



Enterprising Ideas

for Farmers, Ranchers and
Rural Families with
Physical Disabilities



Enterprising Ideas for Farmers, Ranchers and Rural Families with Physical Disabilities

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Introduction

Diversification has been a mainstay of American agriculture since colonial days. Even with today's specialized agriculture, most farmers do not depend on only one specific crop or venture as their sole source of income. Many, if not most farmers, depend on a combined cropping and livestock operation for their livelihoods. While markets, weather, or other factors may adversely affect one segment of the operation, the other can generally be relied upon to carry them through the tough times.

The tough economic climate for agriculture in recent years has generated even greater attention on diversification as a method of reducing economic risks on the farm. In addition, farmers and rural residents have been expanding their attention from traditional farm products, to more unusual and imaginative ventures which utilize resources available on the farm. These ventures have become popularly known as alternative enterprises, and might include the production of non-traditional crops or livestock, specialized marketing or processing of farm products, or farm-based businesses. The variety and scope of alternative enterprises which might be utilized by farm families is limited only by the imagination of the individuals.

Purpose

This publication is designed for use by rural residents with physical disabilities and rural rehabilitation professionals. The resource manual includes several case studies of individuals with disabilities who have started successful alternative enterprises, as well as information regarding the development of farm-based alternative ventures. We hope this publication will stir your own creative thinking, and that through the example of others you will find the inspiration and encouragement to pursue your own entrepreneurial interests.

Value to Farmers with Physical Disabilities

As a farmer with a physical disability you face the same difficulties as other farmers — markets, weather, high input costs and many others. Your physical impairment presents an additional challenge to overcome in becoming successful in farming. In order to continue farming, your family may be forced to make major and expensive modifications to the farmstead to accommodate a physical condition. In some cases, you may feel unable to continue a conventional farming operation, but still desire to remain productive. The use of an alternative enterprise could allow you to expand your earning potential and at the same time accommodate your physical abilities. In addition, an alternative enterprise can be tailored to your family's needs, interests, and available resources.

In 1989, the Breaking New Ground Resource Center began a study of the feasibility and potential of alternative enterprises for use by farmers with physical disabilities.* A mail survey of Breaking New Ground farmer clients found 27 percent reporting some type of alternative on-farm income source. A wide diversity of enterprises were reported by those individuals. In addition, nearly one-half of the survey respondents indicated an interest in starting or expanding some type of enterprise. The survey results clearly showed that alternative enterprises can be successful and beneficial for farmers with physical disabilities.

As part of the study, on-site visits were conducted and case histories developed for selected farmers with physical disabilities who were utilizing alternative enterprises. The visits were conducted in several Midwestern states. Several examples of these case histories are included in this resource manual.

Defining "Alternative Enterprise"

While "alternative enterprises" have attracted much attention by rural residents, researchers and the press, no specific definition of the term has really been developed. For the purposes of this resource guide, the following criteria were used to identify ventures as alternative enterprises:

Alternative farm-based enterprises are income producing ventures which take advantage of family resources, interests and talents that may not be fully utilized in existing farm operations. Entrepreneurial skills are often evident in successful alternative enterprises. Such enterprises may involve both farm production and farm-related ventures, or may have little relation to agricultural production. Crops, livestock or production practices considered non-traditional for a geographic region, innovative processing or marketing strategies and home or farm-based businesses would be included in the broad definition of alternative enterprises.

* *Alternative Enterprise and Off-Farm Employment Options for Farmers with Physical Disabilities*, E.J. Sheldon, Breaking New Ground Resource Center, Purdue University.

Contents of this Manual

This publication includes 31 case histories of rural residents with physical disabilities who have developed alternative enterprises. These case histories describe each enterprise, the resources and skills required for each venture, and the assistive technology utilized by the farmers interviewed. Information concerning financial considerations, such as profit potential or start up costs, is non-specific. The goal of this resource manual is merely to present a variety of ideas that have been successful for individuals, and not to present a step-by-step guide for starting specific ventures.

The planning and development of any alternative enterprise or business venture requires careful thought and evaluation. This manual includes a brief, generalized discussion of factors, or key steps, to consider when contemplating any type of enterprise. This summary of key steps emphasizes the importance of family involvement and research in the decision making process. This information has been derived from publications designed as self-help manuals for individuals interested in starting business or production ventures.

A portion of this resource manual has been devoted to information sources on alternative enterprises. A large number of public and private institutions and businesses have supported research regarding the development of alternative enterprises, especially in the area of small-scale agriculture. Included is a list of names and addresses of selected organizations which could be helpful to an individual wishing to start an enterprise.

Lastly, we have included a list of specific enterprises assembled by Cornell University's Farming Alternatives Program. This list is provided, as were the case histories, to generate ideas and to illustrate the broad scope of possible income-producing ventures available to individuals and families wishing to explore new opportunities.

Key Steps to a Successful Alternative Enterprise

The development of any alternative enterprise should be preceded by careful analysis and planning in order to reduce the risks involved and ensure that the enterprise will complement the family's existing goals and income-producing operations. The following section includes an outline of various points to consider when contemplating an alternative enterprise. The bulk of this information has been derived from two publications; the Northeast Regional Agricultural Engineering Service's *Farming Alternatives: A Guide to Evaluating the Feasibility of Farm Based Alternative Enterprises*, and the Southern Rural Development Center's *The Family Farm - Planning for Success, Part 1 and Part 2*. Each of these publications is designed to be a self-help manual for individuals interested in supplemental farm enterprises, and each includes work sheets to be completed by family members to aid in the decision making process concerning the enterprise's development. The following information summarizes the process outlined by these publications.

① Evaluate the Family's Interests

The success of any enterprise depends on the entire family's support. Most farms still operate as a family unit, with labor and resource availability dependent upon family members. By pursuing an enterprise which fits the needs and interests of the family members involved, the potential for a profitable and satisfying enterprise is enhanced. The first stage in choosing any farm venture should be determining the family members' attitudes and interests in the following areas:

- Business qualities and skills;
- Personal satisfaction with current farm business enterprises;
- Willingness to take risks;
- Concerns for the future of the farm business;
- Types of work or enterprises preferred by each family member.

② Determine Goals and Objectives

Before choosing and pursuing a specific type of venture, decide what role the new enterprise will play in the total farm operation, or in relation to family members' off-farm jobs. Having specific objectives for a new enterprise will improve the probability of selecting a venture appropriate for a particular situation. These factors should be examined in determining the goals for a proposed alternative enterprise:

- Family members to be involved in the enterprise;
- Role of new enterprise with respect to total family income, and labor allotment;
- Special features expected of a new enterprise, such as low risk level, seasonality of work, and utilization of specific skills or talents.

③ Inventory Available Resources

Ideally, an alternative enterprise will take advantage of resources already available but underutilized in the present farming operation, thereby reducing initial investments. In order to determine what resources might be available, a detailed inventory must be completed. By knowing exactly what resources are available, the farm family can make an informed choice of an enterprise, or determine if an alternative enterprise would be an appropriate option. The following categories of resources should be examined in detail before initiating any type of venture:

- Physical resources, such as tillable land, pasture, wood lots, buildings, water sources, machinery, and equipment;
- Financial resources, including cash on hand, savings, and credit potential;
- Management resources - skills, talents, and education of family members;
- Labor resources - family members, hired labor;
- Market resources - slaughterhouses, wholesalers, direct marketers, on-farm market potential, nearby cities or towns.

④ Select a Potential Enterprise

Only after carefully and completely examining the goals and objectives for a new enterprise, the family's interests, and the availability of resources should a specific enterprise be chosen for further consideration. While a person or family may already have had an idea for a venture, the completion of the preceding steps will ensure that the idea is feasible for a specific situation. Upon selection of a specific enterprise to examine, develop a definition of the enterprise with respect to the following criteria:

- Features of the product or service to be offered;
- Targeted marketing season;
- Benefits or uses to the potential consumer.

⑤ Determine Compatibility to Situation

After selecting a specific enterprise, be it a product or service, re-evaluate the resources available and family interests to be certain that the venture will fit into the scheme of the family operation. In particular, research the proposed enterprise in order to determine that the following resources and requirements are available or can be acquired:

- Proper climatic, soil, and water properties;
- Necessary buildings and facilities;
- Machinery;
- Adequate management skills and labor.

⑥ Consider Physical Ability

An individual with a physical disability who is considering an alternative enterprise should take his/her physical impairment(s) into account. While examining the resources and requirements needed for a specific enterprise, determine if the enterprise is suitable for your physical abilities. Learn the specific day-to-day tasks which must be completed, and how these tasks can be accomplished, considering a disability. These points regarding selection of a suitable enterprise should be considered:

- Type of disability (e.g. spinal cord injury, visual impairment);
- Tasks necessary for enterprise;
- Assistive technology needed;
- Costs of necessary worksite modifications;
- Labor distribution for physical tasks which cannot be completed.

⑦ Conduct Production and Market Research

Once you have determined that the potential enterprise meets the basic criteria outlined in the previous six steps, you should be ready to research the venture more extensively. All available information concerning the production, marketing, and consumption for a good or service should be examined in detail. Information sources can include producer groups, the Cooperative Extension Service, the Chamber of Commerce, other individuals with similar enterprises, and potential competitors. Use this research to determine the profitability of that specific product or service. A factor of great importance to the profitability of an enterprise is the availability of a market. The following procedures can enhance the effectiveness of your market research:

- Utilize existing information concerning markets and profitability of a product;
- Perform research activities, such as observation of similar operations, and interviews or surveys of potential customers;
- Determine a specific target population of consumers;
- Evaluate potential competition for that specific target population.

⑧ Perform Financial Analysis

While alternative enterprises are often enjoyable sidelines and may provide a type of recreation for many farm families, the proverbial "bottom line" — will the venture be profitable? — should be the determining factor in selecting a suitable enterprise. Before any enterprise is started, careful financial analysis is required. This analysis involves projected profitability of the total farm operation including the alternative enterprise. The farm's present financial information should already be at hand as a result of the primary resource inventory. Careful production and market research should have provided an accurate picture of the profit potential of the enterprise. To accurately predict the income potential for the farm operation, prepare analyses for 1) the present operation, 2) the first year

of the alternative enterprise, and 3) future years, taking into account possible production increases. Use the following financial tools in making your assessment:

- Balance sheets;
- Net income statements;
- Cash flow statements.

⑨ Make Your Decision

If you have followed the preceding key steps completely and carefully, the resulting financial projections for your alternative enterprise should be as accurate as can be expected. Determine if those projections meet with the goals for the overall family operation. If not, the venture may not be the right option for the situation. However, if the enterprise fits the family resource base, appears profitable, and is of interest to the family members, success is probable. No venture is risk free, but by carefully planning and analyzing options, those risks can be minimized, and an alternative enterprise can become a productive and profitable segment of a family's income base.

Case Histories of Successful Enterprises

A major focus of this project was directed toward on-site interviews with individuals with disabilities who have developed and are utilizing alternative enterprises. These interviews were conducted in several different states. In some cases, on-site visits were impractical, so telephone interviews were conducted. The case histories for the individuals from Iowa were completed by the staff of the Farm Family Rehabilitation Management Program, and the balance were developed by the Breaking New Ground Resource Center.

Thirty-one case histories of successful enterprises are included in this publication. A wide variety of enterprises are provided, ranging from specialty livestock to more "conventional" alternatives such as seed sales. Each venture was successful for the individual farmer, and the result of years of planning and development. Remember that each enterprise must be tailored to fit individual and family interests and abilities. These case histories are intended to generate ideas and provide motivation, not to endorse specific enterprises. Please enjoy reading about these successful and innovative rural residents as you develop your own enterprise ideas.

For your convenience, the cases are divided into several major categories, each of which reflects the general type of enterprise. The categories are:

- Specialty Crops and Livestock;
- Food Products;
- Agricultural Sales and Services;
- Home -Based Manufacturing;
- General Sales and Services;
- Recreation.

Specialty Crops and Livestock

Animal Cages, Angora Goats & Rabbits

Jerry Bennett

Greenfield, Indiana

Jerry Bennett operates a small grain farm, raises Angora goats and rabbits, and manufactures animal cages. His farm is located in central Indiana, several miles east of Indianapolis. Jerry sustained a spinal cord injury resulting in paraplegia, and uses crutches and wheelchair for mobility.

Description of Enterprise:

Jerry Bennett's major enterprise is the manufacture of rabbit and pet cages.



Jerry Bennett manufactures animal cages in his farm shop. He originally sold his cages through a local grain elevator company, and now markets the cages at various farm and trade shows, and pet stores in a six-county area throughout central Indiana.



Jerry and his daughter raise angora rabbits, valuable for their high-quality fur. Unfortunately, they were both allergic to the rabbits and therefore discontinued the operation. Jerry still believes, however, rabbits can be a profitable venture for someone interested in a small animal enterprise.

The cages are built in a shop on the Bennett's farm. Jerry first began building cages in 1982, following his spinal cord injury. Originally, he made the cages and sold them through a local elevator. Jerry later began to test market and sell his products at various trade shows. Today, most of Jerry's business is wholesale. He sells cages to pet stores in a six-county area in central Indiana.

Jerry uses a computer to record sales of his products. He considers



Jerry and his family own a flock of two dozen Angora goats. The long mohair harvested from the goats is highly valued for use in a variety of garments and fabrics.

the computer a very valuable tool, and a great time-saver for record-keeping.

Jerry assembles the wire cages completely in his own shop. Metal working equipment is used to bend and cut the wire material to the desired shape and size. Jerry utilizes sheet metal equipment for bending and making pans for bird and rabbit cages.

Jerry is currently assembling the necessary equipment to establish a machine shop to supplement his cage building enterprise. He already owns a lathe and other equipment that enables him to do machine work. He intends to specialize in projects for farmers. Because farmers' machining needs are usually small, most established machine shops do not cater to them. Jerry sees this as an opportunity to provide a valuable service.

In addition to his cage manufacturing business, Jerry and his family also raise Angora goats and Angora rabbits. The goats grow fibers known as "mohair," and the rabbits produce angora fur. Both mohair and angora are high qual-

ity fibers used in a variety of textiles. At this time, the Bennetts have a flock of two dozen goats. They have 14 female angora rabbits. They are, however, in the process of phasing out of rabbit production. Jerry and his daughter are both allergic to the rabbit hair, and he feels it wise to discontinue the operation. Jerry believes that angora rabbits could be a potentially profitable business venture for someone interested in a small animal enterprise.

Adaptive Equipment:

Jerry uses crutches for mobility around his shop and farmstead. His shop has a concrete floor, which allows for the use of a wheelchair if needed. Stools positioned around the shop provide stable and comfortable seating at necessary workstations. Jerry uses a hoist for heavy lifting chores. He installed an extra step on each of his farm tractors to provide better access to the operator's seats.



Commercial Greenhouse

David Wolff

Cedar Falls, Iowa

David Wolff owns and operates a commercial greenhouse in Cedar Falls, Iowa. David was born with cerebral palsy, and has suffered a stroke. David has over 25 years of experience in the horticulture and greenhouse business.

Description of Enterprise:

Wolff's Greenhouse is a seven-acre, five-greenhouse facility involving David, his father



David's operation has expanded from the original used greenhouse building to five greenhouses on seven acres.



Wolff's Greenhouse has been in business over 20 years selling a variety of quality bedding and flowering plants.

and two other part-time employees. The operation sells a variety of bedding plants, vegetable plants and flowers retail and wholesale.

David's interest in horticulture began when he worked for a local greenhouse as a transplanter. Five years of working for established greenhouse operators provided the inspiration and experience necessary to begin his own business venture. Wolff's Greenhouse, began as a single, used greenhouse building, and grew quickly as demand for David's quality plant products increased.

The greenhouse occupies 100 percent of David's time and provides the majority of his income. He works about 70 hours per week during his peak spring season and 40 to 50 hours per week the remainder of the year. David's pride in the plants that he grows and sells is reflected in a favorite marketing slogan, "You've seen the rest, now come and see the best."



David Wolff has over 25 years experience in the horticulture business, and currently works between 40 and 70 hours per week managing and operating his greenhouse. He was born with cerebral palsy.

David recommends that someone wanting to start a greenhouse should be willing, and have the stamina, to work the hours necessary. He indicated that the greenhouse was not an extremely high-return business, but said there are many personal rewards.

Adaptive Equipment:

David uses a three-wheel, motorized, indoor-outdoor chair for mobility throughout the greenhouse facilities.



Direct Market Fruit & Vegetable Farm

Ed Bell

Hagerstown, Indiana

Ed Bell and his wife, Debbie, operate a 72-acre farm west of Hagerstown, Indiana. The Bells' farm consists of several crop and live-stock enterprises and a farm market. Ed sustained a T-1 level spinal cord injury at the age of 21.

Description of Enterprise:

The Bells' farming operation involves the production of field crops and vegetables. Ed grows some corn and soybeans, but the primary emphasis of his operation is vegetables and specialty crops such as strawberries, sweet corn, green beans and other garden staples.

The Bells market their fresh-picked produce

directly to customers from their own farm produce stand. The produce stand is located on a highway on the outskirts of the small farming community of Hagerstown which lies between two larger cities. Ed credits this location, and the highway traffic, with much of his marketing success.

While at the Bell farm, customers are provided a true example of farm life. The Bells' operation is a genuine working farm, without the souvenirs and other adornments found at many produce stands.

Although the Bells focus primarily on crop production, they do have a several types of live-stock, as well as geese, peacocks and guinea fowl that contribute to the "farm life" experience for visitors. The Bells also raise a few hogs, and ac-



The Bells market their fresh-picked sweet corn, green beans, strawberries and other produce from their own farm produce stand located on a highway on the outskirts of the small farming community of Hagerstown. Ed credits his location on this well traveled highway with much of his marketing success.



Ed modified his tractors by installing high-back seats, seat belts and hand controls. His other tractor includes a lift.

cording to Ed, a sow and litter in the barn often attract the attention of customers at the produce stand.

The Bells utilize part-time labor during the summer to plant and harvest the vegetable crops, and to provide assistance with such tasks as hitching tractor implements and carrying supplies. Local youngsters are employed to harvest strawberries, and customers are allowed to pick their own berries directly from the field.

The seasonal work associated with vegetable production leaves Ed with extra time during the colder months of the year. He is an excellent speaker, and works for the Indiana Easter Seal Society — traveling throughout the state during his slack months promoting awareness of disability issues. He speaks to many organizations and groups, and draws on his personal success despite a serious disability, as an example for others to follow.



The Bells' operation is a genuine working farm, without the adornments found at many produce stands. Ed grows corn and soybeans in addition to a variety of fresh produce.

Adaptive Equipment:

Ed has modified his farm machinery to accommodate his disability. His tractors are equipped with high-back seats, seat belts and hand controls. A lift allows him access to the seat of his larger tractor. He accesses his small utility tractor by manually pulling himself from his wheelchair into the seat.

Ed utilizes a Freedom-I powered wheelchair for mobility around the farm. The chair is ideal for getting to fields, moving over rough ground, and working around livestock. He uses a manual wheelchair around the farmyard and in his home.

Ed carries an FM two-way radio with him at all times. The system has a 60-mile range and dial-out telephone capabilities. This portable communication capability provides a measure of safety and convenience in case of an equipment breakdown, or if other problems occur.



Fish Farm & Hatchery

Dirk Price

Red Level, Alabama

Dirk Price, of Red Level, Alabama, owns and operates a fish farm and hatchery. Dirk has retinitis pigmentosa and has been legally blind since 1980. He does retain some sight, but his field of vision is limited. Dirk has been involved in the aquaculture industry since 1976.

Description of Enterprise:

Dirk Price first became interested in raising fish while working for a state trout hatchery in his home state of New Jersey for a year. Encouraged by his experience at the hatchery, Dirk applied to Auburn University's graduate fisheries program and earned a master's degree in two years. His work at Auburn involved very practical and beneficial experience in the production of various species of fish. While at Auburn, Dirk developed a goal of owning his own fish farming

operation. After graduating from Auburn, Dirk worked for a period of time in Texas and Florida to further develop his skills and expand his knowledge of the aquaculture industry. In 1981, Dirk moved back to Alabama and formed a partnership with another individual to produce several types of fish. In 1987 he dissolved the partnership and went into business on his own.

It took Dirk several years of work and constant improvement to build his fish farming operation. For many years, Dirk's wife worked off the farm so that the profits from the fish farm could go back into the business. Recently, Mrs. Price was able to begin working full time with with her husband on the fish farm.

Price's Fish Farm now consists of 12 surface acres of fish ponds and a hatchery facility. Since going into business on his own, Dirk has produced many varieties of fish, including sport fishes such as largemouth bass, hybrid striped



Dirk Price's fish farm in Red Level, Alabama, includes 12 surface acres of fish ponds and an indoor hatchery. Dirk began his operation in 1987. He has a masters in fisheries from Auburn University and over 18 years experience in the industry.



Dirk operates his own hatchery and currently produces cold-water ornamentals used for stocking decorative pools and ponds. He is exploring the possibilities of marketing Australian crawfish. Dirk is legally blind, but says, "No one else can see in the water either."

bass and bluegills. Other species he has grown include white amur (grass carp), shellcracker and catfish. Dirk believes that his education and early experience in the industry have been invaluable to the success of his farm.

The current focus of Dirk's operation is primarily cold-water ornamentals (goldfish and koi). Koi are a type of multicolored carp originally from Japan. The koi grow larger than goldfish, and unlike tropical fish, are able to survive in cold water. The success of an aquaculture enterprise, as with any other, depends on the market. In recent years ornamental fish have become very popular for stocking decorative pools and ponds in landscaped gardens and yards. This specialized demand has created a lucrative market for ornamentals, making them more profitable than traditional aquaculture species such as catfish.

Advertising is an important part of Dirk's marketing plan. He regularly places ads in trade journals to enhance the market potential for his fish. Dirk says, however, that word-of-mouth advertising resulting from good customer relations and a high quality product is often the most effective.

Dirk believes success requires not only find-

ing and promoting a market, but first and foremost, providing a quality product. In the case of ornamentals, his customers demand hardy and attractive fish. Dirk markets his fish all across the United States, primarily to wholesalers, but to retailers and individuals as well. He ships the fish by next-day air freight with guaranteed live delivery.

Dirk says to remain successful he must stay one step ahead of the market by constantly looking for new and in-

novative products. Though the ornamental fish are profitable now, markets and consumer demand can change rapidly. He is currently considering Australian crawfish as an option for future market development. Product diversity is another important part of Dirk's business philosophy, and for this reason he continues to produce sport fish for stocking ponds. According to Dirk, a diversified and innovative operation will succeed, despite changes in the market.

Adaptive Equipment:

Dirk uses little adaptive equipment in his fish farming operation. He says, "no one else can see under the water either," and that he doesn't feel his sight impairment poses a major problem. He recently acquired a closed circuit TV enlarger for reading. This allows him to remain current with the industry by reading trade manuals and related publications. He has also taken classes with the Alabama Institute for the Deaf and Blind to develop his computer skills.



Llamas, Diversified Farm

Judy Kimball

Haverhill, Massachusetts

Judy Kimball and her husband, Leonard, own and operate a diversified livestock farm in Haverhill, Massachusetts. Kimball Farm, located 35 miles north of Boston, has been in Leonard's family since 1820. Judy had polio as a child, and has very limited use of her legs. She uses crutches for mobility.

The Kimballs originally owned a dairy and milked 70 head of cattle. Leonard suffered a leg injury in 1977 forcing them to discontinue the dairy operation. Since then, the Kimballs have diversified their farming interests, and now have a herd of 50 Polled Hereford beef cattle, a small flock of Dorset sheep and 25 llamas. In addition, they grow 130 acres of hay and a small acreage of corn.



Kimball Farm features a variety of diverse enterprises, including a herd of 25 llamas. The Kimballs sell llamas as breeding animals and pets.

Description of Enterprise:

Though Judy and her family have been involved in a wide range of "alternative" enterprise activities, their llama operation is perhaps the most unique. The Kimballs purchased their first llamas in 1986, and have since expanded their herd to 25 animals. Llamas have been domesticated for more than 4,000 years, and are valuable as pack animals and for their heavy wool. Llamas are becoming more popular around the United States as a domestic animal enterprise.

The Kimballs have found that llamas provide numerous marketing opportunities. The gentle animals are popular as pets for both children and adults alike, and this market provides an outlet for many animals which might not be of show or breeding quality. The Kimballs also market high quality llama wool. Recently, Judy has experimented with using llama manure as a garden

mulch. She uses a "Pasture Vacuum" towed behind a lawn and garden tractor to "harvest" the llama pellets. Judy is currently testing the market for llama mulch, and uses it regularly on her own garden.

Understandably, the animals

draw a steady stream of sightseers and visitors to Kimball Farm. The Kimballs have installed a small coin-operated alfalfa pellet machine. This allows visitors to hand-feed the llamas "snacks" that are nutritionally appropriate for the animals.

The Kimballs dug a fresh water well because the llamas would not drink the city water. They have added a well house, providing drinking water to neighbors and people from as far away as New Hampshire. Judy says people don't seem to like the city water any more than the llamas do.

The Kimballs have been very active in promoting llamas both locally and nationally. Judy and Leonard organized the East Coast Llama Show and Sale at Harrisburg, Pennsylvania, in 1989 and 1990, and for the past five years have managed a show at the Topsfield Fair, one of the oldest agricultural expositions in the country.

Over one-half million people attend the fair each year. The Kimballs are active in several llama associations, and participate in various related shows and sales. Judy is responsible for advertising and promotions for the family business.

Additional Enterprises:

For many years, Judy and her husband have managed a nearby cemetery. This job involves grounds maintenance and record keeping for the cemetery. Judy sells the cemetery lots, measures and records the placement of stones and maintains records of graves.

Judy also provides accounting services, and helps other farmers with tax preparation. She uses a computer for the Kimball farm records, and also maintains herd records for other farmers.



According to Judy, her herd stud Shadow Dancer is "as gentle as a kitten" and enjoys going on walks. The Kimballs actively promote llamas, and have helped organize a number of shows and sales.



Judy markets llama manure as high-quality fertilizer. The manure is collected with a "Pasture Vacuum" pulled by a lawn and garden tractor.

Judy is an excellent gardener. She breeds Daylilies, and markets the many varieties she has developed. Judy sells perennial plants as well.

Judy is also a certified swimming instructor. After learning to swim at age 35, Judy obtained her life-saving and Water Safety Instructor (WSI) certificates. She has since taught many youngsters how to swim. Considering the limited use she has of her legs, Judy is understandably proud of her swimming accomplishments.

Judy recommends that individuals who might be interested in starting some type of alternative enterprise research the services needed in their area. She says, "find a niche in the market, and take advantage of it." Her experiences prove that a wide number of opportunities are available for those who are willing to pursue them.

Adaptive Equipment:

Judy uses few adaptive aids for her farming activities. The farm tractor and lawn mower are both equipped with hydrostatic drives, eliminating the need for a foot clutch. Her car and pickup truck have been modified with hand brakes.



Certified Organic Farm

Wayne Hoeltke

Columbus, Indiana

Wayne Hoeltke, of Columbus Indiana, converted his grain farm to organic fruit and vegetable production in the mid-1970's after a heart attack and subsequent open heart surgery. He believes pesticide exposure was a contributing factor to his health problems. Wayne does the garden work, while his wife, Mary Jane, works in the home and enjoys yarn crafts and sewing.

Description of Enterprise

The Hoeltkes own about 110 acres. Wayne uses five to six acres for his gardens and orchard. The remaining acreage is currently rented for grain production, but will eventually be converted to organic production.

According to Wayne's definition of organic gardening, the grower uses no pesticides, herbicides, or chemical fertilizers while relying on organic matter and natural minerals to feed the plants. He says, "Organic growers work with nature and strive for a balance of nature." Wayne uses a variety of methods to achieve his goal of organic production. He plants a wide variety of crops and garden vegetables, including potatoes, tomatoes, sweet corn, popcorn, lettuce, turnips and many others. He is also heavily involved in planting fruit and nut trees. He grows apple trees and several varieties of pecans, peaches and walnuts. Wayne also has a grape arbor.

Wayne's pest management program is designed to take advantage of naturally occurring controls. He tries to maintain a balance between

the beneficial insects and pests insects. The wide variety of crops, and the use of "decoy" crops both help to maintain a balance and keep the insect damage level low. Wayne also utilizes homemade insect traps that attract fruit damaging insects with sugar, vinegar and banana peels. Wayne also releases tiny predatory wasps which help control pest populations, and he encourages healthy populations of "beneficials" such as ladybugs, lacewings and bees.

Soil quality is maintained by natural or organic methods. Crops are rotated regularly, and



Wayne Hoeltke, a certified organic farmer, utilizes "decoy" crops, insect traps, predatory insects and other "natural" methods of controlling pests in his crops.

left fallow with a legume cover crop to increase nutrient levels. Manure, as well as composted material including grass clippings, vegetable wastes, sawdust and straw, is spread on the gardens. He also uses minerals such as limestone, rock phosphate and wood ashes.

Wayne has built a lean-to greenhouse on the south side of a large barn. The greenhouse is used during early spring for propagating the various crops produced on the farm. He also has a



Wayne's fruit and nut tree orchards include apple trees and several varieties of pecans, peaches and walnuts. He utilizes horticultural splicing and pruning techniques (above) to increase the productivity of his trees.

wood frame and chicken wire shelter which is used for starting crops and bedding plants. This structure is used to protect tender young crops from bird and animal damage.

Wayne is a member of the Organic Crop Improvement Association (OCIA). This association certifies organic producers and inspects the farm periodically to ensure organic practices are followed. Wayne is required to maintain records of his production and submit a yearly plan to the OCIA.

Most of the Hoeltkes' produce is sold retail at the Bloomington, Indiana, farmers market. The certified organic produce receives a premium price. Wayne has sold wholesale to area groceries as well.

Adaptive Equipment:

Wayne uses no adaptive equipment for his operation. He has a Ford 1720 tractor for tillage purposes. His wife, Mary Jane, has paralysis in her right leg due to polio. She utilizes a wheelchair and crutches for mobility.



Wayne built a lean-to greenhouse on the south side of a large barn to use in early spring for propagating the various crops produced on his farm. He uses a wood frame and chicken wire shelter for starting crops and bedding plants. This structure helps to protect the tender young crops from bird and animal damage.

Specialty Farm Market, Crafts Shop

Ron & Helen Thomas

Tangier, Indiana

Ron Thomas and his wife, Helen, own and operate a small farm near the town of Tangier, in west-central Indiana. In 1991, Ron was in a car accident, and sustained a lower-level spinal cord injury that resulted in paraplegia. The Thomas farm produces specialty crops and vegetables, and Helen operates a crafts shop.

The Thomases have been operating their small farm for several years. Before his injury, Ron was employed at a nearby factory, and worked the farm as a sideline. Since Ron's injury, Helen has taken an active role in the farming operation, including field work and other production aspects.



Ron and Helen Thomas' farm market and crafts shop in Parke County, Indiana, hosts a portion of the popular Covered Bridge Festival, an event attracting thousands of visitors from around the nation each year.



Ron, a talented wood craftsman, plans to offer his wares to farm visitors once his chair-accessible shop is completed.

Description of Enterprise:

The Thomas' farm consists of 13 acres in an area with sandy soils widely known for producing excellent pumpkins, gourds and high quality vine-ripened melons. The Thomases have reduced the acreage of several of their crops since Ron's injury, particularly the melons and pumpkins. These crops, however, still represent a major portion of their business. Ron and Helen also grow gourds in a variety of sizes, shapes and colors. Sweet corn is another important crop produced on the farm.

The Thomases market their produce directly

from the farm. An attractive display of pumpkins, gourds and other crops located in the front yard of the Thomas' home captures the attention of passing motorists. An old farm wagon covered with farm products is the centerpiece of the display.

Helen's craft shop is located in a shed adjacent to the house, advertised by a sign near the road which reads, "Sandlady's Arts and Crafts." The craft shop is a rustic shed painted barn red. Electric lights provide the only amenity, as the Thomases like to maintain an authentic atmosphere. Some of the most popular items in the craft shop are dried painted gourds resembling Santa Claus and other popular figures.

Before his injury, Ron was involved in woodworking, and produced crafts items, cabinets and furniture. The Thomases are now in the process of building a wheelchair-accessible wood shop for Ron. The wood shop will follow the rustic theme of the craft shop and farm market, and will provide additional products to sell to farm visitors.

A large portion of the Thomases' success



Helen had to learn how to drive the tractor in order to plant the crops the season following Ron's injury.



Helen's crafts shop, located in a rustic shed near their house, features a variety of hand-crafted items including dried, painted gourds grown on the Thomas' farm.

with these ventures is dependant on their location in the popular tourist area of Parke County, Indiana. The county is the home of the Covered Bridge Festival, a nationally known event which draws nearly 100,000 visitors to this small rural community every October. Ron and Helen have participated in flea markets held in conjunction with the week-long festival for several years, and are now hosting a stop on the bus tour that takes visitors to interesting historical sites and, of course, several covered bridges around the county. Tourists spend about 30 minutes at the Thomas' home, shopping for farm products and crafts, or simply enjoying the rural atmosphere. In the future, guests will be able to tour Ron's wood shop as well.

Adaptive Equipment:

Since 1992 was the first growing season since Ron's injury, Helen handled the field work. The Thomases have not yet made adaptations to farm equipment to allow Ron to operate the tractor. They are adding ramps around the house, and are building Ron's wood shop to be wheelchair accessible.

Food Products

Maple Syrup Food Products

Dennis & Linda Dodd

East Fairfield, Vermont

Dennis Dodd and his wife, Linda, own and operate a dairy farm, produce maple syrup, and manufacture food products utilizing maple sugar. Dennis has farmer's lung, which is caused by allergic reactions to hay dusts, and uses an Air-stream dust helmet when working on the farm.

Description of Enterprise

The Dodds milk 85 cows on their 400 acre farm. After Dennis contracted farmer's lung, they began to search for an enterprise which might eventually replace the dairy operation. Dennis is a third generation maple syrup producer, so naturally the maple syrup enterprise was a primary candidate for expansion. The Dodds attempted to sell maple syrup for two years, but due to the plentiful supply in Vermont, sales were not sufficient to produce a profit.



Dodd Enterprises markets a variety of products under the "Vermont Fare" brand label, including corn bread, muffin and pancake mixes, maple syrup and candy.



In 1993 the Dodds introduced candy made from pure maple syrup. The candy is molded to resemble country characters. The box is a replica of the farm's sugarhouse.

Dennis and Linda decided to explore the possibility of producing value-added products utilizing their own maple syrup. The Dodds' first products were three types of maple glazes for meat. Later, as an experiment, Linda developed a corn bread recipe which used maple sugar refined from the maple syrup. The bread was a success, and served as the inspiration for a variety of designer mix products.

Today, Dodd Enterprises produces mixes for the corn bread, pancake and muffin mix products — all marketed under the "Vermont Fare" brand label. The all-natural pancake and muffin mixes are now the company's most popular products. In 1993, the Dodds are adding maple sugar candy to their product line.



The Dodds employ several part-time workers to hand-mix pancake and muffin mixes. The workers also fill, seal and label each bake mix package and syrup bottle by hand.

Dennis and Linda harvest maple syrup by the "old fashioned" method — utilizing metal buckets and a horse and wagon to collect the sap. The season for sap collecting runs between mid March and mid April, depending upon the weather. One maple tree can accommodate up to four taps. The Dodds have 4,000 maple taps producing enough sap for 1,200 to 1,500 gallons of syrup each year. Approximately 40 gallons of sap is required for one gallon of syrup.

When the Dodds began their maple product enterprise, they mixed and packaged their products in their home. They have since constructed a new building on their farm for that purpose. The Dodds market their products through brokers and sell wholesale to such outlets as Thrift Drugs and Bloomingdales. They have recently been exploring the possibility of exporting to markets in Canada and Japan.

The Dodds' business enterprise is a joint venture between Dennis and his wife. Though Dennis manages the farm and Linda runs the day-to-day operations of the food business, each works on both the dairy operation and in the maple products enterprise.

Dennis and Linda advise any individuals interested in marketing a food product to strive for professionalism and quality when designing packaging and marketing the product. They suggest using high quality stationary with appropri-

ate letterhead when corresponding with potential customers. They also suggest retaining the services of a graphic artist to design a product label and logo. Finally, Dennis and Linda both emphasized that it takes a period of years to build a successful business.

The Dodds received assistance in their venture from several sources. The Vermont Department of Agriculture provided technical and fi-

nancial assistance in their product development. The Eastern U.S. Federal Export Council, one of three regional offices, provided support for the printing and design of their labels and logo.

***Note:** Several organizations, such as the Small Business Administration, can provide loans and technical advice for potential ventures.*



The proof is in the pudding, or in this case, the syrup. The Dodd children personally inspect Mom and Dad's pancakes and maple syrup — and offer a hearty endorsement.

Adaptive Equipment:

Dennis uses an Airstream dust helmet when working in dusty environments. The helmet pulls outside air through a filter and removes contaminants.



Mobile Concession Stand

Dwayne Cole

Lafayette, Indiana

Dwayne Cole of Lafayette, Indiana, farms 220 acres of corn and soybeans and operates a traveling concession stand with his sisters, Jean and Erlene. Several years ago, Dwayne's right arm was amputated near the shoulder.

Description of Enterprise:

For the past five years, the Coles have operated a concession stand trailer during the summer months to supplement their established farming operation. Originally, they became interested in the business after volunteering to run the food

stand during sporting events at a nearby school. They later purchased a used trailer, and with some remodeling, began their own concession business.

The Coles' concession trailer is pulled by an extended cab pickup which provides plenty of room to haul the equipment necessary for running the stand. The trailer itself is equipped with a refrigerator, deep freeze, cooking facilities, and a soft-drink machine, which allows the Coles to serve a varied menu including hot dogs, coneys, sloppy joes, ham & cheese sandwiches and frozen treats. Dwayne stated that supplying a quality product is of utmost importance in the food concessions business.

Though each of the partners is capable of running the concession stand alone, they usually assume specific duties to improve efficiency. Dwayne handles most of the cooking, and serves as unofficial public relations and marketing manager for the group. He insists that to be successful in the business good "people skills" are important. In fact, he said interaction with people was one of the most enjoyable aspects of running the concession stand.

The season for "Cole's Lunch Wagon" runs from April to November of each year, following the cycle of agricultural-related events such as horse shows, livestock sales and county fairs. The "Lunch Wagon" can also be found at various auctions and other events in the Lafayette area. The Coles said they enjoy working agricultural events more than festivals or carnivals.

It is important to note that food concession businesses must meet health and safety regulations, and possess the necessary permits and sufficient liability insurance before beginning operation.



The Coles attribute their success to serving a varied menu and providing quality food products.



Cole's Lunch Wagon, trailing behind the Coles' spacious extended cab pickup, makes the rounds to area livestock sales, horse shows and county fairs during an eight-month season each year.



Simply raising the drain plate on the soft drink dispenser allows Dwayne to serve drinks more easily.

Adaptive Equipment:

Dwayne uses very little adaptive equipment for either his farming operation or his concession stand business.

A 3-wheel ATV modified with a left side thumb throttle and a break pedal provides mobility for chores and errands on the farm. The Coles also use an old golf cart for various chores around the farm.

In the food trailer, the drain plate on the soft-drink machine was raised to allow Dwayne to place a cup under the tap and pour drinks using one hand.



Agri-Sales and Services

Farm Drainage & Backhoe Service

Carl Shankster

Silver Lake, Indiana

Carl Shankster of Silver Lake, Indiana, runs a ditching and backhoe service and works as a teacher throughout the school year. Carl sustained an L-1 spinal cord injury in a car accident in 1988. He is married and has eight children.

Description of Enterprise:

Carl Shankster specializes in farm drainage services, and contracts work for farmers in his northeastern Indiana community. A major portion of Carl's work involves tiling farm fields. Many of the fields in his area, where the terrain is relatively flat, would be impossible to till without the addition of tile lines to drain excess water. Carl uses a ditching machine to dig trenches for laying plastic tile. Carl is often employed to repair existing drainage systems in addition to installing new tile. He is also an experienced backhoe operator, and uses this skill in a variety of drainage-related applications.



Carl is able to operate his ditching machine and backhoe with few modifications, as both utilize hand controls.



Carl Shankster specializes in providing custom farm drainage and backhoe services in the northeastern Indiana community of Silver Lake.

Carl operates his ditching machine and backhoe himself with few modifications. His children often assist with the repair and maintenance of equipment, and also help at job sites, under Carl's close supervision.

Adaptive Equipment:

Carl utilizes few modifications on his ditcher or backhoe. Each is operated primarily by stan-



Carl is able to access both his ditcher and backhoe by pulling alongside on his 4-wheeler, sliding across the bed, and pulling himself into the seat. The foot shifter on Carl's Yamaha 4-wheeler was replaced with a hand-control shifter.

dard hand controls. Carl retains enough movement in his right leg to lift it onto to the brake

pedal. He then depresses the pedal by pushing down on his knee with his right hand. The foot throttle is operated in a similar fashion.

While working in the field, Carl uses a Yamaha 4-wheeler with a bed for mobility. The foot shifter was replaced with a simple hand-operated shift lever. Carl accesses his ditcher or backhoe by pulling the 4-wheeler alongside the equipment, sliding across the bed, and pull himself into the seat.

Carl drives a pick-up truck equipped with hand-control brakes, and utilizes a Quickie GP chair for general mobility.



Carl's ditching and tiling services are in constant demand because much of the relatively flat farm land in his area would be impossible to till without proper drainage. Carl repairs existing drainage systems in addition to installing new drain tile. His children often assist with the repair and maintenance of equipment, and under Carl's close supervision, sometimes help at job sites, as well.

Farm Management & Consulting

Don Baker

Campbellsburg, Indiana

Don Baker manages an 80-head, 525 acre cattle operation and row crop farm with his family near Campbellsburg in Washington County, Indiana. Don experienced a C-5 spinal cord injury in an automobile accident in 1981, which resulted in quadriplegia. He currently lives in a two-room apartment adjacent to his parent's home. Don is active in the Washington County Cattlemen's Association, the citizen's advisory council for the local FFA chapter, and other agricultural activities and organizations.

Description of Enterprise:

In addition to managing his family's farming and cattle operation, Don runs a business man-



Don updates cow records and other data on his powerful, but portable 386 "notebook" lap-top computer.



Don scaled back his row-cropping farm and shifted resources to the less labor intensive cattle operation.

agement and consulting enterprise from an office located in his apartment.

Don did not wish to retrain for a new career and relocate to another area following his injury. He instead shifted resources from the row cropping to the beef cattle enterprise, improved the livestock handling facilities and re-focused his efforts on management. He also began providing informal consulting services to neighbors and friends. Don later attended college, earning a degree in business management with a minor in economics in six years while living at home and managing his family's farm.

One of Don's first clients was a small recycling operation in Salem, Indiana. Don provided financial planning, market research and analysis and budgeting services for the firm. Utilizing his agricultural experience, he expanded the company's enterprises to include shredding newspaper for sale as livestock bedding.

Don operates his business out of the 12 by 24-foot office that comprises half of his two-room apartment. With the help of the state vocational rehabilitation program, Don purchased a computer system to expand his services and im-



An efficient office is important in providing quality service in a professional atmosphere. Don's single-level, L-shaped desk, custom built to provide extra knee clearance, provides a comfortable and efficient work space.

prove his work efficiency. His system includes a 486 IBM-compatible PC with 200 megabyte hard-drive, a 386 "notebook" lap-top computer for entering data in the field, and a laser-printer. The system runs software for budgeting, cost projections, feasibility analysis and other management functions. Don utilizes a track-ball rather than a standard mouse for data entry in addition to a keyboard. Don's office also includes a fax machine and a two-line telephone.

Don suggests that people wanting to begin a management and consulting business must "do their homework." He said it is important to weigh all the advantages and disadvantages of various funding sources. Don says a proper education is important in establishing professional credentials, but that a reputation for honesty, character and "good business sense" are equally valuable.

Adaptive Equipment:

Don's office is fully accessible, with wide doors, low thresholds, lever handles and other basic accommodations. The front door is modi-

fied with a simple rope and pulley system to allow Don to shut the door easily behind him. The concrete path to his driveway is covered by an awning to keep him out of the weather when he moves between the house and his van.

Don utilizes a variety of adaptive devices and home-engineered accommodations in his apartment and office. Don has a single-level, L-shaped desk that helps optimize his work space. The desk was custom-built to accommodate the added knee clearance required for his motorized chair. He uses a hand clip for typing and for operating his two-line, touch-tone telephone. Don modified his computer monitor by gluing a pencil eraser to the hard-to-reach switch. The radio, television and air-conditioner have been modified with custom handles and switches to accommodate his limited hand and wrist mobility. For added convenience, lamps and other electrical devices are controlled from wall switches, and all outlets were installed 20 inches from the floor to be within easy reach.



Feed Supply Store

Mike Haggerty

Spalding, Nebraska

Mike Haggerty of Spalding, Nebraska, owns and manages a grain and livestock farm, operates a feed supply store, and works as a real estate salesman. Mike sustained a T-7/8 spinal cord injury in 1983 that resulted in paraplegia.

Description of Enterprise:

Mike and his family own 680 acres of farm and pasture land. They raise corn, feed 200 head



Mike designed and built an elevator lift for his home which allows him access to the family living area in the basement. He estimates the cost of his lift to be about \$500, considerably less than commercial models.



All the feed sold in Mike's feed mill is pre-mixed and bagged, eliminating the need to handle bulk feed. Mike works with farmers and feed nutritionists to develop appropriate feed rations for his customers' livestock.

of cattle per year, and own a herd of 125 beef cows. Mike and his wife have five daughters; the oldest daughter and her husband provide most of the farm labor. Mike began focusing on farm management following his spinal cord injury when many farm tasks became too difficult for him to physically manage.

After Mike's injury, the Haggerty family did not want to relocate, but wished to expand their income base. In 1986, Mike took on the job of managing a Supersweet feed store a short distance from his home. Mike said the feed store responsibilities provided a productive way to "keep busy from 8:00 to 6:00." He is in charge of buying and selling of the store's products, and all marketing decisions.

The Supersweet feed store serves approximately 75 customers. Most of these clients are beef cattle or hog farmers. Beef and swine are two of the major agricultural enterprises in central Nebraska. Mike works directly with the

farmers and company nutritionists in developing appropriate feed rations for his customers' livestock.

The store handles only pre-mixed bagged feeds. There is no bulk storage at Mike's store, eliminating the need for on-site feed mixing. Mike's customers pick up their feed orders at the store.



Mike's Supersweet feed store serves more than 75 farmers and ranchers in the Spalding, Nebraska, area.

In addition to his farm and store responsibilities, Mike is also a real estate salesman for a local real estate broker. Mike received his real estate license after his injury with financial assistance from state vocational rehabilitation services. Mike handles both agricultural and residential sales, though he prefers the agricultural aspect. He stated that the real estate business fluctuates, and in recent years the business has been slow.

Mike said that when physical labor became too difficult, he found it more beneficial to shift his focus from physical labor to managing the farm and alternative business venture — a comment often repeated by individuals with more severe physical impairments. He also stressed the importance of family and community support for individuals with disabilities.

Adaptive Equipment:

Mike uses no adaptive equipment in his feed store operation or real estate sales. In his home, Mike has installed a home-made elevator, which cost approximately \$500 — a considerable savings over comparable commercial models.



Grain Marketing, Commodity Brokerage

Dan DeBoer

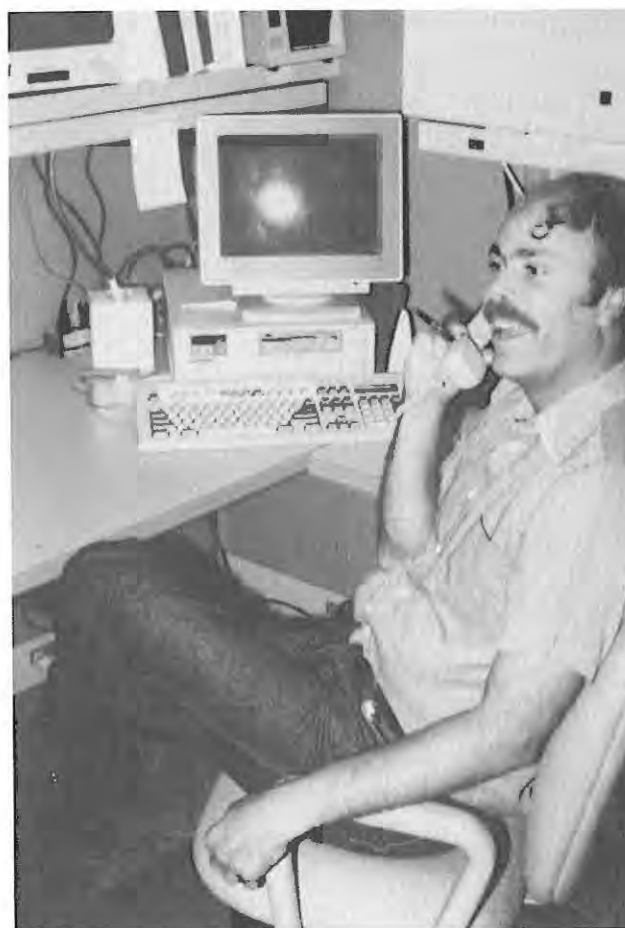
Chicago Heights, Illinois

Dan DeBoer operates D.B. Marketing, Inc. and manages D.B. Farms, located in northeastern Illinois. Dan was involved in a farm accident which caused a subsequent infection, resulting in the amputation of both legs below the knees, and most of his fingers. Since his illness, Dan has shifted the focus of his time toward his marketing business.

D.B. Farms is located near Kankakee in Illinois, about 30 miles from Dan's office in Chicago Heights. The Kankakee farms include primarily center-pivot irrigated seed corn, white corn, and soybean enterprises.



Dan has built D.B. Marketing into a successful home-based agribusiness enterprise.



Dan's marketing business office is located in his basement, and is equipped with computer, satellite data terminal, FAX machine and special radio line.

Description of Enterprise:

Dan started his marketing business in January 1990. The main emphasis of his business is working directly with farmers, recommending marketing decisions. At this time, he has 15 clients in his Illinois office, and another 27 clients in a branch office in Nebraska.

Dan's office is located in the basement of his

home where his wife helps with the secretarial work. The office is equipped with a data terminal which constantly receives and updates commodity prices via satellite. These prices are downloaded into a computer, and graphs are generated to show market trends. In addition, Dan utilizes a radio line which allows him to access the Chicago Board of Trade prices within six seconds after they are posted. A FAX machine allows customers and the branch office to contact him when they want to make a trade. Dan uses the Iowa Grain Company as a clearing firm to clear his trades on the exchanges.

Prior to beginning the business, Dan attended marketing school to supplement his college mathematics and computer degrees.

Dan listed several factors necessary for success in the marketing business. These included:

- Honesty,
- Ability to find good information,
- Communication skills,
- Passing necessary exams to allow trading on the futures market,
- Knowledge of the mechanics of marketing,
- Knowledge of the rules and regulations of the business.



Dan uses a computer to generate graphs of commodity prices and analyze market trends.



Dan equipped his tractor with extra steps to provide easier access to the tractor cab and seat.

Adaptive Equipment:

Dan uses no adaptive equipment in his marketing enterprise. He has equipped his tractors on the farm with an extra step to allow access to the seat. He utilizes prosthesis for general mobility.



Landscaping & Excavating Service

Mike Houin

Argos, Indiana

Mike Houin operates a landscaping business in the northern Indiana community of Argos. Mike has a lower leg amputation and uses a prosthetic device. He has been involved in the landscaping business for seven years.

Description of Enterprise:

Mike Houin Lawn and Landscaping started in 1985 when a local contractor interested in beginning a landscaping business approached Mike to lease some equipment. Mike had been working for several years at a local John Deere dealership as an equipment salesman when the con-



Mike employs three full-time and three part-time workers. During his slack season, he is able to subcontract his labor out for construction and related jobs.

tractor suggested that Mike go into the business. After examining his options, Mike decided to pursue the landscaping venture.

The landscaping service now employs three full-time and three part-time workers in a variety of commercial and residential jobs. The majority of the work is done in the communities which lie within a 20-mile radius of Argos.

A key feature of Mike's landscaping business is diversity. The "lawn" portion of the business includes seeding and sodding, installation of wooden planter boxes and retaining walls and landscaping design. Construction of stone driveways is another common job.

Diversifying services helps Mike to protect his business against the seasonal "slumps" common in residential landscaping. Mike supplements the landscaping enterprise with a backhoe and excavating service, which includes the installation of septic systems. Mike also subcontracts his crew to his uncle, a contractor, who builds pole barns.

Landscaping work requires the use of a variety of machinery and equipment. Mike has two utility tractors, a box scraper for leveling ground, a seeder, straw chopper and a landscape rake. He also has tillage equipment, including a disc and harrow, for working ground to be landscaped.

A ton truck and trailer are used to haul equipment to job sites. An older model grain truck with a hoist performs dump truck duties of hauling stone and other materials. Mike must consistently put money back into maintenance and new equipment to remain competitive.

Mike constantly works to increase his knowledge of the business in order to improve his services. Originally, he had little knowledge of landscaping design. Through experience, and working with professional designers, he has developed a knowledge of design work, and an



Mike (right) started landscaping in 1985, and has since expanded his services to provide excavating work and septic system installation.

understanding of which plants are appropriate in a particular situation. Each year, Mike attends garden and landscaping shows to gain ideas for his business. At the present time, he uses little advertising for his business. Most client contacts

result from word-of-mouth and referrals from building contractors.

Mike's advice for individuals who might be interested in the landscaping business is to find something that can provide year-round income. The landscaping business season in northern Indiana lasts approximately eight months. Winter months provide time to develop contracts and make bids for future jobs, but cold weather effectively stops most outdoor work.

Adaptive Equipment:

Mike is able to conduct his landscaping business using no adaptive aids or assistive technology to accommodate his leg amputation. Though he is very mobile and in good condition, he usually operates the equipment and delegates the more physical tasks to other employees.



The diversity of Mike's business requires a wide variety of equipment. Mike owns two utility tractors, a seeder, a straw chopper, a landscape rake, a box scraper for ground leveling, and a disc and harrow for pre-working ground.

Seed Corn Dealership

Dan Gwin

Linden, Indiana

Dan Gwin and his father own and operate a 2,000-acre corn and soybean farm. Dan maintains the farm business records, and handles sales, purchases and labor management. Dan also operates his own seed dealership as an alternative income source. Dan sustained a T-10 spinal cord injury when he fell off of a semi truck in 1988.

Description of Enterprise:

Dan graduated from Purdue University in 1980 with a degree in Agricultural Economics and Farm Management. He operated semi-trucks before his injury.

Dan began selling seed as a farmer dealer for Pioneer Seed Corn in 1983, five years before his injury. Since that time, his dealership has grown to include about 25 regular customers. Though Dan's farm has also expanded over the last several years, the seed sales venture continues to provide a steady and substantial supplemental income.



Dan manages his seed corn dealership and 2,000-acre farm out of a small, but efficient office in his home.



Communication is an important business tool in Dan's seed corn dealership. A cellular telephone, two-way radios, and telephones placed throughout his house allow Dan to keep in touch with his customers — even in the field.

Dan's seed corn dealership compliments his life-style and farm work schedule. He takes orders during January and February during the farm's off-season, and delivers in the early spring before field work gets too heavy. In addition, he works strictly on commission, which protects him from major losses. Very little initial investment is required. Customers pay the company, and the company, in turn, pays Dan.

Sales are made by farm visits and telephone. Though wheelchair accessibility on farms often presents an obstacle, most farmers in the area know Dan and are very accommodating. Dan says he can usually manage most situations, and that visits in general are not a problem.

Dan employs several people who load, sort and deliver seed corn to his customers, and he accompanies them on most deliveries.

Dan emphasizes service and tries to make himself available to his customers at all times. He keeps a telephone in every room in his house,



Dan utilizes "long-leg" braces to make transfers from his wheelchair to his ATV, truck or car.

and uses a cellular telephone and two-way radios in his vehicles that allow him to stay in touch — even while working in the field.

Adaptive Equipment:

Dan has a concrete ramp and path that allows him to move more easily from his house to his shop/garage area. The shop has a concrete floor for easier wheelchair maneuverability. He has also installed an automatic garage door opener for his shop. Dan utilizes a two-way FM radio for communication and safety.

Dan's tractor and combine were modified with lifts and hand controls. He drives a car and a pickup truck, both modified with hand controls and equipped with a communication device. Dan is able to load his wheelchair in both of these vehicles without assistance. He currently utilizes "long-leg" braces which he believes improves his maneuverability and increases possibilities for accessibility.

Dan drives a modified four-wheel ATV equipped with power take-off and hydraulic hook-ups. A Freedom-I powered wheelchair provides maneuverable mobility for repair work and short-distance travel around the farm.



Dan Gwin farms 2,000 acres of corn and soybeans with his father near Linden in Montgomery County, Indiana. His Pioneer Seed Corn dealership complements his farming activities and provides a steady supplemental income.

Soil Fertility Consulting

Chris Finch

Glenwood, Iowa

Chris Finch of Glenwood, Iowa owns and manages an independent soil analysis and consulting firm. Chris experienced an accidental above-the-knee amputation, and his leg was surgically reattached.

Description of Enterprise:

Chris, a helicopter pilot, first developed the idea for his soil consulting enterprise after observing the obvious differences between healthy and poorly nourished crops from the air. Variations in soil and fertility can be detected in growing plants. Using his farm background, and an agricultural business degree from Iowa State, Chris developed his firm, Soil Systems.

Soil Systems provides a comprehensive soil



Chris utilizes a computer system and digital scanner to create maps describing nutrient levels and soil characteristics of each collection site.

analysis service directly to farmers, real estate firms, fertilizer companies and other interested parties. Chris uses a variety of modern computer technology to produce a high quality, useful fertility analysis for his clients. A unique facet of the business is that the company only provides consulting services, and offers no commercial products such as fertilizers or other inputs. Chris believes this non-commercial aspect has contributed to the success of the enterprise.

Although soil sampling is a vital facet of the services provided by Soil Systems, it is only a portion of the total pack-



Chris' consulting firm, Soil Systems, utilizes a Kawasaki Mule 4-wheel utility vehicle specially modified to carry a hydraulic core sampler (bottom, facing page) and soil data recording equipment (top, facing page).



Chris' mobile soil data collection system.

age offered. The first phase of the program involves developing a grid of the area or farm to be sampled. This task is accomplished using aerial photographs and producer input concerning terrain and farming practices.

Once the grid is developed, Chris or his employees collect a sample from each grid section comprised of at least 12 cores. Soil Systems utilizes a Kawasaki Mule utility vehicle modified to carry soil sampling equipment. A hydraulic core sampler and data recording equipment make the Mule a highly efficient and versatile machine. During collection, soil samples are bagged and labeled according to their location on the grid. The samples are then shipped to a laboratory for soil testing.

Soil Systems utilizes a computer link with a laboratory in Lincoln, Nebraska, to allow access to soil test results. Once completed, Chris develops a Soil Analysis Report containing information concerning the fertility of the soils and the production potential for the field or farm. The report provides such information as field and laboratory information, aerial photographs of the sampled area, corn suitability ratings, nutrient level summaries, fertilizer and nitrogen recommendations and area soil maps.

The colored maps are the most unique and useful portion of the report. The maps report sample collection sites and describe the nutrient

levels and soil characteristics of each site. Each map also includes a Sample Site Specific Fertilizer Recommendation. This recommendation provides a very cost efficient method of managing fertilizer application. The maps help managers apply fertilizer only where needed, thus reducing costs. In addition, this practice can help farmers comply with environmental regulations.

At this time, there are no certification requirements for independent soil consultants. However, Chris feels such certification and continuing education will eventually be mandatory. He recommended that a college degree in agronomy or soil sciences would be appropriate for an individual interested in pursuing such a venture.



Core sampler mounted on Chris' 4-wheel Kawasaki Mule.

Adaptive Equipment:

Chris uses no adaptive equipment specifically for this venture. As mentioned, he uses a specially equipped 4-wheel Kawasaki Mule for collecting soil samples, making collection more efficient.

Small Engine Repair Service

Dale Dippold

De Sota, Iowa

Dale Dippold retired from farming after an automobile accident in 1978 which caused a spinal cord injury resulting in paraplegia. Dale currently works full time as a directory assistance operator and supplements his income with a part time small engine repair enterprise.

Description of Enterprise

Dale developed his interest in small engines as a hobby during his teenage years. During that time, he spent a great deal of time working on several types of engines.

After his injury in 1978, Dale used his mechanical experience by taking on engine repair jobs for neighbors and friends as a means of obtaining supplemental income while looking for full-time employment. As the fledgling enterprise expanded, the demand for Dale's services



Dale Dippold's small engine repair enterprise supplies a steady supplemental income, and provided a transitional income while he was looking for full-time job employment.

grew dramatically. Within a short period, Dale was working approximately 70 hours per week. The heavy demand on his time required Dale to become selective and reduce the number of repair jobs he accepted.

After becoming employed in his full time position with the telephone company, Dale reduced his time allocation in his engine repair enterprise to 20 hours per week. Currently, most of his clients are neighbors and friends.

Dale recommends that persons considering a repair enterprise or similar service-oriented venture be careful not to undervalue their time. He says though competitive pricing is important, adequate compensation for your time and work is equally important.

Adaptive Equipment:

Dale installed an adjustable workbench to allow easy access with his wheelchair. He utilizes the assistance of friends and neighbors in lifting and hauling the engines he repairs.



Dale recommends that those considering service-oriented ventures be sure to charge enough to be compensated fairly for their time.

Home-Based Manufacturing

Bee Production Equipment

Ron Anderson

Shellbrook, Saskatchewan, Canada

Ron Anderson of Shellbrook, Saskatchewan, has been involved with a number of specialty agricultural enterprises. Ron was injured in a construction accident as a young man, and has experienced severe chronic back pain ever since. He was involved with outdoor work for many years, including heavy equipment operation and mineral exploration. Today, Ron is involved in the highly specialized business of manufacturing equipment for the production of alfalfa leaf-cutter bees.

Description of Enterprise

Ron and his wife, Ann, have been involved in several specialty farming ventures, including raising Romanov sheep, growing alfalfa for seed, and producing honeybees and alfalfa leaf-cutter bees. Due to the limitations imposed by Ron's back, and the physically demanding nature of bee



Ron Anderson is one of relatively few manufacturers making equipment for alfalfa leaf-cutter bee production.

production, the Andersons have phased out of the actual production of alfalfa seed and bees, but maintain a sheep flock. They now focus on the manufacture of equipment necessary for growing alfalfa leaf-cutter bees.

Alfalfa leaf-cutter bees are vital to the commercial production of alfalfa for seed. Due to the physical configuration of an alfalfa bloom, more common insects such as the honeybee are very inefficient at pollinating the plant — a process vital for seed production. The leaf-cutter bee, which is smaller than a housefly, is able to cross-pollinate the blooms as it gathers nectar. Alfalfa seed producers who use the leaf-cutter bees in their operations are able to produce many times the amount of seed per acre than those growers who rely on more common pollinating insects.

Alfalfa leaf-cutting bees are native to Cyprus, and are a hot-climate insect. The bees work at temperatures above 72 degrees. Cold climate growers, therefore, must provide an artificial en-



Bee boards provide the artificial environment necessary for alfalfa leaf-cutter bees to reproduce in cold climates. The bees play a valuable role in cross-pollinating alfalfa.

vironment for the bees to lay their eggs and reproduce.

The primary piece of equipment used in this process is a special board drilled with hundreds of holes in which the bees lay their eggs. (The bees place a tiny piece of alfalfa leaf in each hole on which they lay an egg. They include nectar for the larvae's nourishment and cap the hole with a second piece of alfalfa leaf.) Alfalfa seed producers place these boards on trays, usually in a small building with a fiberglass roof which allows sunlight for warmth. As each board fills with eggs, it is replaced with an empty one. The filled boards are saved until the following year, when they are allowed to incubate, and the new bees are hatched.

The Andersons are now producing these "bee boards." Ron owns a special drill for making the holes in the boards. He sells the boards to alfalfa seed producers in Canada and the western United



Ron uses a special press to drill his "bee boards." Bees lay eggs in each hole then include nectar for the larvae's nourishment and cap the hole with a piece of alfalfa leaf.

States. Ron is one of relatively few manufacturers making this equipment, and takes numerous orders from throughout the United States and Canada.

It is a key requirement that bee boards be disease free. Boards must be properly made, and have the correct moisture content to discourage the growth of a fungus known as "chalk-brood," which can cause heavy death losses in leaf-cutter bee populations. The fungus, common in the United States' alfalfa producing areas, creates a fairly constant demand for "clean" bee-production equipment.

The Andersons devote approximately 10 months per year to producing the bee boards, and the remaining two months to the short alfalfa growing season.

Ron's plans for the near future include starting his own sawmill to process the aspen, pine and spruce lumber used in making the bee boards. The family owns a woodlot which can provide a steady supply of quality raw material. Ron said starting the sawmill would require hiring an additional worker, but he feels the plan is feasible considering the automated nature of modern logging operations. The family's goal is to eventually allow both Ron and his wife to work full-time in the manufacturing business.

Adaptive Equipment:

Ron has adapted many of his farming and manufacturing tasks to accommodate his back condition. He has taken steps to eliminate heavy lifting, which aggravates his back. On the farm, Ron uses large round bales for hay, which can be moved by tractor, and cleans his sheep barn with a tractor.

Ron stresses the importance of trying new ideas or specialized ventures which are better suited to a person's physical ability. His successful bee equipment business began because his physical limitations prevented him from working in the more conventional honey and leaf-cutter bee production enterprise.

Cabinet Making & Woodworking

Kurt Wiley

Schoolcraft, Michigan

Kurt Wiley owns and operates a cabinet and woodworking shop on his family's farm near Schoolcraft, Michigan. Kurt sustained a low-level spinal cord injury in a farm accident when he was a teenager, which resulted in paraplegia. He uses a wheelchair for mobility.

Description of Enterprise

Kurt Wiley first became interested in woodworking as a youngster in 4-H club work. He became active in the 4-H woodworking project before his injury, and continued to enjoy the hobby as he grew older. After graduating from high school, Kurt attended college for two years while continuing to pursue his woodworking interests. Gradually, his hobby turned into a full-time job, and Kurt's Wood Shop was founded.

Today, Kurt's Wood Shop specializes in custom cabinet making and millwork. The shop is located on the farm where his parents live and raise a flock of several hundred sheep. Two separate buildings house tools and equipment for the business. The first shop was built soon after Kurt began his business. The second work area was added more recently. Both buildings are heated for year-round use. Equipment in the shops includes table saws, drill presses, routers, milling machines and other specialized woodworking machines.

Cabinets are pre-assembled at the shop as much as possible before delivery, and each cabinet is made to meet the client's specific needs. Most of the cabinets produced in Kurt's shop are constructed with a high quality lami-



The decorative wood trim, cabinets and hardwood floors in Kurt's home exemplify his quality workmanship.

nate material. The custom mill work involves designing and constructing solid wood door frames, window frames and decorative trim.



Kurt's wood working enterprise began as a 4-H project, and gradually grew from a hobby to a successful business over several years.

The wood scraps and sawdust created by the cabinet making and custom millwork provide the raw material for additional wood products. Kurt utilizes various types of wood scraps to make multicolored cutting boards and other items to sell through craft shops. The sawdust and scrap unsuitable for other products is burned as fuel in the boiler which provides hot water and heat to the farm house and shop areas throughout the year.

Kurt's clientele includes both commercial



This vertical table saw is somewhat more accessible than Kurt's standard table saw, particularly when handling larger sheets of ply-board and other heavy lumber.



This drill-press and other machines in Kurt's shop were made more accessible by cutting out a space in the cabinet to allow clearance for his chair.

and residential customers. While most of his advertising is by word-of-mouth, he does run a Yellow Pages ad which has attracted commercial customers. Kurt employs one individual in the shop, and contracts with two to three others to install his products.

In addition to the normal load of shop work,

Kurt oversees the cabinet installation and writes bids for potential jobs. In his "spare time" Kurt remodeled the house on his parent's farm where he lives. He installed cabinets, trim-work, solid hardwood floors and a wooden staircase, as well as an accessible bathroom and bedroom.

Kurt advises prospective woodworkers to buy high quality, durable equipment, rather than trying to get by with inexpensive machines which are often inferior in quality.

Adaptive Equipment:

The equipment in Kurt's shop is of standard design and required no special modifications to accommodate his disability. He made "cut-outs" in his workshop benches to provide clearance for his wheelchair. The shop floors are concrete, which allows for easy manipulation of his manual wheelchair.

Handmade Crafts

Linda Moeller

Readlyn, Iowa

Linda Moeller and her family live in rural Readlyn, Iowa where Linda's husband farms 1,000 acres of corn and soybeans. Linda is a full-time medical secretary and sells hand-crafted stitched and crocheted items. Linda was involved in a serious automobile accident in 1989 which resulted in a visual impairment.

Description of Enterprise:

Linda has been selling her hand-sewn crafts for over ten years, and since 1989 has been a guild member of a crafts store in Oelwein, Iowa, called the The Cupboard. As an active member, Linda is allowed to market her products through the store for a small commission.

Linda learned to sew as a teenager through 4-H clothing and crafts projects, and learned her crochet skills from her grandmother. She became interested in selling her wares when friends encouraged her to bring several items to a church



bazaar. Based on a positive experience at the bazaar and encouragement from friends, Linda began her crafts enterprise in earnest. She now spends approximately 15 to 20 hours per week making and selling her craft items.

Linda credits her success to providing a wide variety of high quality hand-crafted products, and to sheer determination and aggressive marketing. She says practicing is very important, and that creating a quality product takes time. She also says quality products require quality materials.

Linda suggests that individuals interested in beginning a crafts enterprise can find ideas and learn techniques by looking through craft shops and attending adult education classes. She says it is important to take every opportunity to show products to friends, neighbors and people in the community. She says every contact can open new doors for selling products.

Linda utilizes no specialized adaptive equipment for her enterprise. She uses a standard sewing machine and crochet hooks.

Wheelchair Exercise Bicycles

Roger Thoele

Montrose, Illinois

Roger Thoele of Montrose, Illinois, grew up on a farm. At age 23, he sustained a C-5/6 level spinal cord injury resulting in quadriplegia. Since then, he has reduced his involvement in farming and devoted his time to a home-based business venture. His brothers continue to operate the family farm.

Description of Enterprises:

Roger Thoele and his family own and operate Thoele Manufacturing, through which they produce and sell the Pedal-In-Place exercise bicycle. They run the business from the basement of their home. Family members construct the bikes, and Roger handles the book work. Roger began manufacturing the bicycles in 1985.

Roger first developed the idea for his enterprise while in therapy following his injury. In the hospital, he saw a person in a wheelchair using a somewhat conventional exercise bicycle. The patient needed helpers to move his legs and turn the pedals.

Roger decided to develop a new design which would allow a person to operate the bike independently from a wheelchair. He developed a plan and retained the services of a neighbor to construct the prototype.

The current model of the Pedal-In-Place bicycle has some added refinements over the original model, including a tension adjustment and a tilt option. To this point, the Pedal-In-Place has been marketed in all 50 states, Canada, Mexico, and Australia. A firm in Japan has also expressed interest in purchasing a model.

In addition to the exercise equipment business, Roger and his wife are now becoming



Roger developed the idea for his exercise bike while in therapy following his injury. The Pedal-In-Place bike allows a wheelchair user to exercise the upper body and arms while increasing the heart rate and blood circulation in the legs. Features include a tension adjustment (See inset) and tilt option for unassisted feet placement.

involved in network marketing. Network marketing is becoming a popular distribution method for a variety of goods and services. They hope to develop the network marketing venture into a steady supporting income.



Farm Implement Assembly

Arlan Bookwalter

Walton, Indiana

Arlan Bookwalter of Walton, Indiana, operates a 1,800-acre corn and soybean farm with his wife and son and assembles implements for a nearby dealership. Arlan has a spinal cord injury and uses a wheelchair for mobility.

Description of Enterprise:

Arlan first became involved in the equipment assembly business eight years ago, before sustaining his spinal cord injury. At the time, he needed additional work for his employee during the winter months. The business was arranged with Logansport Implement, a Case-IH dealer a few miles from the farm.

As with many implement dealers, much of the equipment sold by Logansport Implement arrives from the factory unassembled or only partially assembled. Arlan provides Logansport



Arlan's shop provides an efficient work area for his implement assembly enterprise. The shop features a concrete floor, lowered benches and tools stored within easy reach.

Implement with the skilled labor necessary to assemble the implements before they are sold by the dealership. Arlan usually oversees the work, while his son and employee do most of the actual labor. The dealership transports machinery to and from Arlan's shop where the implements are assembled.

The Bookwalters work on a variety of machinery, including primarily grain drills, planters, and tillage equipment such as chisel plows, disks and field cultivators. Assembly time varies depending on the complexity of the machine. A corn planter may take 80 man-hours to complete, while a field cultivator or



Arlan utilizes a Freedom-I all-terrain, motorized wheelchair for mobility around the shop and yard. The three-wheeled chair is equipped with electric and gasoline motors, as well as a powerful hydrostatic drive transmission.



Arlan modified his IH 1460 combine with a man-lift to provide access from his chair to the operator's seat. The independently controlled lift operates by a vertical-screw mechanism, and receives power from the combine's battery.

disk may require 30 hours. Once a particular implement has been assembled, additional implements of the same type tend to require less time. The actual assembly involves bolting the various pieces together in their proper positions.

Most of the equipment assembly is done during the winter months, a relatively slow season on the farm. Occasionally, a piece may be assembled during the busy farming season. Arlan assembles approximately 25 to 30 pieces of equipment per year. The dealership pays a fixed amount per machine assembled.

automatic door to the machinery storage area also reduces mobility problems. Arlan keeps a portable cellular telephone with him while working for communication and safety purposes.

Adaptive Equipment:

Arlan has modified a tractor and combine with lifts and hand controls for accessibility. His pickup truck is also equipped with modifications. For mobility around the farm, Arlan uses an all-terrain, motorized wheelchair (see photo left). The shop and machinery storage areas have concrete floors. A concrete work apron outside the

Wood & Metal Shop

Marvin Klevburg

Northwood, North Dakota

Marvin Klevburg farms several hundred acres in northeastern North Dakota, producing a variety of crops such as corn, soybeans, small grains, sunflowers and potatoes. Marvin suffered a stroke which temporarily affected his physical and cognitive abilities.

Following his stroke, Marvin became involved in several new business ventures — including woodworking, custom welding and a bed and breakfast operation — as a means of rehabilitation. He has since recovered from the effects of the aneurysm, but has continued these enterprises as a supplement to his farming operation.



One of Marvin's first new business ventures during his recovery from a stroke involved assembling wood lawn furniture and other woodcraft items to sell.

Description of Enterprises:

After his stroke, Marvin was physically unable to return to farming, but desired to remain productive and active while recovering. One of the first enterprises he pursued during this period was woodworking. He began assembling wood lawn furniture and other items to sell. The work was therapeutic and provided an enjoyable activity.

As a former president of the National Sunflower Association, Marvin has traveled extensively in the United States and abroad. These travels gave the Klevburgs the inspiration for starting a bed and breakfast operation in their home. An extra room in the house was converted to guest quarters. The Klevburgs host approximately 20 guests per year. Mrs. Klevburg cooks for the guests and Marvin enjoys meeting and talking with the visitors from around the country.

Marvin tried a number of other ventures as his recovery continued and he regained his strength and mobility. An accomplished welder, Marvin began a custom welding and machinery repair business, a service now utilized by farmers throughout the community. The Klevburgs also do sandblasting work in addition to custom welding. Another successful new enterprise involves contracting the use of a "Vacuvator" grain bin vacuum to area farmers.

EDITOR'S NOTE:

This case was included to illustrate the potential for alternative enterprises in the recovery stages of a disabling injury or illness, and as income generating activities for individuals with temporarily disabling conditions.



The Klevburg farm, a large multi-crop operation located in Northwood, North Dakota, has been host to a multitude of alternative business enterprises including woodworking, metal welding, and a bed and breakfast operation.

Marvin is very supportive of the use of alternative enterprises as a means to aid recovery from a disabling condition. He does advise,

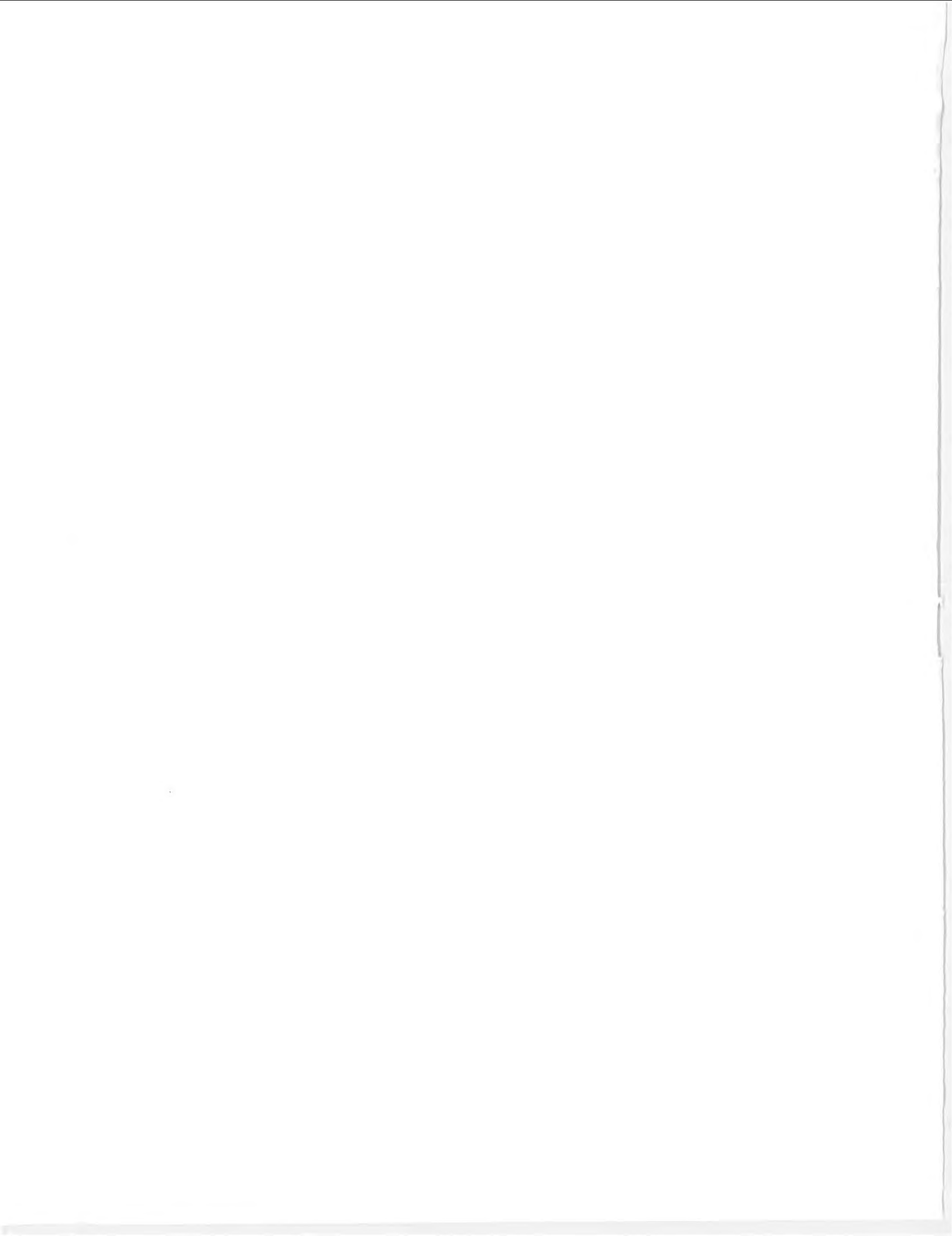
however, that an individual must recognize if a particular activity is beyond his or her capability, and that he/she should work gradually toward more challenging activities as abilities are restored. He says it is important to challenge yourself, and to pursue interests you enjoy.



Marvin's custom welding and metal working began as a therapeutic activity, but has become a successful enterprise providing valuable services to farmers throughout the area.

Adaptive Equipment:

Marvin utilizes no adaptive equipment, having fully recovered from the effects of the stroke.



General Sales and Services

Adaptive Equipment Sales

George H. Ferris

Archer, Nebraska

George Ferris, a retired farmer, owns and operates an adaptive equipment sales business. A bout with polio in 1946 and subsequent post-polio syndrome left him paralyzed from the waist down. George and his wife, Kathryn, farmed 1,200 acres for 37 years, but retired from farming in 1991 so George could concentrate fully on his adaptive equipment business. He said the increasing difficulty in accomplishing farm tasks was the main reason he retired from farming. The Ferrises' home is on 120 acres of farm land which they rent to another farmer.

Alternative Enterprises:

George Ferris began his association with the adaptive equipment business five years ago when he became a sales representative for the Fortress Company, selling three-wheel motorized carts. He has since expanded, and now sells equipment



This self-loading car-topper chair storage unit is one of the products George sells through his company.

for several manufacturers under the name Central State Mobility, Inc. The equipment George sells includes stair lifts and elevators, three-wheel carts, hand controls, and automatic door openers. His major company is now the American Stair Glide Company. This firm manufactures stair lifts for houses, schools and other facilities.

George works out of his home, with one part-time employee. He is responsible for installing the equipment he sells. This work is done by his employee or contracted out to a reputable firm. George estimates



George provided consulting services for a new community health and fitness center that included a wheelchair accessible swimming pool, hot tub and shower and changing rooms.

one-quarter of his business includes working in homes, with commercial businesses and churches comprising the remainder of his clientele.

Recently, George provided input during the planning of a new wheelchair accessible community health and fitness center in Central City in which a wheelchair accessible swimming pool, hot tub, changing rooms and showers were installed.

George currently serves on the board of an area Independent Living Center. This organization actively promotes and strives toward the goal of making all public buildings and programs accessible.

adaptive equipment have no disabled people on staff. He said this lack of direct experience sometimes leads to problems that must be corrected to allow proper use and access. He believes adaptive equipment companies will be seeking employees with personal experience with disabilities.



The Ferrises farmed for many years. During that time George used this standing lift to access his tractor.

George says he sees great opportunity in the adaptive equipment business for people with disabilities. Many of the companies producing

Advertising & Promotional Materials

Don Skinner

Pawnee, Illinois

Don Skinner of Pawnee, Illinois operates a large cash grain farm with his son. In addition, Don sells specialty advertising items. Don sustained a T-8 level spinal cord injury in a farm accident.

Description of Enterprise

Due to the demands of his 1,800-acre grain farm, Don's advertising sales business is primarily an off-season activity. Don is a salesman for an advertising specialty company owned by his brother. He works from his home and is paid strictly by commission. He has no investment, and therefore is able to concentrate on his farming activities when needed.

Don sells a wide variety of advertising items, including calenders, caps, jackets, pens, pencils and cups. He works primarily with agricultural businesses such as fertilizer companies and seed dealers. His farming experiences have provided Don with a wide range of contacts. He says, "The more people you know, the more sales you can make."

When developing advertising items for clients, Don strives to provide a unique product. Companies look for items which are different from their competitors'. Developing these unique products requires that Don design some of the logos for his client firms. Don also consults with his brother in developing items. Creativity is very important in advertising. Occasionally Don enlists the help of a talented local high school student who provides ideas and designs for products.

Don feels the potential for this type of business is very good, if a person is willing to work with clients in developing quality advertising



Don sells a wide variety of unique advertising items, including calenders, caps, jackets, pens, pencils and cups.

products. The business provides a good sideline for Don's farming activities because he can concentrate on the enterprise during his "slack" season, and can utilize his many farm contacts as a client base.

Adaptive Equipment:

Don's advertising sales business requires no special adaptive equipment. He has modified his farm equipment, including his tractors and combine, with lifts and hand controls to allow him to work in the field.

Real Estate Sales & Appraisals

Terry Woolum

Versailles, Indiana

Terry Woolum operates a grain and beef cattle farm with his family near Versailles in southeastern Indiana. He and his sons farm 950 acres,



including 650 acres of corn and soybeans in addition to hay and pasture land. They have a small herd of commercial beef cows and a 130 sow hog operation. Terry also operates a real estate agency. Terry sustained a low-

level spinal cord injury in a tobacco barn accident in 1975, which resulted in paraplegia.

Description of Enterprise:

Terry, a University of Kentucky graduate, has been involved in the real estate business for many years. His first involvement was working for the Federal Land Bank as a farm credit appraiser in the mid-1960s. In 1965, he started the real estate business he operates today.

Following his injury, Terry and his wife moved to the outskirts of Versailles, Indiana where they now maintain a small, but well equipped office in their home.

Terry deals primarily in farm real estate in the area surrounding his home county, and serves as a certified appraiser specializing in agricultural properties.

Terry belongs to several organization, including as the American Society of Farm Managers and Rural Appraisers, to remain current with the trends in the real estate business.

Adaptive Equipment:

Terry utilizes chair lifts to provide access to his farm tractors. He has two tractors equipped with lifts and appropriate hand controls.



Terry Woolum manages his real estate enterprise from a well-equipped office in his home.

For his real estate business, Terry uses little adaptive equipment. He drives a Jeep Cherokee wagon equipped with four-wheel drive. This vehicle allows him to "walk" some farmsteads to observe the properties more closely.

Independent Insurance Agency

Harlan Temple

Davis, South Dakota

Harlan Temple of Davis, South Dakota, operates a beef cattle and grain farm, as well as owning and managing an insurance agency. Harlan and his wife farm 200 acres of corn, soybeans, oats and hay. They also raise registered Simmental cattle which they sell as breeding stock. At this time, they have 39 Simmental cows and a small herd of commercial cows. Harlan has cerebral palsy and uses an electric wheelchair for mobility.

Description of Enterprise

Harlan owns and manages the Temple Insurance Agency in the small town of Davis (population 100) located a few miles from his home and farm. An independent insurance agent, Harlan offers insurance through several different companies which allows his customers a wide choice of policies and options. The agency pro-



Harlan's agency is located in his hometown, providing strong community support and an established client base.



Though the business requires a great deal of time, farming is still Harlan's primary occupation.

vides a variety of policies and services including property and casualty insurance, life, health, and accident insurance, as well as investment and savings plans.

The insurance agency demands much of Harlan's time, requiring him to complete his farming activities during evenings and weekends. The agency has a full-time secretary, and Harlan's wife and mother work part time. Harlan handles all of the agency's sales, making most of the



The Temples farm 200 acres and raise registered Simmental beef cattle. The heavy time demands of the insurance business require that Harlan complete most of his farm work in the evenings and on weekends.

business contacts by phone. Writing new accounts for farm clients, however, requires site visits for making maps and taking measurements and photographs. Harlan's wife performs the vast majority of this "legwork."

Although Harlan has been involved in the insurance business since 1964, he originally wanted to work in the area of bookkeeping and finance. He had a casual interest in the insurance business, which he eventually pursued.

To become qualified to sell insurance, an agent must pass state exams for each type of insurance sold. Harlan was "self educated," learning the necessary information from insurance manuals. To remain current and to retain his license, Harlan must complete 20 hours of continuing education courses every two years as required by the state.

According to Harlan, individuals who are interested in starting an insurance agency should anticipate investing five to seven years building the business. He advises prospective agents to work within an established agency, or go into a partnership to gain experience.

Although the insurance agency takes a considerable amount of time and energy, Harlan considers the agency his supplemental enterprise. He enjoys his farming activities, and purposely keeps the two ventures separate. He believes it is very important to conduct his insurance business in the office to maintain a professional business environment and to prevent business concerns from competing with family interests.

Adaptive Equipment:

Harlan's office is adapted to accommodate his wheelchair. He has a custom made

work table, which is accessible from either side. Other items in his office are arranged within his reach. The agency recently obtained a computer, which should eliminate or reduce the use of cumbersome books and manuals, and replace a calculator for figuring rates and options.

Harlan's farming equipment is also modified to accommodate his limited mobility. Adaptations include a hydraulic lift on his tractor, and modifications to controls within the cab.



Recreation

Farm Vacation, Bed & Breakfast

Don Gales

Confluence, Pennsylvania

Don Gales and his wife own and operate a bed and breakfast operation and small farm near the town of Confluence, Pennsylvania. Confluence is located in the mountainous regions of southeastern Pennsylvania. Don experienced an accident in which his dominant right hand was severed. His hand was surgically reattached, but he retains movement only in the thumb.

Description of Enterprise:

After Don's wife, a schoolteacher, was injured in a car accident the Galeses decided they needed extra income. It was at that point that they sought information on starting a home-based business. The Galeses began a bed and breakfast enterprise through a program called the Pennsylvania Farm Vacation conducted by the Pennsylvania Department of Agriculture. Farming operations participating in the vacation program are inspected by the Department of Agriculture. Upon approval, the department provides advertisement for the farm in a brochure distributed throughout the country.

The Galeses were running a dairy farming operation at the time they began their farm vacation service, but due to difficulties with Don's hand injury, they chose to discontinue their dairy business. The Galeses' farm operation now consists of garden vegetables, including sweet corn and pumpkins, and corn to feed a poultry flock of chickens, geese, and ducks.

The Bed and Breakfast segment of the operation requires the family to open up their home to guests. The Galeses' home has two guest rooms with a bathroom provided on each floor. They converted a nearby office complex into additional guest quarters for their operation. Other guest accommodations include a rustic cabin located in

a wooded area one quarter mile from the main farm buildings. This more "rustic" and isolated setting is popular with visiting families. The cabin has no electricity or indoor rest room facilities. A hand pump provides the water supply, and a wood and propane stove is provided for heating purposes. A campground and fishing area is also located on the Galeses' farm.

A heated in-ground swimming pool provides another form of recreation for the guests, as well as providing a therapy source for Mrs. Gales, who has arthritis. In the near future, the pool will be enclosed to allow year-round use. The addition of an outdoor wood-burning furnace has significantly reduced heating bills for the house, barn and pool.

The Galeses' operation is in an ideal location for a recreation business. Less than two hours from Pittsburgh and only three hours from Washington, D.C., the operation is within easy driving distance of several large urban population bases. Several nearby tourist attractions, including white water rafting areas, Yough Lake, and a reservoir bring many individuals to the Confluence area. As the only Bed and Breakfast service in their area of the state, the Gales' are able to book guests nearly every week.

Guests stay for varying periods of time at the farm, from one or two nights to nearly a week. Repeat customers provide the bulk of the business, and often book reservations for a cabin or guest room years in advance. Various groups visit the campground year after year.

Don advises that individuals interested in starting a Bed and Breakfast or farm vacation must enjoy working with people. He said a bed and breakfast operator must show courtesy to guests, and be willing to talk to people and be generally outgoing and friendly. He said sharing a home with so many other people can be quite a

challenge. To avoid misunderstandings or conflicts, Don has defined clear rules concerning the use of the facilities on the farm. Making the guests aware of these usually prevents any problems. Most of the guests that stay with the Gales' are from cities, and enjoy the opportunity to "get back to nature." Don said people are curious and interested in the farm operation, and usually enjoy learning about the farm during their stay.

Adaptive Equipment:

Don uses no adaptive equipment for his farming or Bed and Breakfast operation. Because he has little use of his right hand, Don has had to learn to use his left hand for many tasks. ■

Hunting Dog Training, Elk Farming

David Smith

Iowa Falls, Iowa

David Smith of Iowa Falls, Iowa raises 1,500 head of hogs and trains hunting dogs. He has recently begun phasing out his hog operation while converting to elk farming. In December 1987, David was involved in a farm accident resulting in the amputation of his left arm below the elbow.

Description of Enterprises:

David's interest in hunting dogs began at the age of 18 when he purchased and trained a dog of his own. David learned the tools of the trade by reading, viewing video tapes and visiting with experienced trainers. He began taking on "students" in 1989. David's operation currently includes a kennel which can house five dogs during the training period.

David's training process begins with the customer. He and the prospective client thoroughly discuss the dog's training plan and negotiate an agreement and payment plan before work with the dog begins. David then admits the



David trained his first hunting dog when he was 18. He now works with dogs from across the country.

dog for a two to three week analysis to determine if the dog is trainable according to his methods.

If he determines that the dog is a good prospect, the dog will stay with him for three to four months. David works with each of his "trainees" five days a week for 15 minutes to one hour per day, depending on the stage of training.

Though David has trained dogs from several different states, the majority of his clients



David can house five dogs in his kennel during the three to four month training period. Dogs are screened for two or three weeks before being accepted as full-time "students."

are from Iowa. He advertises nationally in "Gun Dog," a specialty magazine for hunting dog enthusiasts. He intends to expand his dog training business by producing his own dogs and selling them as trainers.

David's most recent business venture is an elk farming enterprise. He is currently feeding and pasturing six head of bull elk. The primary crop will be antlers harvested in the "velvet" stage and sold to buyers from across the country who trade with Asian countries where the antlers are popular for decorative and medicinal purposes.

David has modified his property to accommodate the elk by installing eight-foot fencing combined with electric fencing. He said the elk require a fraction of the labor needed to raise hogs, and that the income from 15 bull elk would be comparable to a 1,500 head hog operation. David plans to expand to 15 head of bull elk, and possibly begin a cow/calf herd.

David suggests that someone wanting to be-

gin any new venture should move slowly and research carefully before investing too much time and money. He said honesty, good service and efficient management are important to building a successful business.

Adaptive Equipment:

David uses an electronic training device that allows him to work more efficiently with his dogs. He uses no other specialized adaptive equipment in his dog training or elk farming enterprise.



David works with his trainees from 15 minutes to one hour every day, five days a week.

Horse Breeding & Showing

Carole VanCleave

Bristow, Iowa

Carole VanCleave of Bristow, Iowa raises Arabian horses with her daughter in Hampton, Iowa. Carole retired from her long-time factory job in 1991 with severe tendonitis in both of her arms and shoulders.

Description of Enterprise

Carole VanCleave has been involved in raising horses for over 36 years. Her interest originated when she was responsible for taking care of her parents horses as a child. Though Carole's career took her away from the farm, she has always maintained an interest in horses.

Until she retired from her factory position, Carole stabled her horses and cared for other



Carole stabled and cared for horses before retiring from her long-time factory job.

horses part time. Her plans at that time were to establish a horse stable management enterprise and take on more long-term boarders.



Severe tendonitis prevents Carole from lifting large feed buckets, hay bales and water pails. She compensates by using smaller containers to carry grain, a cart to move bales and a garden hose to provide water to the horses she cares for.



Carole is "living her dream" by working on her daughter's farm and raising and showing horses.

Since her retirement she has moved her horses to her daughter's farm, K & R Arabians, where she also assists in the feeding, exercising and show preparation of the farm's horses.

Carole is now co-owner of a stallion and six mares, and in her words, realizing her dream through her daughter. She says working with the horses and helping in her daughter's enterprise helps her overcome the pain and discomfort of her tendonitis.

Adaptive Equipment:

Because of the tendonitis in Carole's arms and shoulders, she lacks the strength to carry heavy loads. Carole compensates by using a small measuring cup and gallon container to feed the horses and a two-wheeled garden cart to carry hay. She uses an extended length of garden hose to provide water to the horses, rather than carry pails of water.



Information Sources for Alternative Enterprises

The initiation and development of a successful alternative enterprise requires careful thought and planning. Research into the various options, and utilization of available information sources are both integral parts of this process. In recent years, many Cooperative Extension Service (CES) and private organizations have devoted effort to producing resource materials for individuals interested in pursuing alternative enterprises. Numerous organizations representing various commodity groups also produce an enormous volume of material relating to specific ventures.

The most effective resource available to you may be the CES. Every county in the United States has a CES office, and each has access to materials produced at land grant universities across the country. USDA publications, regional Rural Development Center materials, and CES publications can be acquired by the staff of county CES offices. An initial visit with a county agent can save much time in your research. The agent is also usually aware of other individuals who may be involved in enterprises similar to you are considering.

Local groups such as the Chamber of Commerce can assist in organizing a home-based business. If you plan on developing some type of enterprise, consulting these resources will likely save time and effort. Chances are high that someone has already attempted any enterprise you might try. Therefore, avoid "re-inventing the wheel." Time spent researching, planning and utilizing information already available will increase the chances of success for your particular venture.

Nearly every livestock breed, crop or commodity has some type of representative organization. Identifying and contacting those of interest to you can also be very beneficial to your prospective enterprise. These groups are excellent sources for market and production information about unusual animals or crops.

The following pages contain a partial listing of possible information sources for the development of farm-based alternative enterprises. First is a listing of several government, extension and private programs which have been active in research, or may have publications involving farming alternatives. Second, we have included a short list of publications regarding alternative enterprises, small scale farming, small business development and various enterprises. These publications include extension manuals, periodicals and resource directories. All have been utilized to some extent during this study and in the development of this manual.

Extension, Government and Private Organizations

Office for Small Scale Agriculture

14th and Independence Avenue, SW
Washington, D.C. 20250-2200

Alternative Farming Systems Information Center

National Agricultural Library, Room 304
1301 Beltsville, MD 14853

The Farming Alternatives Program

440 Warren Hall
Cornell University
Ithaca, NY 14853

Southern Rural Development Center

Box 5446
Mississippi State, MS 39762

North Central Rural Development Center

216 East Hall
Ames, IA 50011-1070

Northeast Rural Development Center

104 Weaver Building
University Park, PA 16802-5500

Western Rural Development Center

Room 307
Ballard Extension Hall
Corvallis, OR 97331-3607

Center for Alternative Plant and Animal Products

340 Aiderman Hall
1970 Folwell Avenue
University of Minnesota
St. Paul, MN 55108

Rural Innovation Center

1375 Baxter Avenue, NW
Amana, IA 57203

Appropriate Technology Transfer for Rural Areas

P.O. Box 3657
Fayetteville, Arkansas 72702

Rodale Institute

222 Main Street
Emmaus, PA 18908

Publications

***Farming Alternatives: A Guide to Evaluating the Feasibility
of Farm Based Alternative Enterprises***

Northeast Regional Agricultural Engineering Service
Cornell University
152 Riley-Robb Hall
Ithaca, NY 14853

***Assessing the Farm/Family Resource Base and
Analyzing the Feasibility of Agricultural Enterprises***

Southern Rural Development Center
Box 5446
Mississippi State, MS 39762

Signs of Change:

Part 1: Starting a Home Based Business,

Part 2: Diversifying Your Farm

(videotapes)

Roger Williams
University of Wisconsin
Madison, WI 53703

The Directory for Small Scale Agriculture

14th and Independence Avenue, SW
Aerospace Building 342-D
Washington, D.C. 20250-2200

Alternative Agricultural Opportunities: A Bibliography

Center for Alternative Plant and Animal Products
340 Alderman Hall
1970 Folwell Avenue
University of Minnesota
St. Paul, MN 55108

Small Farm Today Magazine

3903 W. Ridge Trail Road
Clark, MO 65243

The New Farm: Magazine of Alternative Agriculture

222 Main Street
Emmaus, PA 18908

Alternative Enterprise and Off-Farm Employment Options for Farmers with Physical Disabilities

Breaking New Ground Resource Center
1146 Agricultural Engineering Building
Purdue University
West Lafayette, IN 47907-1146

Potential Alternative Enterprises

The Cornell University Farming Alternatives Program has conducted extensive research into the potential for alternative enterprises. They have explored hundreds of types of ventures, specifically in the area of specialty crops and livestock. The Farming Alternatives program developed the following list of enterprises as a "brainstorming tool." Neither Cornell University nor the Breaking New Ground Resource Center endorse the ventures listed in any way. Some of the products or enterprises listed have not been researched and have uncertain market potential. However, the list is an excellent tool for generating ideas, and highlights the broad scope of possible income-producing ventures available to the farm family with imagination and ingenuity.

Innovative Farming Ideas List

Cornell University Farming Alternatives Program, 1987

BIOTECH PRODUCTS AND PRODUCTS FOR SCIENTIFIC USE:

Blood products from animals, e.g. rabbits, chinchilla
Horse urine
Rabbits
Guinea pigs

FIELD CROPS:

Aduki beans
Amaranth grain for food and feed
Barley
Bird seed (sunflowers, etc.)
Buckwheat
Canola for oil
Corn for snack foods
Fresh or stone-ground flours and grains
Fuel crops (ethanol generation, etc.)
Hard red spring wheat
Indian corn, miniature or regular sized
Jerusalem artichokes for cattle feed and human consumption
Lupines, sweet (as cash grain and for feed)
Malting barley
Organically grown grains of all types
Popcorn, white and colored

Seed production
Soybeans for human consumption
Soybeans processed into tofu, tempeh food products
Sunflower for oil and birdseed
Wild rice

FISH AND GAME:

Bait fish
Beefalo (hybrid or buffalo and beef)
Buffalo (American Bison)
Bullhead catfish produced with aquaculture techniques
Deer farming (production of venison for restaurant trade, not white tail deer species)
Fallow deer
Red deer
Elk (Wapiti)
Eels for export to Europe
Fish Bait
Game farms for tourists
Guinea fowl
Mallard duck for meat
Peacocks for feathers
Pheasants rearing for release/restocking programs and for meat
Rabbits for meat

Rabbits (Angora) for hair
Salmon
Squab (young pigeons)
Trout

FOREST PRODUCTS:

Apple tree firewood
Balsam pillows, stuffed evergreens, and wild herbs
Christmas trees
Cedar oil
Fiddleheads (unprotected species)
Firewood
Furniture, e.g. outdoor chairs and picnic tables
Ginseng herb
Hemlock for pharmaceutical industry
Hybrid poplar for fuel
Locust for posts and pods for forage
Morel mushrooms
Nuts
Sawlogs
Shiitake mushrooms
Tree seed collection
Toys from wood
Willow for pharmaceutical industry

FRUITS:

Apples
Applesauce
Berry products - jams, jellies, wines, juices, pie fillings
Blackberries
Blueberries, highbush cultivated and lowbush foraged
Cider
Cranberries
Currents
Dried fruit
Elderberries, elderberry wine
Fresh white and pink grape juice
Fruit leather
Gooseberries
Grape pie filling
Homemade jams, jellies
Kiwi, greenhouse culture of hardy varieties
Mixed berry juices

Mulberries
Raspberries, red, black, purple, and yellow
Raspberries, chocolate covered
Strawberries, day neutral types
Table grapes, seeded and seedless
Wine grapes for home brewing market

HORTICULTURAL/NURSERY:

Annual flowers sold as potted plants
Dried flowers, cultivated and wild
Field grown cut flowers
Field grown mums
Herb bedding plants, wholesale market
Herbs for culinary purposes
Herbs for potpourri and dried arrangements
Nasturtium flowers as edible salad ingredient
Northern hardy ornamental shrubs and perennial flowers (wholesale)
Organically raised bedding plants and fruit trees
"Wild" local species cultivated, e.g. trillium and bloodroot

LIVESTOCK:

Beef, conventional and organic or "chemical free"
Deer farming (for fine grade venison)
Fallow deer
Red deer
Donkeys, miniature
Elk
Fox, red, silver, and blue
Goats for milk (fresh and cheese) and meat
Goats (Angora) for hair
Honey and beeswax products
Horses, trail rides, draft horse breeding
Llama for pack animals, hair, and pets
Mink
Rabbits for meat and lab animals
Rabbits (Angora) for hair
Sheep for lamb and mutton, wool, milk (for cheese)
Sheep wool for home spinning market
Sheepskin leather products
Veal, conventional and "FACT" certified

POULTRY:

Balut (duck eggs partially incubated)
Chicken eggs (partially developed) for oriental markets
Chicken processed into patties for wholesale markets
Ducks for meat
Ducks for liver pate
Free range poultry of all types
Geese
Organically raised poultry of all types
Squab (young pigeon)
Turkey, fresh, frozen, or cooked

SERVICES AND RECREATION:

Antique shop
Bed and breakfast inn
Boat storage
Bottle return center
Campground
Child care in country setting
Composting of municipal wastes
Custom machinery work
Custom planting and care of window boxes and container annuals
Custom planting and care of vegetable gardens
Custom slaughter
Farm sitting
Festivals during peak harvest periods
Gift shops
Hunting, fishing, and nature hike guides
Lectures on herbs, gardening at farm
Museum of old farm equipment on working farm
Pet motels for large as well as small animals
Petting zoo
Race horse recuperation farms
Religious services held on farm, e.g. sunrise
Easter services, weddings
Restaurant
Seed and supplies distributor
Sleigh rides with work horses
Small engine repair
Taxidermy, mammal and bird
Tea services, catered at farm
Tours by public, school children, bus tours of farm, winery, etc.
Vacations on farm

VEGETABLES:

Asparagus
Baby vegetables
Burdock root for macrobiotic market
Chutney sauces
Cole crops (broccoli, cauliflower, brussels sprouts, kohlrabi)
Endive, Belgium
Garlic
Gourds, ornamental
Gourmet vegetables
Horseradish
Hydroponically produced crops, out of season
Indian corn, regular, strawberry type, and mini-multicolored
Mushrooms, bisporous, shiitake, etc.
Onions (diversification, e.g. transplants, shallots, sweet, early)
Organic vegetables of all types
Oriental vegetables
Peppers, green and specialty types (purple, hot, etc.)
Pesto basil sauce
Pumpkins
Sprouts from beans, mustards, etc.
Sweet potatoes
Tomatoes, little yellow types
Vinegars, herb
Watercress and other water produced vegetables

