second overall for two in five trainers. Seventeen different occupations were reported by the respondents. Four occupations, while reported only once, demonstrated the wide variety of occupational experiences agribusiness trainers bring to their profession (See Table 21).

RELATIONSHIPS OF COMPETENCY DOMAINS TO DEMOGRAPHIC FACTORS

The levels of importance reported by agribusiness trainers were examined by each competency domain and correlated with other data provided by the respondents. Table 23 showed the correlation
coefficients between competency domains and other factors.

In order to aid in the interpretation of the data, this writer referred to the following scale (Davis, 1971) throughout the discussion of relationships of the competency domains and the demographic factors. The scale will first be applied to the relationship of organizational demographics and competency domains.
**TABLE 23**

**Correlation Coefficient Scale**

<table>
<thead>
<tr>
<th>Range</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>.70 to 1.00</td>
<td>Very Strong Association</td>
</tr>
<tr>
<td>.50 to .69</td>
<td>Substantial Association</td>
</tr>
<tr>
<td>.30 to .49</td>
<td>Moderate Association</td>
</tr>
<tr>
<td>.10 to .29</td>
<td>Low Association</td>
</tr>
<tr>
<td>.01 to .09</td>
<td>Negligible Association</td>
</tr>
</tbody>
</table>

**Relationship of Number of Employees and Competency Domains**

Overall, relationships of these factors were mixed. The domains of Interface/Cooperate and Trends/Issues exhibited a negligible positive relationship with number of employees, while the Professionalism domain showed a low positive association. This correlation although slight was positive. Therefore, the higher the number of employees the more the trainers perceived these domains to be important.

The remainder of the training competency domains reported negative relationships ranging from negligible to low association. The more employees an organization had the lower in importance agribusiness
trainers rated the domains of Instruction/Counseling, Administer/Manage, Assessment/Evaluate, Agri-industry and Background/Experience.

Relationship of Number of Programs to Competency Domains

The relationship of the number of programs was mixed when associated with various domains. The domains of Assessment/Evaluation, Agri-industry and Background/Experience all reported a positive negligible association. The more programs agribusiness trainers conducted, the higher in importance they rated these domains. The Instruction/Counseling and Trends/Issues domains exhibited a negative negligible association. Interface/Cooperate and Administer/Manage domains reported low negative association with amounts of training activity conducted by agribusiness trainers. The more programs trainers conducted, the less they perceived the domains of Instruction/Counseling, Trends/Issues, Interface/Cooperate and Administer/Manage as important.
Relationship of Typical Attendance and Competency Domain

The domains of Assessment/Evaluation, Background/Experience and Agri-industry produced low positive association with Typical Attendance. The larger the class size the more important these domains were perceived by agribusiness trainers.

The domains of Instruction/Counseling and Trends/Issues had negative negligible associations with the number of employees in attendance. Interface/Cooperative and Administer/Manage domains exhibited low negative associations with the number of employees in attendance. The larger the class size the less important trainers rated these domains. The Professional domain reported no association with a coefficient of .00. Overall, the relationships of this characteristic varied widely when associated with domains.
Relationship of Time Spent
Training and Competency Domains

The amount of time spent training was associated positively throughout all domains. The magnitude, however, ranged from negligible to low ratings. Overall, the associations in this domain were the most closely grouped with the lowest correlation of +.09 and the highest at +.28. The domain rating the highest was Agri-industry, while Background/Experience and Trends/Issues were tied as the lowest associations. The more time agribusiness trainers spent training the higher they rated the importance of each domain.

Relationship of Time Spent
Counseling and Competency Domains

The amount of time agribusiness trainers spent counseling correlated positively with each competency domain. The more time agribusiness trainers spent counseling the greater the importance attributed to each domain. The range of association was negligible to moderate. The Background/Experience domain was highest with .32 positive association with the amount of time spent counseling.
Relationship of Age Group and Competency Domains

The Trends/Issue domain reported no relationship with the age of agribusiness trainers, while the Background/Experience domain exhibited a negligible positive association with age. Therefore, the older the trainer, the more important Background/Experience becomes. The remainder of the domains displayed negative associations ranging from negligible to low. The domains of Instruction/Counseling, Assessment/Evaluate, Interface/Cooperate, Administer/Manage, Professionalism, Agri-industry and Trends/Issues lessened in perceived importance as the age of the respondents went up.

Relationship of Formal Education and Competency Domains

The amount of formal education possessed by agribusiness trainers showed a negligible positive association with the domains of Instruction/Counseling, Interface/Cooperate, Professionalism and Agri-industry. The more formal education a trainer possessed the higher in importance these domains were ranked.
Also, of negligible association were the domains of Assessment/Evaluation and Trends/Issues, however, the direction of these correlations was negative. Low associations were reported for the domains of Administer/Manage and Background/Experience. The higher the level of formal education achieved by trainers the less important they rated these domains.

Relationship of Amount of Education Utilized and Competency Domains

The amount of education utilized as reported by agribusiness trainers correlated positive with the means of the competency domains. The magnitude of the association ranged from negligible to low. The more that agribusiness trainers perceived they utilized their formal education the more important they rated each domain.

Relationship of Current Time Allocation by Trainers and Competency Domains

The Agri-industry domain exhibited a negative negligible association with the way in which agribusiness trainers allocated their time. The more time agribusiness trainers spent on key training
activities the less important they perceived this domain.

All other domains reported positive associations which ranged from negligible to low on the scale utilized. The more time agribusiness trainers spent on key training activities, e.g. instruction, etc., versus less critical training activities, e.g. public relations, etc., the more important they perceived all domains, with the exception of Agri-industry.

Relationship of Ideal Time Allocation by Trainers and Competency Domains

The Assessment/Evaluate and Trends/Issues domains reported negative negligible association with the way in which agribusiness trainers would ideally like to allocate their time. The more time agribusiness trainers would ideally spend on key training activities the less important they perceived these two domains.

The remainder of the domains were positively associated with ranges of negligible to moderate. The more time agribusiness trainers would ideally spend on key training activities, e.g. instruction, etc., versus less critical training activities, e.g. public
relations, etc., the more important they perceived all domains except the two previously listed.

**Relationship of Training Experience Possessed and Competency Domains**

The overall associations ranged widely. Agri-industry and Trends/Issues domains reported negligible positive association. While the domain of Interface/Cooperate was also positive, the magnitude was rated low. The more training experience possessed by respondent the more important the previous domains were rated.

The remainder of the domains were negative with Instruction/Counseling and Background/Experience Domains reported negligible association. The Assessment/Evaluate and Administer/Manage domains were negative low and moderate associations respectively. The more experience possessed by agribusiness trainers the less important the domains were rated.

**Relationship of Experience Required and Competency Domains**

This correlation exhibited the widest range of association among the domains. Instruction/Counseling and Trends/Issues domains were positive and the
associations were negligible and low respectively. The more experience perceived to be required of agribusiness trainers the higher in importance they perceived these domains.

The remainder of the associations were negative. The range of magnitude was from negligible to moderate. The domain of Administer/Manage reported the highest association overall with a negative .33. The more training experience required, as perceived by the respondents, the less important the Assessment/Evaluate, Interface/ Cooperate, Professionalism, Agri-industry and Background/Experience domains were rated.

**Relationship of Major Area of Study and Competency Domains**

The more closely the majors of agribusiness trainers related to their present positions the higher the respondents rated each of the competency domains. While the association of these factors was helpful, a more appropriate assessment was a simple one-way analysis of variance. The question of interest dealt with college majors and their perception of the importance of individual competency domains. In other words, do agribusiness trainers differ by major on the
competency domains being studied. In order to properly answer this question a one way analysis of variance was conducted.
<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th>Instruction Counseling</th>
<th>Interface Cooperate</th>
<th>Professionalism</th>
<th>Agriculture Experience</th>
<th>Background Experience</th>
<th>Trends Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Assessment</td>
<td>Manage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Employees *</td>
<td>-0.07</td>
<td>-0.21</td>
<td>0.05</td>
<td>-0.14</td>
<td>-0.17</td>
<td>-0.08</td>
</tr>
<tr>
<td>Number of Programs Ø</td>
<td>-0.09</td>
<td>0.05</td>
<td>-0.17</td>
<td>-0.11</td>
<td>-0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Typical Attendance Ø</td>
<td>-0.05</td>
<td>0.21</td>
<td>-0.14</td>
<td>-0.20</td>
<td>0.00</td>
<td>0.11</td>
</tr>
<tr>
<td>Time Training *</td>
<td>0.16</td>
<td>0.13</td>
<td>0.26</td>
<td>0.20</td>
<td>0.17</td>
<td>0.28</td>
</tr>
<tr>
<td>Time Counseling *</td>
<td>0.16</td>
<td>0.08</td>
<td>0.20</td>
<td>0.04</td>
<td>0.19</td>
<td>0.02</td>
</tr>
<tr>
<td>Age Group *</td>
<td>-0.08</td>
<td>-0.05</td>
<td>-0.25</td>
<td>-0.20</td>
<td>-0.20</td>
<td>-0.11</td>
</tr>
<tr>
<td>Formal Education *</td>
<td>0.07</td>
<td>-0.04</td>
<td>0.04</td>
<td>-0.10</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>College Major Ø</td>
<td>-0.02</td>
<td>-0.23</td>
<td>-0.01</td>
<td>-0.17</td>
<td>-0.10</td>
<td>-0.19</td>
</tr>
<tr>
<td>Education Utilized *</td>
<td>0.11</td>
<td>0.03</td>
<td>0.14</td>
<td>0.03</td>
<td>0.14</td>
<td>0.03</td>
</tr>
<tr>
<td>Current Time Allocation *</td>
<td>0.28</td>
<td>0.03</td>
<td>0.19</td>
<td>0.09</td>
<td>0.17</td>
<td>-0.08</td>
</tr>
<tr>
<td>Ideal Time Allocation *</td>
<td>0.17</td>
<td>-0.05</td>
<td>0.30</td>
<td>0.16</td>
<td>0.22</td>
<td>0.20</td>
</tr>
<tr>
<td>Experience Possessed Ø</td>
<td>-0.06</td>
<td>-0.15</td>
<td>0.14</td>
<td>-0.30</td>
<td>-0.20</td>
<td>0.06</td>
</tr>
<tr>
<td>Experience Required *</td>
<td>0.08</td>
<td>-0.13</td>
<td>-0.31</td>
<td>-0.33</td>
<td>-0.05</td>
<td>-0.19</td>
</tr>
</tbody>
</table>

* = Pearson product-moment coefficient  
Ø = Spearman rank-correlation coefficient  
† = Point-biserial correlation coefficient
ANALYSIS OF VARIANCE FOR MAJOR AREA
OF STUDY AND COMPETENCY DOMAINS

The results displayed in Table 23 show that the agribusiness trainers were homogeneous on all variables in question. There were no significant differences at the .05 alpha level for seven of the domains. Therefore, agribusiness trainers who majored in one area did not view competencies as being more important than did any other major. For example, education majors ($\bar{x} = 3.49$) were much like business majors ($\bar{x} = 3.52$) in their perception of the importance of the overall competency domains.

There were significant differences detected among majors on their view of the importance of background experience at the .05 alpha level ($F = 2.8$). However, the Scheffe procedure did not detect where the differences occurred. The Scheffe test, being a very robust and conservative test, may not identify significant differences even when the $F$ was significant from analysis of variance.
### TABLE 25

Analysis of Variance for Major Area of Study and Competency Domain

<table>
<thead>
<tr>
<th>Domain</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction/</td>
<td>Between Groups</td>
<td>6</td>
<td>1.07</td>
<td>.18</td>
<td>.68</td>
</tr>
<tr>
<td>Counseling</td>
<td>Within Groups</td>
<td>52</td>
<td><strong>13.55</strong></td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>14.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessed/</td>
<td>Between Groups</td>
<td>6</td>
<td>4.20</td>
<td>.70</td>
<td>1.78</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Within Groups</td>
<td>52</td>
<td><strong>20.45</strong></td>
<td>.39</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>24.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface/</td>
<td>Between Groups</td>
<td>6</td>
<td>2.10</td>
<td>.35</td>
<td>.83</td>
</tr>
<tr>
<td>Cooperate</td>
<td>Within Groups</td>
<td>52</td>
<td><strong>22.03</strong></td>
<td>.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>24.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administer/</td>
<td>Between Groups</td>
<td>6</td>
<td>2.08</td>
<td>.35</td>
<td>.76</td>
</tr>
<tr>
<td>Manage</td>
<td>Within Groups</td>
<td>52</td>
<td><strong>23.77</strong></td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>25.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>Between Groups</td>
<td>6</td>
<td>1.47</td>
<td>.24</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>52</td>
<td><strong>16.33</strong></td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>17.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AgriIndustry</td>
<td>Between Groups</td>
<td>6</td>
<td>3.19</td>
<td>.53</td>
<td>.44</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>52</td>
<td><strong>63.61</strong></td>
<td>1.22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>66.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Background</td>
<td>Between Groups</td>
<td>6</td>
<td>13.78</td>
<td>2.30</td>
<td>2.81*</td>
</tr>
<tr>
<td>Experience</td>
<td>Within Groups</td>
<td>52</td>
<td><strong>42.54</strong></td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>56.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trends/</td>
<td>Between Groups</td>
<td>6</td>
<td>1.46</td>
<td>.24</td>
<td>.85</td>
</tr>
<tr>
<td>Issues</td>
<td>Within Groups</td>
<td>52</td>
<td><strong>15.01</strong></td>
<td>.29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>16.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p .05
CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to determine the knowledge, skills, and abilities required by agribusiness trainers and obtain descriptive data about these agribusiness trainers and their organizations.

The major research questions providing focus for this study were:

1. What educational and occupational competencies are perceived as necessary by selected trainers in agribusiness?

2. What are the educational characteristics and occupational characteristics possessed by selected trainers in agribusiness?

3. What are the characteristics possessed by the departments and/or organizations for which these selected trainers in agribusiness work?

4. To what extent do selected trainers in agribusiness differ from vocational agriculture teachers in perceived critical competencies as determined by previous research in vocational education?

5. What is the relationship between the characteristics possessed by agribusiness trainers and their perceptions of the needed competencies?

6. What is the relationship between the characteristics possessed by training
PROCEDURES

The population studied was first defined as members of the national professions organization for trainers, the American Society for Training and Development. The population was next defined by those who self-selected to be a part of the Agriculture Special Interest Group. This list was then purged of members outside the United States and Canada.

A random sample of 10 percent of this group was selected and mailed a pilot test. The pilot group was asked to complete the questionnaire and write in any comments regarding the instrument, its content, and/or format. Reliability estimates were then calculated. Content validity was established by a panel of experts. Two changes were made due to the pilot group input. The instrument was then administered to the remainder of the Special Interest Group in Agriculture.

Prior to completing the questionnaire, each individual was asked to read the following definitions of agribusiness and trainer.
*AGRIBUSINESS—A business which directly or indirectly contributes to the production of food or fiber or handles the products produced therefrom.

*TRAINER—A person who assists others in the purposeful development for the knowledge, skills, and abilities needed to perform current or future jobs.

With those definitions in mind, the group was then asked the following questions:

I. Do you believe your organization qualifies as an agribusiness?

II. Do you believe a significant part of your job is serving in the role of a trainer?

If previously selected individuals answered "no" to either or both of these questions, they were asked to stop at that point and return the questionnaire.

The competencies for agribusiness trainers were identified through several processes. First, an extensive literature review was conducted. Next, a group of agribusiness trainers from across the country were asked to work in small groups and identify training domains and associated demographics which should be included in a study of the agribusiness profession. This information was compared to the instrument being developed and some adjustments were made. The instrument was then administered to a pilot group. With the input from the pilot group, one competency was revised and another competency was
added. A total of 44 final competencies in ten domains were identified and included in the questionnaire.

Data were collected from all remaining agribusiness trainers on the list through the use of a mail questionnaire. The instrument was distributed in the initial mailing along with a cover letter. A follow-up postcard reminder was sent shortly thereafter. A follow-up letter was then sent with a replacement questionnaire enclosed. A final reminder postcard was mailed five days later, asking the respondents to complete the questionnaire and return it by the prescribed deadline.

The instrument was compiled in a booklet format (Dillman, 1978). The instrument had the return address printed on the back of this booklet and it was prestamped. The respondent was asked to staple the questionnaire closed and mail it upon completion.

Descriptive statistics were utilized to summarize and analyze the data. In addition, possible relationships between variables were examined using Pearson, Spearman, and point-biserial correlations. Analysis of variance was also utilized when the antecedent variable was on the nominal scale of measurement.
CONCLUSIONS

Competency Domains

For each of the 44 agribusiness training competencies, agribusiness trainers rated the level of importance on a five point Likert-type scale: (5) Most Important; (4) Above Average Importance; (3) Average Importance; (2) Below Average Importance; (1) Minimal Importance; or (0) Not Applicable. The resulting mean levels of importance were discussed using the interpretation scheme illustrated in Figure 4.

INSTRUMENT SCALE

Level of Importance

<table>
<thead>
<tr>
<th>Above</th>
<th>Average</th>
<th>Below</th>
<th>Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most</td>
<td>Average</td>
<td>Average</td>
<td>Minimal</td>
</tr>
<tr>
<td>(5)</td>
<td>(4)</td>
<td>(3)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

High Area of Importance

Low Area of Importance

Figure 3
The mean scores for individual competency domains ranged from 4.14 to 3.02. Utilizing the reporting system previously mentioned, every domain ranked in the "High Area of Importance." Four domains were considered to be of above average importance by agribusiness trainers, with the remainder below 4.00.

**Communications Domain**

Agribusiness trainers perceived that communications competencies were of high importance. The low standard deviation would indicate that agribusiness trainers tended to agree as a group on the level of importance of this without much variability.

**Instruction/Counseling Domain**

Seven of the competencies in this domain were among the highest ranked by agribusiness trainers. The instruction competencies rated somewhat higher than the counseling competencies. Instruction competencies, if separated out of this domain, would have been the highest rated domain overall. The ability to instruct, as supported by the data, was an integral part of the competencies needed in
agribusiness. Counseling, while important to agribusiness trainers, was of considerably less importance than instructing.

**Group Dynamics**

Agribusiness trainers perceived that leadership skills were among the most important competencies in their profession, with "Assess Group Dynamics" considerably less important than the other competencies in this domain. Members of this profession need, therefore, to seek increased opportunity to study and practice leadership skills.

**Interface/Cooperate Domain**

This domain had wide variance among competency means with the "Establishing Credibility" competency as one of the highest rated overall. This competency should be included in training curricula due to its importance. Even though the ability to deal with problems did not rate as highly as others in the domain, it was still rated as an important skill to possess and should be included among training curricula.
This domain ranked much higher than many other domains. The ability to plan and coordinate learning was a highly important part of the job of the trainer. The competency, therefore, needs to be stressed in future development of agribusiness trainers. Other competencies in this domain were closely rated by agribusiness trainers and should be maintained in the personnel development process, although they do not require the emphasis of the first competency.

Consult Domain

This competency was rated as an important one for agribusiness trainers to possess. This competency was a recently recognized one and needs to receive greater attention in the development of members of this profession.

Professionalism Domain

The ability to approach new situations and to adjust correctly were highly valued competencies by this profession, while the ability to interact with Government Agencies was not perceived as important by agribusiness trainers. In fact, the latter competency was one of the lowest rated overall. This competency
requires very little attention in preparation for the profession.

**Agri-industry Domain**

The means for these three competencies were closely clustered but exhibited some of the highest standard deviation scores for the entire list of competencies. This suggested that there were diverse opinions on the perception of the knowledge of the industry upon trainers. However, the mean scores made it clear that this knowledge should be included in the preparation of agribusiness trainers.

**Assessment/Evaluation Domain**

The respondents rated the skills and abilities required to do needs assessments and program evaluation as important to the profession and, therefore, should be made part of the curriculum for agribusiness trainers. However, the ability to conduct in-depth research or utilize computers was not rated as important to trainer. The low rating attributed to conducting research was not surprising after reviewing the literature in the field, where virtually no empirical research was found on
agribusiness trainers, and few may have been trained in its conduct or utilization.

**Occupational Experience Domain**

The dividing point on the previously discussed reporting scheme was a mean of 2.50. This domain was close to being rated as low importance. Further analysis showed interesting data. Occupational experience in the industry was rated lowest among the items. This was opposite the trend found in vocational agriculture (Miller and Green, 1979). Trainers in agribusiness did, however, value experience with teaching skills highly. Future preparation of agribusiness trainers should include experiences similar to those found in teacher preparation. Direct agricultural experience was not perceived as necessary.

**Trends and Issues**

The means showed that training was important to employees and organizations as reported by trainers in agribusiness. Respondents reported increased concern for fiscal issues. Funding pressure to allocate costs to end user and demonstrate impact on profit-ability
for fiscal issues. Funding, pressure to allocate costs to end user and demonstrate impact on profitability were perceived as upward trends in agribusiness. One could argue from the data that many trends are on the increase throughout agribusiness training and there appears to be agreement among the members of the profession, as seen in the low standard deviation scores, for each trend and issue.

Number of Employees

The size of the organizations for which the agribusiness trainers work exhibits wide variability. The majority of respondents worked for organizations of 1,000 or less. Review of the range of organizations in terms of size showed that organizations of all sizes were interested in developing their people.

Training Programs Conducted Monthly

The data showed that agribusiness trainers spend a small percentage of their time in conducting programs. The average was less than one program per week. This was considerably less than what would be the case for educators in public instruction at the secondary or collegiate level.
**Typical Program Attendance**

The sizes of agribusiness training classes were, for the most part, consistent with what has been found in many classrooms. Only four trainers reported classes with more than thirty participants. A mean of less than 20 participants was within the range of what one would expect to see in most secondary vocational agriculture programs. The predominate size of agribusiness classes was such that a variety of common learning activities, such as individualized instruction, problem solving and small group activities to name a few, could be implemented.

**Determination of Training Needs**

The data exhibited strong tendency among agribusiness trainers to use subjective means to determine training emphasis. Apparently, agribusiness trainers do not value systematic methods of investigation. The profession should reconsider this, however, otherwise agribusiness trainers might continue to operate under what could prove to be false assumptions. This tendency could be related to the low rating attributed to conducting research and
perhaps the value of providing such research training should be considered in the development of agribusiness trainers.

**Age Group**

While the respondents were heavily grouped in two categories encompassed by the ages 36 through 45, one category stood out due to the absence of a single respondent. The 20 to 26 range registered zero in this study. Upon close examination, this was consistent with findings in item 64. Responses to item 64 determined that agribusiness trainers enter the profession after obtaining occupational experience elsewhere. The conclusion can be drawn that the agribusiness training positions were not at the entry-level.

**Formal Education**

The formal education possessed by members of the agribusiness training profession was substantial. Only one out of ten respondents had less than a Bachelors Degree. Nearly one-half had graduate degrees. The levels of education attained by the respondents led to the conclusion that agribusiness
trainers as a group were committed to educational enrichment for themselves as well as the groups they served. Another conclusion could be that key decision makers in business have certain educational expectations of those involved in training.

**Major Area of Study**

The major areas of study possessed by agribusiness trainers reflected their chosen field to some degree. Those majors were, in order of magnitude: (1) Agriculture, (2) Education, and (3) Business. Each of these majors have application to the agribusiness training profession and were, therefore, relevant to their present position.

**Utilization of Education in Training**

This question sought to determine how much agribusiness trainers perceived that their formal education applied to their present career. Only ten percent of the respondents found their educational preparation was of little or no value in their present capacity. One-third of the agribusiness trainers surveyed perceived that they utilized over one-half of their formal education. This writer believes that
programs must be developed for those trainers who feel that their prior education was not sufficient for their present career. Such a program could be similar to many inservice programs provided for teachers of vocational agriculture.

**Years Experience in Training**

The respondents to this study possessed substantial experience in training. Eighty-five percent of the trainers responding had four years or more experience. This researcher believed that the respondents possessed sufficient professional experience to competently complete the survey.

**Prior Occupational Experience**

Members of the profession come to agribusiness training with a wide variety of occupational backgrounds. Only a little over one-third of the respondents had prior teaching experience. Traditional business occupations predictably accounted for a majority of the prior experiences among trainers. A conclusion can be drawn that teaching experience, while desirable, was not viewed as essential to holding a training position in agribusiness.
RELATIONSHIP OF COMPETENCY DOMAINS TO DEMOGRAPHIC FACTORS

The level of importance of each competency domain as perceived by agribusiness trainers was correlated with information gathered about the trainers and the organization for which these trainers worked.

The results showed that competencies and demographics did not exhibit strong associations. The highest coefficient recorded was only -.35, which is barely above the low to moderate association division line. Ninety-four percent of the coefficients ranked as low association or less. In the opinion of this researcher, there was very little relationship between the demographics of agribusiness trainers or their organizations and how they perceived competencies.

The analysis of variance did show that those agribusiness trainers with agricultural majors differed from the other members of the SIG group in how they valued that experience. The Scheffe technique utilized did not detect the significant differences of interest to this study. However, as discussed earlier, this situation may be expected
from time to time, and is consistent with Scheffe's Theorum. In this researcher's opinion, those respondents with agricultural majors considered that experience more important than did those with business and education majors.

COMPARISON OF AGRIBUSINESS TRAINER COMPETENCIES AND VOCATIONAL AGRICULTURE TEACHER CATEGORIES

An initial objective of this study was to determine to what extent agribusiness trainers differ from vocational agriculture teachers in their perception of the critical competencies required of their respective professions. In order to properly answer this question this researcher chose to utilize the works of Cotrell et al. As pointed out in the Review of Literature, the study by Cotrell et al. (1971) has served as the foundation for nearly all the research conducted to date on vocational teacher competencies. Over the years, through various methods outlined by Shinn (1976), the list of 384 competencies were grouped into ten categories (p. 9). These competency categories have been utilized extensively by researchers in agricultural education and were shown to be important to vocational agriculture
educators at all levels. Through a comparison of the vocational education teacher competency categories with the agribusiness trainer competency domains, identified in this study, an assessment was made.

The comparison of agribusiness trainer domains with vocational agriculture teacher categories was achieved by dividing the data into two groups. These groups were identified as Comparable and Confirmed and Not Comparable. The following serves as the definition for these groups.

Comparable and Confirmed - (C) - The Agribusiness Trainer Domain and Vocational Agriculture Teacher Categories contain at least some similar competencies that have been established through scientific methods as important to members of both professions.

Not Comparable - (N) - The Agribusiness Trainer Domain and Vocational Agriculture Teacher Categories did not contain similar competencies but were established through scientific methods as important to members of one profession.

The following chart (Table 26) assists in ascertaining the degree to which the Vocational
Agriculture Teacher Categories and Agribusiness Trainer Domains compare. Note that the each profession has ten groups, referred to as domains in the case of trainers and categories in the case of teachers.

As seen in Table 25 Agribusiness Training domains compared favorably with Vocational Agriculture Teaching categories. Overall, seventy percent (70%) of the one hundred cells were classified as Comparable and Confirmed. The individual Agribusiness Training domains ranged from a low of four out of ten to a high of nine out of ten when compared with the vocational agriculture teaching categories. Once again, these results were achieved by comparing the 384 competencies determined by Cotrell et al. (1971) with the forty-four competencies identified in this study. This comparison was made manageable by grouping the individual competencies into categories and domains. The results of this comparison show that many of the competencies from these two professions interrelate. Given that one of the primary uses of a competency study is to develop curriculum, then the curriculum for these professions appear similar.
### TABLE 26

**COMPARISON OF AGRIBUSINESS TRAINING DOMAINS WITH VOCATIONAL AGRICULTURE TEACHING CATEGORIES**

<table>
<thead>
<tr>
<th>VOCATIONAL AGRICULTURE TEACHING CATEGORIES</th>
<th>Training Domains</th>
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<th></th>
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<td></td>
<td>Instruction Counseling</td>
<td>Interface Cooperation</td>
<td>Professionalism</td>
<td>Background Experience</td>
<td>Trends Issues</td>
<td>Group Dynamics</td>
</tr>
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<td></td>
<td>Assessment Evaluation</td>
<td>Administer Manage</td>
<td>Agri-Industry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Planning, Development and Evaluation</td>
<td>N C C C C C C N C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Planning</td>
<td>C C N C C C C C N</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Execution</td>
<td>C N N N C C C N N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Evaluation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Management</td>
<td>C N N C N C N C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidance</td>
<td>C C C C C C C N C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School-Community Relations</td>
<td>N N C C C N N C C</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Student Vocational Organization</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Role And Development</td>
<td>N C C C C C C C C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordination</td>
<td>N C C C C N C N C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

113
The similarities enjoyed by both curricula make a strong case to interface the delivery systems. Since a formal educational discipline does not presently exist for agribusiness trainers, the point has been made that agribusiness trainers should look to undergraduate, graduate, and inservice programs provided for vocational agriculture teachers as a logical source to acquire much of the needed knowledge, skills, and abilities.

IMPLICATIONS OF FINDINGS

Implication to Current Knowledge

This study broke relatively new ground. This researcher was unable to find studies closely related to the topic being investigated. The results should provide agribusiness trainers with a data base upon which to build further study.

The competencies in this investigation and their domains were developed out of two landmark works, the first being the Teacher Competencies by Cotrell et al. (1971). This study has served as the foundation for much of the work done on competencies. The second work was the ASTD Models for Excellence (McLagen,
1982) which was the most extensive study of training conducted to date. The results of this study showed that each competency was rated as important to agribusiness trainers, thereby supporting these earlier works.

The professional competencies required of agribusiness trainers were similar to competencies required of all trainers (McLagan, 1982). The agribusiness training competencies investigated in this study have many specific commonalities with those required of vocational educators in general and, more specifically, vocational agriculture teachers.

The results of this study strongly support the underlying assumption that agribusiness trainers and vocational agriculture teachers' professions share important knowledge, skills and abilities. In general, competencies of agribusiness trainers paralleled those of vocational and agricultural educators.

The demographic data obtained from agribusiness trainers should provide a foundation upon which to build greater understanding of the members of the profession. The diversity of educational background and occupational experiences are examples of
considerations that should be addressed. The organizational data gives some indication of the nature and commitment found in different organizations.

The results of this study also support the assumption found in the literature concerning the value of training (Nelson, 1982; Knowles, 1970; Downey, 1982; and others). The trend toward more and improved training efforts was parallel to the literature (McLagan, 1982).

Finally, the relationship between demographics and perceptions of domains proved to be low overall. Factors such as age, major areas of study, etc. were apparently not reliable predictors of the importance of a competency domain.

In general, the findings of this study were within the parameters of the expectations of this researcher and were compatible with similar studies of similar professions.

Implications to Agricultural Education

There has been growing concern among some members of the agricultural education profession about the constantly dwindling clientele base. Clearly this
trend must be addressed if staffing, funding and related issues are to be maintained against all types of competing forces.

The primary charter of agricultural education programs nationwide has been to conduct preservice and inservice teacher preparation programs. However, across the country, many agricultural education programs have been expanding into other areas. Examples of these areas include 1) Extension Education, 2) Agriculture Communications, and 3) General Agriculture to name a few. The results of this study have begun to build the case that agribusiness trainers are an appropriate group for agricultural education to serve.

While a majority of the agribusiness trainers studied had an agricultural background either through formal education or occupational experience, less than one-third had preparation or experience in teaching. These same agribusiness trainers rated domains that parallel (Cotrell et al., 1971) work in teacher education closely as important competencies.

One of the logical places for agribusiness trainers to obtain and develop teaching skills for application in an agricultural setting would be from
the staffs of agricultural education departments. Developing the competencies needed to teach technical job-related competencies has long been the primary objective of vocational agriculture teachers. Trainers in agribusiness require the same competencies. Unfortunately, the agribusiness training profession is where agricultural education was decades ago -- operating under the assumption that agribusiness trainers are born, not developed. This misconception should be addressed. The ability to grow and acquire new knowledge in the profession may be dependant upon the availability of a delivery system for trainers in agribusiness.

Agricultural education should step forward as one of the appropriate delivery systems to assist and develop trainers in agribusiness. Conversely, agribusiness trainers should accept the help and guidance of agricultural education where it is appropriate. In the opinion of this writer, these professions can truly develop a symbiotic relationship.
NEED FOR FURTHER STUDY

Based on the findings and conclusions of this study the following topics require further investigation.

1. Agriculture education should assess current curriculum through further comparisons of the identified competencies for agribusiness trainers and previous competency studies in vocational agriculture, in order to identify developmental activities for agribusiness training.

2. An in-depth study should be conducted of trainer certification issues in order to determine if standards should be established, e.g. generic versus industry specific certification standards.

3. The profession should further refine agribusiness training competencies to determine appropriate performance measures.
4. A study should be made applying the latest adult education theory such as androgogy and synergogy to agribusiness training.

5. A study needs to be made to identify successful program models for agribusiness training.

6. An investigation should be conducted comparing and contrasting agricultural education majors with non-agricultural education majors on essential teaching variables among agribusiness trainers.

7. A study should be made of agribusiness trainers comparing and contrasting the leadership skills learned in vocational agriculture to the managerial skills required by agribusiness.

RECOMMENDATIONS

The following recommendations are based upon the findings and conclusions of this study.
1. Agriculture education should embrace, by formal and informal association, agribusiness trainers as appropriate clientele because many commonalities exist among the competencies required in preparing agricultural educators for any position.

2. The agribusiness trainers should develop an appreciation for scientific inquiry and promote the application of research findings in order to enrich and add to the knowledge base of the agribusiness training profession.

3. The leadership of the National Vocational Agriculture Teachers' Association and the American Society for Training and Development, Special Interest Group in Agriculture, should establish a vehicle for exploration of common interests and needs.

4. Agricultural education should interface many areas of vocational agriculture inservice education with agribusiness training through
planned joint activities, e.g. adult education workshops, curriculum development seminars, etc.

5. The agribusiness training profession should communicate with vocational agriculture/extension education professions to identify individuals interested in teaching adults in a business and/or industrial setting.

6. Agribusiness trainers should seek to further define the profession and encourage more organized professional activities.

7. An effort should be made to identify the total scope of membership of agribusiness trainers on a national basis.
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APPENDIX A

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APPENDIX B

DESCRIPTIVE STATISTICS FOR MAJOR AREAS OF STUDY AND COMPETENCY DOMAINS

<table>
<thead>
<tr>
<th>MAJOR</th>
<th>Agriculture (n=8)</th>
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<th>Math/Science (n=4)</th>
<th>Technical (n=1)</th>
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<tr>
<td>Mean</td>
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<td>Mean</td>
<td>SD</td>
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<td>BACKGROUND EXPERIENCE</td>
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<td>.88</td>
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<tr>
<td>TRENDS/ ISSUES</td>
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<td>2.73</td>
<td>.90</td>
<td>2.51</td>
<td>.38</td>
<td>2.00</td>
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</table>
APPENDIX C

CHI SQUARE COMPARISON OF EARLY TO LATE RESPONDENTS BY
COMPETENCY DOMAIN AND DEMOGRAPHIC CHARACTERISTICS

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>ALPHA LEVEL</th>
</tr>
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<tbody>
<tr>
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<td>Assessment/Evaluation</td>
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<td>Interface/Cooperate</td>
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<td>Background/Experience</td>
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<td>Number of Programs</td>
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<td>Time Counseling</td>
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<td>Experience Required</td>
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<td>Needs Determined</td>
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<td>Prior Occupation</td>
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### MEASURES OF LINEAR RELATIONSHIP (ASSOCIATION) UTILIZED

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<th>Ordinal</th>
<th>Interval or Ratio</th>
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<td>Cramer's Statistic</td>
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<tr>
<td>Ordinal</td>
<td>Rank-biserial coefficient</td>
<td>Spearman rank-correlation coefficient</td>
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<td>Interval or Ratio</td>
<td>Point-biserial correlation</td>
<td>Spearman rank-correlation coefficient</td>
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<tr>
<td>Kendall Tau coefficient</td>
<td>Kendall Tau coefficient</td>
<td></td>
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</tr>
</tbody>
</table>

(Warmbrod, 1981)
January 24, 1985

Dear :

As with most professionals, I am sure you have many demands on your time, so I will get right to the point. You have been identified as a leader interested in both the training of people and the industry of agriculture. That makes you uniquely qualified to assist in a study I am conducting.

I am gathering information about trainers in agribusiness, a group about which surprisingly little is known. This study seeks to identify the knowledge, skills, and abilities needed by a trainer in agribusiness. Other objectives of the study include development of a demographic base about those individuals in the agribusiness training profession.

Please complete the qualification criteria on the front of the attached questionnaire and follow all directions closely. Your responses will be kept in strict confidence, with data reported collectively only. The identification number at the top of your questionnaire allows for contact of those who do not return the survey. After you have completed the questions, please return the questionnaire by February 1, 1985. Simply fold the questionnaire so that the return address is showing and staple.

If you have any questions regarding the survey, please call me at (317) 631-8361 during the day or (317) 835-7821 evenings.

Sincerely,

INDIANA FARM BUREAU COOPERATIVE ASSOCIATION, INC.

Joe W. Green, Jr.
Manager of Training and Development

Attachment
APPENDIX F

FIRST FOLLOW-UP POSTCARD

Dear Sir/Madam:

You should have recently received a request to participate in a national study of agribusiness trainers. Because of the small number of people selected to participate, your response is most critical. Please take a few minutes to complete and return the questionnaire now. The data will be part of an independent study that hopefully serves to further the knowledge base of our profession and inspire others to learn more about agribusiness trainers. A copy of the summary information will be provided upon request. Feel free to forward the questionnaire to an appropriate person or call me at 317-631-8361 for another copy.

Thank you.

Sincerely,

INDIANA FARM BUREAU COOPERATIVE ASSOCIATION, INC.

Joe W. Green, Jr.
Manager of Training and Development
APPENDIX G

SECOND MAILING COVER LETTER

April 16, 1985

Dear :

Approximately two weeks ago you were mailed a questionnaire concerning trainers in agribusiness. As of now, I have not received your response.

The intent of this study is to learn more about trainers in agribusiness, by gathering background data and assessing the necessary knowledge, skills, and abilities required of them. The results could prove helpful to the profession, in such areas as, selection criteria, certification standards, curriculum development and job relevance assessment, among others.

You are one of the small number of individuals being asked to participate in this study. Please forward the questionnaire if you feel there is a more appropriate individual within your organization to respond to these questions. It is vital that the questionnaire be returned, even if qualifying criteria cannot be met.

If you have already returned the questionnaire, please accept my sincere thanks. If by any chance you did not receive the first questionnaire or it has been misplaced, a second copy has been enclosed for your convenience. Summary results will be provided to participants upon request. Please feel free to call me at 317-631-8361, if you have any questions. Thank you for your cooperation and time.

Sincerely,

INDIANA FARM BUREAU COOPERATIVE ASSOCIATION, INC.

Joe W. Green, Jr.
Manager of Training and Development

Attachment
APPENDIX H
SECOND Mailing FOLLOW-UP POSTCARD

Dear Sir/Madam:

You were recently asked to participate in a national study of agribusiness trainers. In the questionnaire, you were asked to identify the critical knowledge, skills, and abilities required of your profession. I would like to remind you that you are a member of a small and select group being asked to respond. It is, therefore, imperative you return the questionnaire right away!

If you have already completed and returned the questionnaire, please accept my sincere gratitude. If you require another copy of the questionnaire for any reason, please call (317) 631-8361 and I will mail you another one today. The deadline for responding is Friday, April 25th. Thank you.

Sincerely,

INDIANA FARM BUREAU COOPERATIVE ASSOCIATION, INC.

Joe W. Green, Jr.
Manager of Training and Development
I.D. NUMBER (........)

This questionnaire will only take a few minutes to complete. Please take the time to read all directions and questions thoroughly. There are no right or wrong answers; only your opinions are sought.

Before you proceed, please read the following terms and their accompanying working definitions:

♦AGRIBUSINESS - A business which directly or indirectly contributes to the production of food or fiber or handles the products produced therefrom.

♦TRAINER - A person who assists others in the purposeful development of the knowledge, skills, and abilities needed to perform current or future jobs.

With the preceding definitions in mind, please answer the following questions:

I. Do you believe your organization qualifies as an agribusiness? YES( ) NO( )

II. Do you believe a significant part of your job is serving in the role of a trainer? YES( ) NO( )

IMPORTANT: If you answered NO to either or both of the above questions, you need not go any further. Simply return the survey. Thank you for your time.

Two concepts should help you focus more closely and react more accurately as you complete the questionnaire. For the purposes of this study, the following definitions have been utilized.

*Training and development in agribusiness consist of providing planned learning opportunities for individuals to gain the needed knowledge, skills, and abilities required by agribusiness now and in the future.

*Training competencies are the knowledge, skills, and abilities which are key to producing the critical outputs of the training and development field.

On the following pages are a number of competencies organized into categories. Drawing from your knowledge of training and development in agribusiness, please rate the degree of importance of each competency. At the end, there will be space provided for any additional competencies you think should be listed.
DIRECTIONS

Please assess the level of importance of the competencies starting on the next page. The various levels of importance can be differentiated, utilizing the definitions listed below.

MOST IMPORTANT (5) - Competencies at this level are considered absolutely essential and required to a high degree of every agribusiness trainer.

ABOVE AVERAGE IMPORTANCE (4) - Competencies at this level are considered necessary and required of the majority of agribusiness trainers.

AVERAGE IMPORTANCE (3) - Competencies at this level are considered generally needed and required of many agribusiness trainers.

BELOW AVERAGE IMPORTANCE (2) - Competencies at this level are considered useful but required of few agribusiness trainers.

MINIMAL IMPORTANCE (1) - Competencies at this level are considered unnecessary and seldom required of any agribusiness trainer.

NOT APPLICABLE (0) - Irrelevant or does not apply as a competency for agribusiness trainers.

5= MOST IMPORTANT
4= ABOVE AVERAGE IMPORTANCE
3= AVERAGE IMPORTANCE
2= BELOW AVERAGE IMPORTANCE
1= MINIMAL IMPORTANCE
0= NOT APPLICABLE

Please proceed with these definitions in mind, circling the response which most accurately reflects the level of importance you place on each of the competencies numbered 1 through 44.
INSTRUCTION/COUNSELING

<table>
<thead>
<tr>
<th>Level of Importance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1. Plan training, applying accepted adult learning concepts.</td>
</tr>
<tr>
<td></td>
<td>2. Present information utilizing a variety of methods in such a way as to enhance the learning process.</td>
</tr>
<tr>
<td></td>
<td>3. Develop instructional objectives utilizing clear, concise, and measurable instructional outcomes.</td>
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<td></td>
<td>4. Formulate and ask effective questions in such a way as to stimulate thought, provide insight, clarify communication, and improve understanding.</td>
</tr>
<tr>
<td></td>
<td>5. Provide developmental feedback by communicating insights, perceptions, and observations accurately to others.</td>
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<td></td>
<td>7. Use appropriate instructional aids, equipment, and materials in such a way as to enhance the learning process.</td>
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<tr>
<td></td>
<td>8. Identify, analyze, and communicate individual needs, attitudes, and goals.</td>
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<td></td>
<td>10. Implement strategies which maintain and/or enhance productivity.</td>
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<td></td>
<td>11. Integrate individual career goals and organizational goals in a mutually beneficial manner.</td>
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<tr>
<td>4</td>
<td>Other (Please specify the competency)</td>
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<tr>
<td></td>
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<tr>
<td>3</td>
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<td>2</td>
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<tr>
<td>1</td>
<td></td>
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<tr>
<td>0</td>
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</tr>
<tr>
<td>Competency</td>
<td>Level of Importance</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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<tr>
<td>GROUP DYNAMICS</td>
<td></td>
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<tr>
<td>12. Utilize group dynamics and assess their impact on the individual, the organization, and learning.</td>
<td>5 4 3 2 1 0</td>
</tr>
<tr>
<td>13. Demonstrate leadership, both directly and indirectly, in order to encourage optimum results.</td>
<td>5 4 3 2 1 0</td>
</tr>
<tr>
<td>14. Consult with appropriate individuals and groups on Human Resources and Training and Development issues.</td>
<td>5 4 3 2 1 0</td>
</tr>
<tr>
<td>COMMUNICATION</td>
<td></td>
</tr>
<tr>
<td>15. Prepare written materials consistent with purpose and use, which adhere to the industry's grammatical standards.</td>
<td>5 4 3 2 1 0</td>
</tr>
<tr>
<td>16. Speak effectively with individuals and groups under varying conditions.</td>
<td>5 4 3 2 1 0</td>
</tr>
</tbody>
</table>
17. Identify job competencies by defining the requirements of a job, role, or position in clear and measurable terms.

18. Assess individual learning and development utilizing established performance standards through observation or other appropriate means.

19. Evaluate programs utilizing appropriate methods to determine training and development needs and/or results.

20. Assimilate information of all types from appropriate sources and process properly.

21. Utilize computers and associated software in training and related activities.

22. Conduct surveys and other needs assessments of groups and individuals in order to establish training focus and goals.

23. Conduct research through formal inquiry, utilizing appropriate methodology and statistical analysis to contribute to the knowledge base of the organization and/or profession.

Other (Please specify the competency)

Other (Please specify the competency)

INTERFACE/COOPERATE

24. Establish and maintain credibility and confidence with significant individuals and groups in order to foster a positive work environment.
<p>| | | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td><strong>LEVEL OF IMPORTANCE</strong></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>25.</strong> Recognize inherent differences among individuals and/or groups, and promote a positive atmosphere which fosters learning and development.</td>
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<td><strong>26.</strong> Identify alternative solutions to various training and development problems.</td>
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<tr>
<td><strong>27.</strong> Assist in resolving problems within the organization.</td>
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<tr>
<td><strong>28.</strong> Maintain one's perspective as events and actions impact the organization, and assess how training and development can best support organizational and/or industrial gains.</td>
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<tr>
<td><strong>Other (Please specify the competency)</strong></td>
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<tr>
<td><strong>Other (Please specify the competency)</strong></td>
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<tr>
<td><strong>ADMINISTER/MANAGE</strong></td>
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<tr>
<td><strong>29.</strong> Plan and coordinate the resources of training and development in an efficient and effective manner.</td>
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<tr>
<td><strong>30.</strong> Delegate and follow up training and development responsibilities while maintaining appropriate controls.</td>
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<tr>
<td><strong>31.</strong> Control financial factors by analyzing program funding needs and projecting impact throughout the organization, thus determining cost benefits of training and development activities.</td>
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<tr>
<td><strong>32.</strong> Maintain the records required of training and development activities.</td>
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</tr>
</tbody>
</table>
Other (Please specify the competency)

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-------------------------------  5 4 3 2 1 0

Other (Please specify the competency)

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-------------------------------  5 4 3 2 1 0

PROFESSIONALISM

33. Demonstrate an open mind to new ideas and practices, approach situations creatively, and be able to critically evaluate personal biases.  5 4 3 2 1 0

34. Adjust style and approach to various groups and/or individuals in such a way as to maximize communications learning and productivity.  5 4 3 2 1 0

35. Facilitate change by observing trends, and providing farsighted leadership and a positive environment to solve problems.  5 4 3 2 1 0

36. Identify the social, economic, and technological trends and issues within the profession and industry; and take appropriate action to maintain professional competence.  5 4 3 2 1 0

37. Relate training and development to the umbrella profession of Human Resource Development.  5 4 3 2 1 0

38. Interact with government programs, such as EEO, OSHA, Job Partnership Training Act, Vocational Education, and Higher Education, etc., as they relate to training and development.  5 4 3 2 1 0

Other (Please specify the competency)

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-------------------------------  5 4 3 2 1 0
Other (Please specify the competency)  

LEVEL OF IMPORTANCE  

5 4 3 2 1 0

AGRI-INDUSTRY

39. Identify issues, economic trends, and cycles in agriculture, as well as the state of technology and other forces impacting farming.  

5 4 3 2 1 0

40. Identify the unique challenges facing agribusiness (e.g., technology, economics, etc.)  

5 4 3 2 1 0

41. Compare and contrast formal and informal structures of organizations and recognize the unique challenges facing the organization (e.g., competition, government, etc.)  

5 4 3 2 1 0

Other (Please specify the competency)  

LEVEL OF IMPORTANCE  

5 4 3 2 1 0

Other (Please specify the competency)  

LEVEL OF IMPORTANCE  

5 4 3 2 1 0

Other (Please specify the competency)  

LEVEL OF IMPORTANCE  

5 4 3 2 1 0

Circle the response which most nearly reflects your opinion on these questions.

LEVEL OF IMPORTANCE

42. How important is it for a trainer in agribusiness to have occupational experience in farming?  

5 4 3 2 1 0

43. How important is it for a trainer in your capacity to have occupational experience in agribusiness?  

5 4 3 2 1 0
44. How important is it for someone in your job to have formal training in teaching skills?  

5 4 2 2 1 0  

Training and development is often one of the first areas impacted by change in business and industry. What has been your personal experience regarding the following issues in training and development?

Increasing = I  
Unchanged = U  
Decreasing = D

45. Funding for training and development.  

46. Pressure to decentralize control of training and development.  

47. Expressed interest on the part of employees in self-development.  

48. Pressure to show organizational accountability in many ways, including impact on profit.  

49. Visibility of training and development and its activities throughout the entire organization.  

50. Pressure to allocate the cost of training to final users of the training program.  

Please take a few minutes to give us some background information. Complete each item to the best of your ability. (Remember, all individual responses will be kept strictly confidential and only collective data will be reported.)

51. Approximately how many people are employed by the organization for which you train? .........

52. Approximately how many formal training programs do you personally conduct on a monthly basis? .........
53. When conducting a formal program, what is the typical or average number of people in attendance?  .......... 

54. How much of your work week is spent in a formal training environment, e.g., classroom, learning laboratory, etc.? (Check one.)  
( ) 0 - 10%  ( ) 11 - 25%  ( ) 26 - 50%  ( ) Over 50% 

55. How much of your work week is spent in career development/counseling activities? (Check one.)  
( ) 0 - 10%  ( ) 11 - 25%  ( ) 26 - 50%  ( ) Over 50% 

56. Please check your age group.  
( ) 20 - 25 years  ( ) 36 - 40 years  ( ) 51 - 55 years  
( ) 26 - 30 years  ( ) 41 - 45 years  ( ) 56 - 60 years  
( ) 31 - 35 years  ( ) 46 - 50 years  ( ) Over 60 years 

57. What is your highest level of formal education?  
( ) High School  ( ) Bachelor's Degree  
( ) Post secondary Vocational/Technical School  ( ) Master's Degree  
( ) Some College  ( ) Doctorate  ( ) Associate Degree/Equivalent 

58. What was your major or principal area of study for your highest degree? (Check one.)  
( ) Agriculture  ( ) Liberal Arts  
( ) Business  ( ) Mathematics/Science  
( ) Education  ( ) Technical  
( ) Other (Please specify)  .........................  
..................................................... 

59. Reflect on the responses you checked on the previous two questions—what percentage of your formal education do you think you presently utilize as a trainer in agribusiness? (Check one.)  
( ) 0 - 10%  ( ) 11 - 25%  ( ) 26 - 50%  ( ) Over 50%
60. On a monthly basis, what percentage of your professional time would you estimate you spend, and ideally should spend, in the following areas? (Total for each should equal 100%)

<table>
<thead>
<tr>
<th>Current</th>
<th>Ideal</th>
</tr>
</thead>
<tbody>
<tr>
<td>( ) Assessing Needs (e.g., programs, personnel)</td>
<td>( )</td>
</tr>
<tr>
<td>( ) Career Development (e.g., coaching, counseling, advising)</td>
<td>( )</td>
</tr>
<tr>
<td>( ) Design/Development (e.g., writing lessons, formulating programs)</td>
<td>( )</td>
</tr>
<tr>
<td>( ) Instruction (e.g., facilitating learning formally/informally)</td>
<td>( )</td>
</tr>
<tr>
<td>( ) Interacting With Others (e.g., communicating marketing programs, developing cooperation)</td>
<td>( )</td>
</tr>
<tr>
<td>( ) Managing/Administering (e.g., controlling resources, maintaining records, making decisions)</td>
<td>( )</td>
</tr>
<tr>
<td>( ) Professional Growth (e.g., reading, attending programs, self-development)</td>
<td>( )</td>
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<tr>
<td>( ) Other (Please specify) .....................</td>
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<td>( ) .............................................</td>
<td>( )</td>
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</tbody>
</table>

100% = TOTAL = 100%

61. How many years have you been directly involved in training and development? (Check one.)

( ) Less than 1 year  ( ) 7 - 9 years
( ) 1 - 3 years  ( ) More than 10 years
( ) 4 - 6 years
62. How much actual training experience is required for someone to become proficient as a training and development professional? (Check one.)

- ( ) Less than 1 year
- ( ) 1 - 3 years
- ( ) 4 - 6 years
- ( ) 7 - 9 years
- ( ) More than 10 years

63. How are training needs determined in your organization? (Check as many as appropriate)

- ( ) Performance Appraisal
- ( ) Productivity Data/Financial Reports
- ( ) Task Force/Fact-Finding Groups
- ( ) Advisory Committee
- ( ) Employee Survey
- ( ) Client Survey
- ( ) Outside Consultation
- ( ) Subjective Evaluation of Training Staff
- ( ) Human Resources Planning
- ( ) Assessment Centers
- ( ) Formal Testing
- ( ) Personal Observation
- ( ) Requests by Management
- ( ) Interview
- ( ) Organizational Audit
- ( ) Other (Please specify)

64. Prior to becoming a trainer, what were your other work experiences? Put the NUMBER OF YEARS of experience you had in each area in the blank next to the type of work listed. Place a ZERO in areas at which you have not worked.

- ( ) Sales/Marketing
- ( ) Production/Manufacturing
- ( ) Farming
- ( ) Management/Supervision
- ( ) Research/Development
- ( ) Advertising/Promotion
- ( ) Teaching
- ( ) Personnel/Employment
- ( ) Accounting/Finance
- ( ) Others (Please specify)

.................................
.................................