

New Crops and Agricultural Enterprises Decision Assistance Tools

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FARM PROSPERITY
PROJECT— IMPROVING
FARMLAND PROTECTION
BY INCREASING FARM
PROSPERITY WITH
ADOPTION OF HIGH
VALUE NEW CROPS AND
AGRICULTURAL
ENTERPRISES

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Introduction

In an effort to help farmers in western North Carolina improve the profitability of their farms, we identified a variety of new crops and agricultural enterprises that looked promising for the region. These crops and enterprises may also be appropriate for farmers in other areas. A simple decision assistance tool is provided to help you quickly evaluate whether any of the twelve new crops and enterprises might fit your situation. The following pages contain more information on those crops including a definition, general issues, examples, and how they fit with indicators of farm performance that are important to many farmers. Links to production and marketing information are also included.

As you go through the process of identifying new crops and enterprises for your farm, you might find it helpful to use a more comprehensive decision assistance guide or tool than the simple tables provided in this document. For the Farm Prosperity Project, Dr. Susan Kask and Dr. Laura Lengnick studied how farmers make decisions and created a do-it-yourself, values-based decision tool which they entitled “The Sustainable Decisions Tool for Western North Carolina.” The authors would like to refine that tool further, but we have included a draft version of it in a separate document on the Farm Prosperity Project webpage at <http://ncherb.org>. The indicators of farm performance included in this publication are from this decision tool. A more detailed description of the indicators and how they can be used are included here.

Two other decision making tools that you might find helpful are described below.

AGRICULTURE DIVERSIFICATION COMPASS

The Minnesota Grown Opportunities Program, through the Minnesota Department of Agriculture, published a guide for helping farmers choose a new farm enterprise called the Agriculture Diversification Compass. It is a wonderful tool for taking a farmer through the decision making process about whether a new agriculture enterprise is a good fit for his or her farm and family. Using a point system, this guide will help you evaluate how the enterprise fits with your family’s personal interests and goals; available management skills and resources; available labor skills and resources; available physical and natural resources; expected profitability of a proposed enterprise; and the impact the proposed enterprise will have on your local community. We recommend that you use the guide in addition to the other materials provided here. The guide is included with permission in the appendix and is available at <http://www.mda.state.mn.us/protecting/sustainable/mfo/mfocompass.aspx>

PRIMER FOR SELECTING NEW ENTERPRISES

Another decision tool was created by some agricultural economists with the Cooperative Extension Service at the University of Kentucky. It is called a PRIMER for Selecting New Enterprises and it also uses a scoring system, but is more in-depth on the economics than the Compass is. It is included with permission in the appendix and can be found at http://www.uky.edu/Ag/AgEcon/pubs/ext_acc/ext2000-13.pdf





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Using Indicators in Making Farm Decisions:

Research has shown that there are a number of indicators of farm performance in common use among farmers. The use of a set of indicators helps farmers keep in mind the multiple benefits of farming as they make decisions. These benefits are unique to every farm family, but often include things other than income. For example, they may include enjoyment of farm life or the satisfaction of working in a family business. Using indicators to help make decisions can insure that the full range of farm life benefits are included in the process. Monitoring with indicators can be useful as early warning signals that a change that was made is not having the desired effect.

These indicators are the basis for the Sustainable Decisions Tool for Western North Carolina created by Drs. Susan Kask and Laura Lengnick for the Farm Prosperity Project and will be helpful if you choose to use that tool with this document. Even if you do not use that decision tool, the indicators can still help you determine if that new crop or enterprise might have a positive or negative effect on issues that are important to you and your family.

For every crop and enterprise listed in this publication, the indicators that might be affected are included. Below is a more detailed description of these indicators.

COMMON FARM INDICATORS

Family Well-Being Indicators

- Total Family Income *What is our combined income from all sources?*
- Time for Family Activities *Do you have time together as a family to participate in activities you enjoy?*
- Family Health *Do you maintain good family health and have the resources to obtain desired healthcare?*
- Satisfaction from Farming *Does farmwork bring your family a feeling of satisfaction?*
- Farm Succession Plan *Do you have plans for the farm to continue operation by the family in the future?*
- Family Education *Do you have the resources for the desired education of family members?*
- Community Activities *Do you have time to participate in religious/community groups?*
- Ratio of Family to Other Farm Labor *What proportion of farm labor is provided by family members?*
- Ratio of Family to Other Farm Residents *What proportion of full-time farm residents are family members?*

Community Well-Being Indicators

- Local Sales *What proportion of your total farm income is from local markets?*
- Farm Income Compared to Average Income *What is the ratio of total farm income to the average regional income?*
- On-Farm Jobs *How many permanent off-farm local residents does your farm employ?*
- Local Purchases *What proportion of your total farm purchases go to local suppliers?*
- Cooperation with Other Farmers *Are you an active member of a local farm org., farmer's coop. or other informal group of local farmers?*
- Cooperation with Non-Farming Neighbors *Do you maintain good relationships with your non-farming neighbors?*
- Community On Farm *Do you allow the local community access to or through your farm, make on-farm sales or host events that welcome the local community to your farm?*
- Development Pressure *Have you protected your farm from development?*
- Local Identity *Do you know the history of your farm and how it relates to the local region?*
- Farm Attractiveness *Do you manage your farm to have visual appeal and avoid creating noises and bad smells that might disturb neighbors?*

**Environmental Well-Being Indicators**

- Presence of Earthworms *Do you monitor earthworm populations on your farm?*
- Balanced Nutrient Budgets *Do you monitor the nutrient status of your farm with soil tests and follow a nutrient budget?*
- Balanced Carbon Budget *Do you monitor the organic matter content of your soil and follow a plan to maintain or increase it?*
- Energy Efficiency *How much non-renewable energy does your farm use per acre of crop/livestock harvested?*
- Water Efficiency *How much water does your farm use per acre of crop/livestock harvested?*
- Biodiversity *How many different habitats/ecosystems are present on your farm?*
- Pest Pressure *When no pesticides (natural or synthetic) are used, what is the pest pressure on your farm?*



New Crops and Agricultural Enterprises Decision Assistance Tool

Agritourism Activities		Specialty Nursery		Value-Added Products		Specialty Meats, Dairy, & Eggs		Organics		Specialty Fruits & Vegetables	
Are you okay with having people on your farm?		Do you have greenhouses?		Do you know what your customers want?		Do you have the facilities needed?		Are you certified organic or willing to become so?		Do you have a market for your products?	
Are you in a good location for a public activity?		Do you have access to good water?		Do you have good organization and business skills?		Will there be customers for your products?		Are you willing to do paperwork and abide by the rules?		Is it legal to grow the crop of interest?	
Do you enjoy working with the public?		Do you have capital to start a nursery?		Do you have capital to start a new enterprise?		Do you know the state regulations?		Could you make a profit without a price premium?		Do you have a source of seeds or planting stock?	
Are you creative?		Do you have a good knowledge of the plants?		Are you creative and entrepreneurial?		Are you willing to do paperwork and abide by the rules?		Do you have the labor resources for weed control?		Do you have good fields to grow in?	
Do you have good social skills?		Are you willing to attend trade shows?		Are you willing to do paperwork and abide by the rules?		Do you have adequate pasture?		Do you have a market for your products?		Do you have the ability to irrigate?	
Can your roads accommodate additional traffic?		Can you handle the stresses?		Do you like to cook or follow a detailed process?		Are you willing to take on a 365 day a year operation?		Do you have good fields to grow in?		Do you have post harvest facilities?	
Do you have parking, restrooms, and shelter?		Do you have entrepreneurial skills?		Are you willing to attend trade shows to sell product?		Do you have an entrepreneurial spirit?		Do you have the ability to irrigate?		Do you have labor to harvest your crops?	
Are you willing to take on the liability risks?		Do you have organizational skills?		Do you have the means to store and distribute?		Do you know where to get assistance?		Do you have post harvest facilities?		Do you have greenhouses or high tunnels?	
Are you able to promote your farm?		Do you have the basic technical skills required?		Do you have a marketing plan?		Will you have adequate labor?		Do you have greenhouses or high tunnels?		Do you have an entrepreneurial spirit?	
Does local zoning permit the activity you want to do?		Are you willing to run a year round business?		Do you have family members or employees to help?		Can you find affordable sources of supplies?		Do you have access to organic supplies?		Do you know where to get assistance?	
Agritourism		Specialty Nursery		Value-Added Products		Specialty Meats, Dairy, & Eggs		Organics		Specialty Fruits & Vegetables	

Instructions: Working in columns, put a check mark in the yellow box next to each question that you can answer "yes" to. If you answer "yes" to every item in the column, put a star in the box at the bottom. Those categories that receive a star are enterprises that you are probably well suited for right now. If you have most of the boxes checked, you might want to consider that enterprise. If you have few boxes checked, that enterprise is probably not a good fit for you.



New Crops and Agricultural Enterprises Decision Assistance Tool

Medicinal Herbs	U	Mushrooms-Shiitake	U	Truffles	U	Hops	U	Organic Grains	U	Wasabi	U
Do you have a market?		Do you have a market?		Do you have a market?		Do you have a market?		Do you have a market?		Do you have a market?	
Do you have local herbal product manufacturers?		Do you have high end restaurants nearby?		Do you have high end restaurants nearby?		Do you have micro-breweries nearby?		Do you have specialty bakers nearby?		Do you have high end restaurants nearby?	
Can you grow to help meet manufacturers' GMP guidelines?		Do you have a source of small diameter oaks?		Do you have an appropriate orchard site?		Do you have a site for a permanent large trellis system?		Do you have large open fields to grow grains?		Do you have a stream or high-volume water source?	
Do you have a dryer?		Do you have a dryer?		Do you have a cooler?		Do you have a dryer?		Do you have a storage facility?		Is your water quality high?	
Will you make value-added products?		Will you make value-added products?		Will you make value-added products?		Can you sell retail and wholesale?		Can you sell retail and wholesale?		If you will grow in the stream, is it legal?	
Can you wait 1-5 years to harvest?		Can you wait 6-18 months to harvest?		Can you wait 5 or more years to harvest?		Do you have a source of labor for harvest?		Do you have equipment to harvest?		Are you willing to grow organically?	
Are you certified organic or willing to become so?		Can you check your logs daily for fruiting?		Do you have the capital to get started?		Can you come up with a good weed control strategy?		Are you certified organic or willing to become so?		Will you make value-added products?	
Do you know where to get assistance?		Do you know where to get assistance?		Do you know where to get assistance?		Are you willing to keep up with industry trends?		Do you know where to get assistance?		Do you have a cooler?	
Are you willing to keep up with industry trends?		Can you do year-round production?		Can you keep and train a dog to hunt for truffles?		Do you have the capital to get started?		Do you have a source of organic seed?		Can you track down a supply of planting stock?	
Do you have the ability to irrigate?		Do you have the ability to irrigate?		Do you have the ability to irrigate?		Do you have the ability to irrigate?		Do you have a source of affordable organic fertilizers?		Do you know where to get assistance?	
Medicinal Herbs		Mushrooms-Shiitake		Truffles		Hops		Organic Grains		Wasabi	

Instructions: Working in columns, put a check mark next to each question that you can answer "yes" to. If you answer "yes" to every item in the column, put a star in the box at the bottom. Those categories that receive a star are enterprises that you are probably well suited for right now. If you have most of the boxes checked, you might want to consider that enterprise. If you have few boxes checked, that enterprise is probably not a good fit for you.



Agritourism

Definition: *Agritourism attracts people to farms for entertainment and education activities. It combines tourism and agriculture.*

GENERAL ISSUES TO BE CONSIDERED:



- There will be people on your farm. Think of lots of people, families, children, etc. Are you comfortable with that?
 - Your farm must be in a good location for the public to be willing and able to visit.
 - You must enjoy working with people; some of them will not be nice.
 - You need to have a creative nature; an ability to make things look attractive and inviting.
 - You need to have good social skills and be a bit of a ham.
 - Traffic to your farm will be increased; can your roads handle this? How will it impact your neighbors? Do you have a place to park them all? How about shelter from the rain or intense sun?
- Having people on the farm always increases your liability. Are you willing to take the risks and carry the proper insurance to protect yourself?
 - Promotion is a key to being successful at agritourism. Are you good at promoting yourself or willing to learn or hire someone to do it?
 - Does the zoning in your area permit you to do the activity you are considering? The most successful agritourism operations not only have something interesting for people to see, but they have some kind of activity for people to be involved in, and there are usually farm products available for sale.

SOME AGRITOURISM IDEAS:

- Crop Maze
- Sorghum Syrup Making
- Apple Picking and Cider Making
- Historical Farm Tour and Educational Programs
- Pumpkin Patch for Picking and Catapults
- Catfish Pond with Picnic Area
- Goat Milking and Cheese Making Demonstrations
- Pick-Your-Own Fruits, Vegetables, or Flowers
- Herb Farm with Display Gardens and Festivals
- Country Weddings, Retreat Centers
- Rental Cabins or B&Bs with Help On the Farm Themes



Indicators of Farm Performance Most Likely to be Affected by a Successful Agritourism Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan
- Community Activities

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Purchases
- Cooperation with Other Farmers
- Cooperation with Non-Farming Neighbors
- Community On Farm
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms



Photo courtesy of Lanny Hass

For Information on How to Grow and Market:

Adam, K.L. 2004. **Entertainment farming and agri-tourism. Business management guide.** ATTRA Publication #1P109.
<http://attra.ncat.org/attra-pub/entertainment.html>.

NCDA&CS Agritourism website devoted to promoting and supporting agritourism in North Carolina. Links include understanding liability laws, Agritourism Network Association membership, examples of agritourism in NC, among many other valuable web-based resources. <http://www.ncagr.gov/agritourism>

Mississippi State University's website devoted to agritourism. Links include NRCS' "Alternative Enterprises and Agritourism," in depth inclusion of other state's agritourism resources, and risk and resource assessment.
<http://www.naturalresources.msstate.edu/resources/agritourism.html>

<http://www.ncherb.org> From NCSU. Follow the link "**agritourism**" for a list of resources.



Specialty Nursery

Definition: *A nursery with a theme or one specializing in offering only a certain kind of unusual plant material.*

GENERAL ISSUES TO BE CONSIDERED:

- Do you have greenhouses or structures to use for overwintering plants?
- Do you have access to good quality water and is it affordable?
- Do you have the financial resources to start a nursery, including buying structures, media, pots, and initial stock plants?
- Do you have a good knowledge of the kinds of plants you want to grow or are you willing to learn it?
- Are you willing to attend trade shows to promote and sell your products?
- Can you handle the stress that comes from having a large investment in living plants that need to be watered and protected from the elements 24 hours a day?
- Do you have good entrepreneurial skills?
- Do you have good organizational skills and the ability to keep track of many different things at one time?
- Do you have good technical skills? Can you manage the plumbing, electrical, carpentry, heating/cooling, and basic mechanical skills required to run a nursery or would you have to pay someone to do those?
- Are you willing to run a year round business?

SOME SPECIALTY NURSERY IDEAS:

- Bamboo
- Aquatic Plants
- Medicinal Herbs
- Bonsai
- Organic Transplants
- Native Medicinal Herbs
- Groundcovers
- Edible Shrubs and Trees
- Rock Garden Plants
- Based on One Flavor or Color





Indicators of Farm Performance Most Likely to be Affected by a Successful Specialty Nursery Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan
- Community Activities

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- On-Farm Jobs
- Local Purchases
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Water Efficiency
- Biodiversity



Photo courtesy of Appalachian Sustainable Agriculture Project

For Information on How to Grow and Market:

"So You Want to Start a Nursery" by Tony Avent. Published by Timber Press, 2003

ISBN 0881925845, 9780881925845. Much of the book is available on line and it can be purchased at the following link:

http://books.google.com/books?id=6crdxJ13IB4C&pg=RA1-PA11&lpg=RA1-PA11&dq=running+a+specialty+nursery&source=bl&ots=1tbwMsEFqx&sig=txdGaycVeTK_zf6ML28uTZcS3Y&hl=en&ei=6Ha2ScSLMeCbtwfn3eW4CQ&sa=X&oi=book_result&resnum=8&ct=result#PRA1-PA10.M1

"Starting a Nursery Business" University of Kentucky Cooperative Extension. Access this publication at

<http://www.uky.edu/Ag/NewCrops/introsheets/nurserybiz.pdf>

USDA's Alternative Crops and Nursery website. Links include floriculture, nursery crop science, and ornamental topics.

http://afsic.nal.usda.gov/nal_display/index.php?info_center=2&tax_level=2&tax_subject=298&level3_id=0&level4_id=0&level5_id=0&topic_id=1457&&placement_default=0



Value-Added Products

Definition: *Raw agricultural products that are increased in value through some level of processing.*

GENERAL ISSUES TO BE CONSIDERED:

- Do you have good ideas of what customers want and are willing to pay extra for?
- Do you have good planning, organization, record keeping, and business skills so you can plan the steps, evaluate costs at each step, and set a price for your product?
- Do you have the capital to start this venture? For example, you may need to purchase packaging supplies, buy or rent equipment to process the product, and pay someone to create a label.
- Do you have a creative and entrepreneurial spirit?
- Are you willing to follow strict regulations, attend training sessions, and file lots of paperwork?
- Do you like to cook or follow a detailed process?
- Are you willing to attend trade shows to sell your products?
- Do you have a place to safely store your value-added products and do you have a means to distribute them?
- Do you have a marketing plan? How are you going to sell your products? Direct sales? Through restaurants and stores? Over the internet?
- Do you have family members or employees to help? Taking on a value-added product in addition to growing crops or raising animals is not a one-person job.

SOME VALUE-ADDED PRODUCT IDEAS:

- Jams and Jellies
- Fruit and Sorghum Syrups
- Sauces
- Pickled Fruits and Vegetables
- Herb Salts and Seasonings
- Baked Goods
- Birdseed
- Cider and Fruit and Vegetable Juices
- Dried Fruits, Vegetables, Flowers, and Herbs
- Honey and Beeswax Products
- Gourd Crafts
- Pre-decorated, Carved, or Etched Pumpkins
- Stone-Ground, Heirloom Variety Corn and Grains
- Herb Soaps and Lotions
- Private Label Your Products for Others





Indicators of Farm Performance Most Likely to be Affected by a Successful Value-Added Product Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Purchases
- Cooperation with Non-Farming Neighbors
- Local Identity



Photos courtesy of Appalachian Sustainable Agriculture Project

For Information on How to Grow and Market:

Blue Ridge Food Ventures in Asheville, NC website with many helpful links.

http://www.advantagewest.com/content.cfm/content_id/202/section/food

University of California Direct Marketing with Value-Added Products Website

<http://www.sarep.ucdavis.edu/CDPP/valueadded.htm>

University of Tennessee Tool for Evaluating the Potential Success of Value Added Products

<http://www.utextension.utk.edu/publications/wfiles/W040.pdf>

NC Fresh Produce Safety website includes processing, sanitation, regulatory, land, and liability links as well as many other invaluable links. This site offers a thorough and reliable network of resources and is a must see. <http://www.ncmarketready.org>



Specialty Meats, Dairy, and Egg Products

Definition: *Meat, dairy, eggs and their value-added products that are not commonly available in this area.*

GENERAL ISSUES TO BE CONSIDERED:



Photo courtesy of Appalachian Sustainable Agriculture Project

- Do you have the facilities to produce, harvest, store, and transport the livestock, poultry, or the value-added product of interest? If not, do you have the resources to build them?
- Have you done the market research? Will there be customers for the products you want to produce?
- What are the county, state, and federal regulations that might affect the production, slaughter, and transport of your products?
- Are you willing to follow strict regulations and file lots of paperwork?
- Most specialty meat animals are produced on pasture. Do you have adequate pasture?

- Animals are a 24 hour a day, 365 day a year venture. Are you willing to take that on?
- Do you have a creative entrepreneurial spirit?
- Do you know where to go for assistance for something this specialized? The help might not be available locally. You might need to find a consultant in another state or country.
- Will you have the labor you need at the times of year needed to manage the enterprise you are considering?
- Finding feed, medicine, packaging, and other supplies for specialty enterprises such as these can be quite challenging. Make sure you can buy the products you need at an affordable price.

SOME SPECIALTY MEATS, DAIRY, AND EGG PRODUCTS IDEAS:

- Duck, Quail, Goose, Guinea, and Quail
- Heritage Breeds of Chickens and Turkey
- Buffalo and Beefalo
- Organic Eggs
- Unusual Eggs, e.g., different colors and species
- Cheese, Yogurt, Ice Cream
- Sausage, Jerky, and Pate





Indicators of Farm Performance Most Likely to be Affected by a Successful Specialty Meats, Dairy, and Egg Products Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- On-Farm Jobs
- Local Purchases
- Cooperation with Non-Farming Neighbors

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Biodiversity
- Pest Pressure



Photo courtesy of Appalachian Sustainable Agriculture Project

For Information on How to Grow and Market:

ATTRA Dairy Goats Sustainable Production link: <http://attra.ncat.org/attra-pub/dairygoats.html>. This publication covers everything from getting started to regulations.

ATTRA Organic Livestock Workbook link at <http://www.attra.org/attra-pub/PDF/livestockworkbook.pdf>. Covers all aspect of organic livestock production.

Small Flock Poultry Production website at NC State's Cooperative Extension link http://www.ces.ncsu.edu/depts/poulsci/tech_manuals/small_flock_resources.html

Link to the **Independent Farmers' Directory of Slaughter Facilities in NC** at <http://www.ces.ncsu.edu/chatham/ag/SustAg/Slaughter%20Directory%20Introduction.pdf>

Center for Environmental Farming Systems Pasture-based Dairy Unit. <http://www.cefs.ncsu.edu/main-what-we-do/research-units/pasture-based-dairy-unit.html>

Growing Small Farms is an NC Cooperative Extension site and offers general production assistance as well as covering topics from heirloom tomatoes, to beekeeping, to pastured poultry. Find at <http://www.growingsmallfarms.org>

Agricultural Marketing Resource Center offers an extensive website covering specialty meat commodities like alpaca, goat, bison, deer, lamb, ostrich, and many other products.

http://www.agmrc.org/commodities_products/livestock/



Organic Fruits, Vegetables, Herbs, and Flowers

Definition: Produce grown using organic production practices as defined by the National Organic Program.

GENERAL ISSUES TO BE CONSIDERED:

- Is your farm certified organic or are you willing to become certified organic?
- Being certified organic requires maintaining detailed records and filing for renewal annually. Are you willing to do the paperwork?
- There is currently a price premium for most organic products, but this will decrease over time.
Can you still make a profit without a big price premium?
- Weed control is a major production issue for organic agriculture in the Southeast.
Do you have the labor resources to use manual or mechanical weed control for your crops?
- In some areas, there is not a developed local market for organic produce and in other areas there is an overabundance of organic produce. What is your situation? How do you plan to market your produce?
- Do you have appropriate fields for growing fruits, vegetables, herbs, or flowers?
- Do you have the ability to irrigate?
- Do you have the facilities to properly grade, wash, and pack your produce?
- Being able to offer produce for sale most months of the year is often what makes an organic operation successful.
Do you have greenhouses or high tunnels to allow you to extend the season?
- You will need organic seeds, transplants, fertilizers, pest control products, and compost. Do you have readily available, affordable sources for these?

SOME ORGANIC FRUITS, VEGETABLES, HERBS AND FLOWERS IDEAS:

- All Common Fruits, Vegetables, Herbs, and Flowers
- Pawpaws
- Asparagus
- Edible Flowers
- Garlic
- Heirloom Fruits and Vegetables
- Pea Shoots and Garlic Scapes
- Elderberries
- Organic Transplant Production
- Pick Your Own Flowers for Weddings



Photo courtesy of Appalachian Sustainable Agriculture Project



Indicators of Farm Performance Most Likely to be Affected by a Successful Organic Fruits, Vegetables, Herbs, and Flowers Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- On-Farm Jobs
- Local Purchases
- Cooperation with Other Farmers
- Community On Farm
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency?
- Water Efficiency
- Biodiversity
- Pest Pressure



For Information on How to Grow and Market:

Organic Vegetable Production by eOrganic <http://www.extension.org/article/18364>

NCSU Sites: Follow the links to each subject of interest.

<http://www.ncorganic.org>

<http://www.ncherb.org>

<http://www.growingsmallfarms.org>

"Resources for Specialty Cut Flower Production" a publication through the Chatham County NC Cooperative Extension Center. Find this guide at <http://www.ces.ncsu.edu/chatham/ag/SustAg/flowerresources.pdf>

Organic Farming: at ATTRA - National Sustainable Agricultural Information Service. This site covers everything from pest control to greenhouse production among many other topics. Vegetables, herbs, flowers, and fruit are all discussed at <http://attra.ncat.org/organic.html>

Kansas State University links to various organic crop production resources. <http://www.kansasustainableag.org/Library..htm>



Specialty Fruits and Vegetables

Definition: *Fruits and vegetables that are not commonly grown or sold in your area.*

GENERAL ISSUES TO BE CONSIDERED:

- There is almost always a small market for the very unusual fruits and vegetables, but it can be difficult to create enough of a market to make any money. This needs to be worked out early.
- Some specialty fruits and vegetables have the potential to be invasive weeds or are hosts for diseases. Check with state and federal offices to make sure it is legal to grow the crop you want to. For example, it is illegal to produce gooseberries or currants in North Carolina even though there is a good market for them.
- Finding a source for commercial volumes of high quality planting stock or seeds may be an issue. Arrangements might have to be made way in advance to obtain adequate volumes.
- Do you have appropriate production areas for fruit and vegetables?
- Do you have the ability to irrigate?
- Do you have facilities to properly grade, wash, and pack your produce?
- Do you have adequate labor to harvest your crops?
- Do you have greenhouses or high tunnels to allow you to extend the season?
- Do you have a creative, entrepreneurial spirit? It takes a special kind of personality to sell unusual items!
- Finding help when you are growing something unusual can be difficult. Try to find this early and be sure to have your county extension agent informed and working with you early in the process.

SOME SPECIALTY FRUITS AND VEGETABLES IDEAS:

- All Different Kinds of Garlic
- Heirloom Fruits and Vegetables
- Blackberries and Raspberries
- Ethnic Fruits and Vegetables
- Pawpaws
- Many Kinds of Winter Squash
- Many Kinds of Gourds
- Asparagus
- Rhubarb



Photo courtesy of Appalachian Sustainable Agriculture Project



Indicators of Farm Performance Most Likely to be Affected by a Successful Specialty Fruits and Vegetables Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Purchases
- Community On Farm
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Biodiversity



Photo courtesy of Appalachian Sustainable Agriculture Project



Photo courtesy of www.NaomiJohnsonPhotography.com and Appalachian Sustainable Agriculture Project

For Information on How to Grow and Market:

NC Specialty Crops Program found at http://www.cals.ncsu.edu/specialty_crops/

"Blueberry Production for Local Sales and Small Pick-Your-Own Operators," Charles Mainland and William Cline with NC State University offer an in depth look at blueberry production in North Carolina. Link to the document at: <http://www.ces.ncsu.edu/depts/hort/hil/hil-202.html>

"Growing Raspberries in North Carolina," NC State University Cooperative Extension. A thorough presentation of growing raspberries in NC. Link to the document at: <http://www.ces.ncsu.edu/depts/hort/hil/pdf/ag-569.pdf>

Growing Small Farms offers general production assistance as well as covering topics from heirloom tomatoes, to beekeeping, to pastured poultry <http://www.growingsmallfarms.org>

Follow the links on these NC State sites. <http://www.ncorganic.org> <http://www.ncherb.org>



Medicinal Herbs

Definition: *Herbs grown for medicinal purposes.*

GENERAL ISSUES TO BE CONSIDERED:



- If you want to grow medicinal herbs on a large scale, selling your crop can be challenging. Do not plant any large acreage without having a buyer. Remember that much of your competition is from overseas.
- There are many value-added product and direct marketing opportunities for medicinal herbs.
- The new federal Good Manufacturing Practices for Dietary Supplements apply to manufacturers of herbal products, but also affect growers because manufacturers need to know they are buying a safe and positively identified herb. You can use this to your advantage.

- It can be difficult to find reliable sources of high quality seed and planting stock.
- Learn how to grow, harvest, clean, dry, and package your medicinal herb before planting.
- You will probably need an herb dryer and irrigation.
- If you are going to produce value-added products, find out all the rules and regulations to ensure that you are selling a safe product.
- Some herbs will grow well here and others will not grow well enough to be competitive on the global market.
- There is a good market for organically grown herbs.

SOME MEDICINAL HERB IDEAS:

- Ginseng Packaged for the Tourist Trade
- Old Timey Medicinal Herb Teas
- Large Scale Production of Valerian, California Poppy, or Goldenseal
- Production of Medicinal Herb Transplants
- Supplier of Medicinal Herb Planting Stock
- Value-Added Products such as Extracts, Capsules, Lotions, and Salves
- Growing Medicinal Herbs for a Local Practitioner of Herbal Medicine or an Acupuncturist
- Chinese Medicinal Herbs





Indicators of Farm Performance Most Likely to be Affected by a Successful Medicinal Herbs Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Family Health
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Farm Income Compared to Average Income
- Local Purchases
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Biodiversity
- Pest Pressure



For Information on How to Grow and Market:

Follow the link "Medicinal Herbs and Non-Timber Forest Products" from <http://www.ncherb.org>

"Herb Production in Organic Systems," an ATTRA - National Sustainable Agricultural Information Service publication found at <http://attra.ncat.org/attra-pub/om-herb.html>

NC Consortium on Natural Medicines offers information to consumers, growers, and health practitioners. <http://www.naturalmedicinesofnc.org/>

American Herbal Products Association is a member supported organization offering numerous trade-related resources. Find them at: <http://www.ahpa.org/>



Hops

Definition: : *A perennial vine grown for its flowers which are used primarily in beer making but also as a medicinal herb.*

GENERAL ISSUES TO BE CONSIDERED:

- Hops are grown on a very large scale in the Pacific Northwest.
- Hops shortages are usually of short duration; the big growers can gear back up very quickly.
- The market for Southeastern grown hops will be for local breweries and home brewers.
- There are many dozens of hops varieties, but only a relatively small number are grown on a large commercial scale. This can be an opportunity for small-scale producers to grow for a niche market.
- There are local markets for fresh hops (the standard is dried) and organic hops.
- There has been hops production in the eastern U.S. before. Disease, particularly powdery mildew, caused production to move west.
- Disease could be a major production issue in the Southeast.
- Weed control is also critical for establishing a healthy hop yard.
- Hops need very large trellises (telephone pole size). The vines must be harvested, flowers removed, processed (may include drying), and packaged. How to do all this needs to be worked out ahead of time and may be costly.
- You will probably need a dryer for at least part of your crop.
- You will need a good labor source for harvesting.

SOME HOPS IDEAS:

- Fresh Hops for Home Brewers and Small Breweries
- Heritage Varieties of Hops
- Dried Hops for Home Brewers
- Local Pelletized Hops for Larger Local Brewers
- Organic Hops





Indicators of Farm Performance Most Likely to be Affected by a Successful Hops Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- On-Farm Jobs
- Local Purchases
- Cooperation with Other Farmers
- Local Identity
- Farm Attractiveness



Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Pest Pressure

For Information on How to Grow and Market:

Information on Growing Hops in NC and Links to Additional Info can be found under the Frequently Asked Questions Section on the front page of <http://ncherb.org>.

Collection of PowerPoint presentations from the **Sustainable Hop Production Workshop** hosted by Colorado State University Cooperative Extension. Topics include harvest, trellising, budget, varieties, and ongoing research. Link to the Powerpoints at:

http://www.coopext.colostate.edu/TRA/Hops_2008.html

"Hops: Organic Production" A publication of ATTRA - National Sustainable Agriculture Information Service. Link to the document at <http://attra.ncat.org/attra-pub/PDF/hop.pdf>



Log Grown Shiitake and Other Mushrooms

Definition: *Shiitake mushrooms, oyster mushrooms, and reishi are examples of mushrooms that can be grown on logs outdoors. They can be part of a woodland management plan. They can also be produced in a sawdust culture in a controlled environment.*

GENERAL ISSUES TO BE CONSIDERED:

- Do you have the trees to provide the logs for mushroom production or would you have to purchase the logs?
- Do you have a shaded area to grow the mushrooms in?
- Do you have a market for the mushrooms?
- Do you have a place to keep the mushrooms cool until sold?
- You should have a plan to deal with excess mushrooms, e.g., drying them or processing them into a value-added product.
- Many markets prefer year round production. Consider how you might do this.

SOME SHIITAKE AND OTHER MUSHROOM IDEAS:

- Fresh Shiitake, Oyster, Lion's Mane, and Maitake Mushrooms
- Dried Mushrooms
- Mushroom Soup Mix





Indicators of Farm Performance Most Likely to be Affected by a Successful Shiitake and Other Mushroom Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Purchases
- Local Identity

Environmental Well-Being Indicators

- Balanced Carbon Budget
- Biodiversity



For Information on How to Grow and Market:

<http://www.ncherb.org>. Follow the "mushrooms" link.

"**Growing Shiitake Mushrooms in an Agroforestry Practice**," by Johann Bruhn with the University of Missouri Center for Agroforestry. In depth description of shiitake mushroom production. Access this publication at:

<http://www.centerforagroforestry.org/pubs/mushguide.pdf>

"**Kentucky Shiitake Production Workbook**," by Deborah Hill, University of Kentucky Cooperative Extension Service. Detailed description of getting started and materials list.

http://mushrooms.cals.cornell.edu/resources/Hill_UKY_FOR85_2002.pdf

"**Cultivation of Oyster Mushrooms**," Penn State College of Agricultural Sciences. This publication covers production of a popular gourmet mushroom. Find it at:

<http://pubs.cas.psu.edu/freepubs/pdfs/UL207.pdf>

Agricultural Marketing Resource Center

http://www.agmrc.org/commodities_products/specialty_crops/mushrooms.cfm



Truffles

Definition: A truffle is a fungus that grows underground on the roots of a variety of trees. The highly valued black Perigord truffles are not native to the U.S. They must be inoculated onto filbert or oak seedlings and allowed to grow for many years. When mature, the truffles are found by dogs that sniff them out. This industry is in its infancy, but if successful, truffles bring \$600 per pound or more.

GENERAL ISSUES TO BE CONSIDERED:



Photo courtesy of Franklin Garland

- This is a very new industry with few success stories, so it is very high risk.
- It takes many years to produce a truffle.
- Truffles require a very high soil pH, meaning the land must be heavily limed.
- The orchard must be weeded and irrigated for years without production.
- There are few experts to help you if you encounter problems.
- If you produce high quality truffles, you should not have any trouble selling them.
- You need a trained dog to find the truffles.

SOME TRUFFLE IDEAS:

- Fresh Truffles
- Truffle Oil
- Truffle Butter
- Truffle Vinegar



Photo courtesy of Franklin Garland



Indicators of Farm Performance Most Likely to be Affected by a Successful Truffles Venture:

Family Well-Being Indicators *refer to page 3*

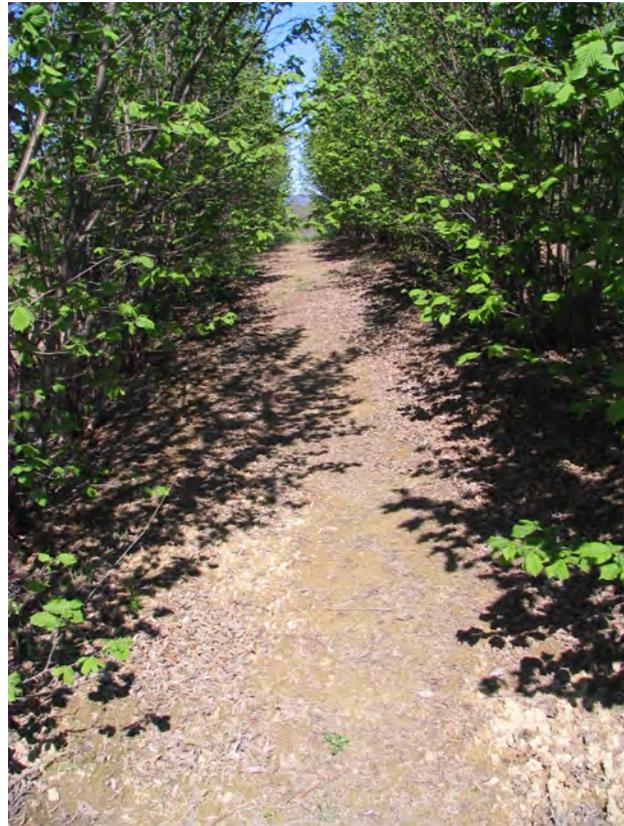
- Total Family Income
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Biodiversity



For Information on How to Grow and Market:

<http://www.ncherb.org>. Follow the "mushrooms" link to "other mushrooms".

"Oregon Culinary Truffles: An Emergent Industry for Forestry and Agriculture" by David Pils, Charles LeFevre, and Leslie Scott. While the focus of this paper is on Oregon truffle production, the information will be useful to NC growers. Find the document at: <http://www.oregontruffles.org/>

New World Truffieres, Inc.

This is a company in Oregon. In addition to selling truffle inoculated trees, they have an informative website. It explains orchard management, soil pH, etc. Check it out at: <http://www.truffletrees.com/index.html>

Garland Gourmet Mushrooms and Truffles

This is a North Carolina based company that received a grant from the N.C. Tobacco Trust Fund Commission to determine if truffles can be grown commercially in North Carolina. They sell inoculated seedlings and also offer a dog training service to help find your truffles. Their website is: <http://www.garlandtruffles.com/>

The links below are to some truffle grower organizations around the world

<i>Australia</i>	http://www.trufflegrowers.com.au/
<i>British Columbia, Canada</i>	http://www.bctruffles.ca/
<i>New Zealand</i>	http://www.southern-truffles.co.nz/
<i>North American Truffle Growers Association</i>	http://www.trufflegrowers.com/



Wasabi

Definition: *Wasabi is the green, horseradish-like condiment served with sushi. The plant is native to Asia where it grows along streams. The root is used. It is difficult to get fresh wasabi in the US, so there is demand for it. It is currently grown in the Pacific Northwest*

GENERAL ISSUES TO BE CONSIDERED:

- Wasabi grows in water which can be supplied naturally or by irrigation.
- If you plan to grow it in a stream, all state and federal regulations concerning using a stream for production and planting something in a stream must be investigated.
- Obtaining sufficient volumes of high-quality planting stock may be difficult.
- There is very little information available on wasabi production at the present time.
- There are virtually no agricultural chemicals cleared for use on wasabi; production is usually organic.
- Although there is a demand for fresh wasabi, a grower must work to develop markets.

SOME WASABI IDEAS:

- Fresh Wasabi Root
- Value-added Products such as wasabi powder, paste, salad dressing, and sauce
- Wasabi Planting Stock





Indicators of Farm Performance Most Likely to be Affected by a Successful Wasabi Venture:

Family Well-Being Indicators *refer to page 3*

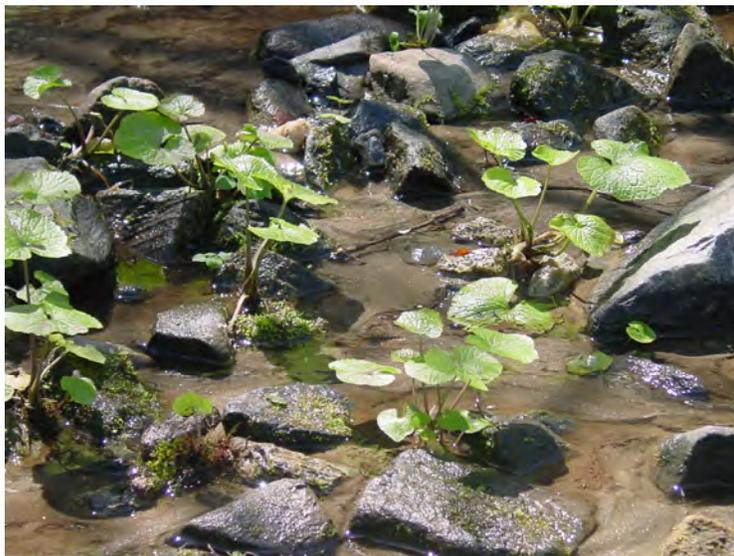
- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Purchases
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Biodiversity



For Information on How to Grow and Market:

Real Wasabi is a company founded and based in North Carolina. This is a link to their website to get some ideas of what you might do with value-added wasabi products:

<http://www.realwasabi.com/News/index.asp>

"Growing Wasabi in Western North Carolina," a project led by Randy Collins.

http://www.cals.ncsu.edu/specialty_crops/publications/reports/collins2.html

Washington State University's has a great program on wasabi production and here is a guide:

<http://cru.cahe.wsu.edu/CEPublications/pnw0605/pnw0605.pdf>



Organic Grains

Definition: *Grains grown in a certified organic production system.*

GENERAL ISSUES TO BE CONSIDERED:

- There is a demand for organic grains in the Southeast.
- There is not a lot of information on grain production, especially organic grain production, for western North Carolina.
- Growers will need to experiment with varieties and planting dates.
- Although the market is strong, growers will still need to find their buyers or build their markets before planting.
- Few farmers in western North Carolina have the equipment to plant, harvest, and store grains properly.

SOME ORGANIC GRAIN IDEAS:

- For Organic Dairies
- For Other Organic Meat Operations
- For Human Consumption-Wholesale and Retail
- Locally Grown Organic Grains for Local Artisan Bakeries
- Wheat
- Popcorn
- Soybeans
- Malting Barley
- Spelt
- Rye
- Oats





Indicators of Farm Performance Most Likely to be Affected by a Successful Organic Grains Venture:

Family Well-Being Indicators *refer to page 3*

- Total Family Income
- Time for Family Activities
- Satisfaction from Farming
- Farm Succession Plan

Community Well-Being Indicators

- Local Sales
- Farm Income Compared to Average Income
- Local Purchases
- Local Identity
- Farm Attractiveness

Environmental Well-Being Indicators

- Presence of Earthworms
- Balanced Nutrient Budgets
- Balanced Carbon Budget
- Energy Efficiency
- Water Efficiency
- Biodiversity



Photo courtesy of Chris Reberg-Horton

For Information on How to Grow and Market:

"Marketing Organic Grains: Marketing, Business, and Risk Management," at ATTRA - National Sustainable Agricultural Information Service. Access at:

<http://attra.ncat.org/attra-pub/marketingorganicgrains.html>

"North Carolina Organic Grain Production Guide," NC State University.

<http://www.cefs.ncsu.edu/PDFs/organicgrainfinal.pdf>

"Organic Field Crop Production and Marketing in North Carolina: Organic Grain Project," NC State University's organic grains resource guide. Access the site at:

<http://www.organicgrains.ncsu.edu/>

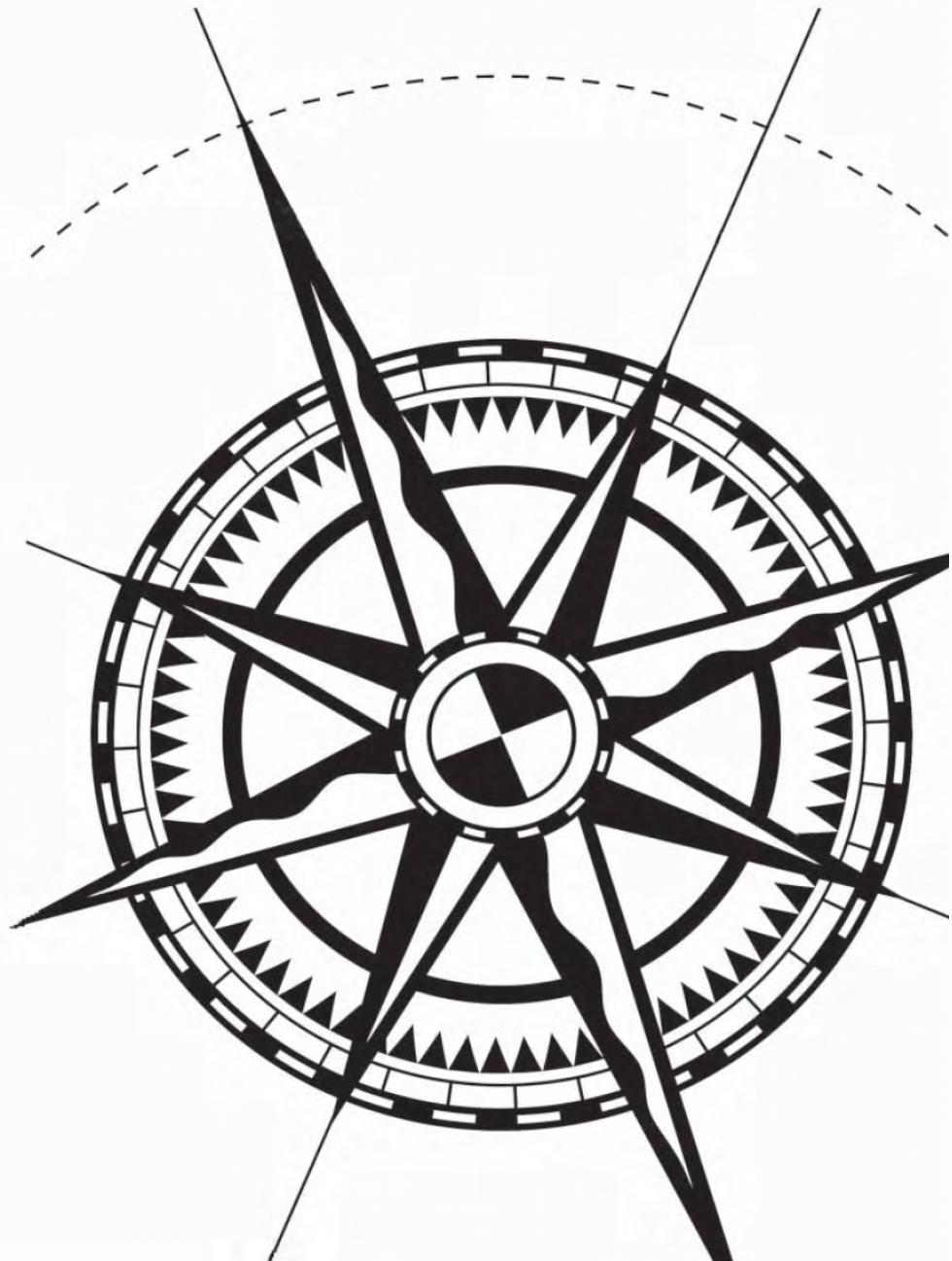
Organic and Specialty Grains at the Agricultural Marketing Resource Center

http://www.agmrc.org/commodities_products/grains_oilseeds/



Agriculture Diversification Compass

— A Guide to Choosing New Directions for Your Farm —





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Agriculture Diversification Compass

— A Guide to Choosing New Directions for your Farm —

Contemplating changes or additions to your farm operation can be exciting and a little daunting. There are many things to consider in determining whether a change is right for your family and your farm. This guide is intended to help you think about some of the key issues involved as you consider diversification options that may fit your farm.

These issues include:

- ▶ your family's personal interests and goals;
- ▶ available management skills and resources;
- ▶ available labor skills and resources;
- ▶ available physical and natural resources;
- ▶ expected profitability of a proposed enterprise; and
- ▶ impact the proposed enterprise will have on your local community.

Some of these issues may be higher priorities for you than others. This guide uses a point system that allows you to compare different options. After you answer all of the questions, you will decide which issues are most important to you and your family, and give special consideration to your responses on these issues.

This guide will be most helpful if you do some ongoing research and careful thinking on each issue before you begin and as you're filling it out. It is intended as a *starting point* that will help you hone in on a few promising options to explore in more depth. For it to be most effective, you'll need to know some of the basic requirements of the crop, livestock, or enterprise you're considering – things like growing degree day, soil fertility, rainfall, labor, and/or equipment requirements. The guide is *not* a substitute for a detailed feasibility study or business plan. You'll find it helpful to revisit your answers down the road, after you've done some more investigating.

What you will need:

- a pen or pencil;
- a separate copy of the tool, or a separate piece of paper, for each option; and,
- a calculator.

Step 1: Choose an option to test

If you already have one or more diversification options you are interested in, you are ready to begin. If you are looking for ideas, a list of many possible options can be found on the USDA National Agriculture Library website at: www.nal.usda.gov/afsic/AFSIC_pubs/altlist.htm#list. For other ideas, consult the Minnesota Grown Opportunities website at: www.mda.state.mn.us/mgo or call 651-297-8916.

The guide is designed to allow you to compare as many options as you wish. Each option must be run through the guide individually. To compare two or more options, run each one through the guide separately and compare the respective scores. Once you have identified the options that you would like to look into further, choose one and proceed to Step 2.



Step 2: Answer each question for the six issues on the following pages

Issue #1: Interests and Goals

The questions in this section will help you identify your interests and those of your family to determine how compatible the proposed diversification option is with those interests. Your enthusiasm for a proposed option is important in determining the likelihood of its success.

Before you begin:

- Sit down with family members to discuss their interests in the proposed option. Identify existing conflicts as well as commonalities in the family’s goals and interests. How is the enterprise likely to affect these conflicts and commonalities?
- **Familiarize yourself with the ins and outs of the proposed enterprise by talking with someone who has experience with it.** Talk to more than one grower if possible. If not, do some preliminary reading to get a sense of what’s involved. In answering this section, it is important to have a reasonably good idea of the tasks involved with this option.
- Talk to potential customers to get a sense of what people want. They might influence the way you think about the potential product.

1) How excited are you and your family about this option?

Not at All	Slightly	Somewhat Excited	Very Excited
0	1	2	3

2) How much do some or all of you enjoy the *kind of work* it will require?

Not at All	A Little	Somewhat	Very Much
0	1	2	3

3) How much would the proposed option *take you away from* an activity or activities that you currently enjoy and value?

A Lot	Somewhat	A Little	None
0	1	2	3

4) How much time would the proposed option involve you or your family in activities that you are *not* interested in spending time on?

A Lot	Somewhat	A Little	None
0	1	2	3

5) Overall, how compatible would the proposed enterprise be with your family’s *personal goals* for the farm?

Not Compatible	A Little	Somewhat	Very Compatible
0	1	2	3

Add the total score for all of the questions for Issue #1: _____
 Divide by 5 (*the number of questions for this issue*) _____
Issue #1 Total (*Round to the nearest hundredth*) = _____
 This is your Issue #1 Score. Record this score on page 8.

If any of the questions in Issue #1 received a rating of 0, this is probably not the best option to pursue at this time.



Issue #2: Business Management Skills

You don't have to be an expert before you begin a new enterprise. However, regardless of what diversification option you are considering, business management skills will be critical to your chances of success. This section is intended to evaluate these skills with regard to the option under consideration.

Before you begin:

- As you fill out this section, consider your own business management skills (things like accounting, record keeping, time management, sales, marketing, etc.) as well as those of other people involved with the farm.
- Consider the ways that new management tasks could be incorporated into current operations. For example, you might take on additional tasks, replace some current tasks with new tasks, or hire additional staff for the new enterprise.

1) How much *experience* do you have working with this or a similar enterprise?

None at All	A Little	Some	A Lot
0	1	2	3

2) To what extent do you have the *planning and organizing skills* to accomplish any new tasks required to effectively manage the new enterprise?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

3) To what extent do you have *time* to incorporate any additional tasks required for the new enterprise?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

4) To what extent are you willing to put in extra effort to learn *new business management skills* required for this enterprise?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

Add the total score for all of the questions for Issue #2: _____

Divide by 4 (*the number of questions for this issue*) _____

Issue #2 Total (*Round to the nearest hundredth*) = _____

This is your Issue #2 Score. Record this score on page 8.

If any of the questions in Issue #2 received a rating of 0, this is probably not the best option to pursue at this time.



Issue #3: Production-related Skills and Resources

Labor resources and skills are as important as business management skills in a successful enterprise.

Before you begin:

- Take into account the seasonality of new labor requirements.
- Be aware that existing employees may have underutilized skills related to the proposed enterprise. Be sure to check whether any of your existing employees have relevant experience.
- Consider whether you are willing and able to hire outside help if it is needed, and whether the needed help is available.
- Find out whether there are special regulatory requirements connected to this enterprise. Will you need licenses, permits, or inspections?

1) To what extent does your current workforce have the *time and skills* to accomplish the tasks required for the proposed enterprise?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

2) If you will need *additional labor*, how easy will it be to find and retain?

Impossible	Difficult	Fairly Easy	Very Easy
0	1	2	3

3) If *extra workers* will be needed, how easy will it be to train them?

Impossible	Difficult	Fairly Easy	Very Easy
0	1	2	3

4) How thoroughly have you explored *regulatory requirements* that might impact you?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

Add the total score for all of the questions for Issue #3: _____
 Divide by 4 (*the number of questions for this issue*) _____
Issue #3 Total (*Round to the nearest hundredth*) = _____
 This is your Issue #3 Score. Record this score on page 8.

If any of the questions in Issue #3 received a rating of 0, this is probably not the best option to pursue at this time.





Issue #4: Physical and Natural Resources

This section will help you figure out whether you currently have the physical and natural resources you need for this new venture. In some cases, you may find that there are insurmountable obstacles. In other cases, you may be able to acquire the necessary resources or adapt existing resources to the needs of the proposed enterprise.

Before you begin:

- Talk with someone knowledgeable about the farm conditions and resources that would be required for the proposed enterprise.
- Determine whether there are any obvious environmental resources that your farm does not possess and cannot acquire.
- Find out what kind of machinery will be required and when.

- 1) Would the proposed enterprise fit (or can it be adapted to fit) the *physical and natural resources* of your farm (i.e., soil qualities, climate, land base, water quality, well capacity, etc.)?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

- 2) Will the proposed enterprise make use of existing *on-farm physical resources* (i.e. land, buildings, machinery, and by-products)?

Not at All	A Little	Somewhat	A Lot
0	1	2	3

- 3) How easily could the proposed enterprise be incorporated into *existing operations*?

Impossible	Difficult	Fairly Easily	Very Easily
0	1	2	3

- 4) How comfortable are you with any *short- or long-term changes* to your farm that are likely to occur as a result of this operation?

Not at All	A Little	Somewhat	Very Comfortable
0	1	2	3

Add the total score for all of the questions for Issue #4: _____

Divide by 4 (*the number of questions for this issue*) _____

Issue #4 Total (*Round to the nearest hundredth*) = _____

This is your Issue #4 Score. Record this score on page 8.

If any of the questions in Issue #4 received a rating of 0, this is probably not the best option to pursue at this time.



Issue #5: Profitability

When considering any new enterprise, profitability is a central concern. **An accurate assessment of the potential profitability of any option requires careful financial analysis that is beyond the scope of this guide.** This section relies on you to make conservative and informed estimates of the perceived investment costs as well as the potential sales of the option you are considering.

Before you begin:

- Remember: the initial financial projections you make for the purposes of this guide are only preliminary. This section is *only* intended to help you decide whether it is worth your time to take a more detailed and accurate look at the financial considerations involved.
- Consider costs over at least the first few years of operation. Some investments and costs may occur at the start-up phase. Others will come down the road. Consider all of the financial investments required (including labor, equipment purchase and depreciation, loan payments, fuel and electricity, storage/conditioning, packaging, and other costs related to production and marketing) to pursue this option.
- Carefully consider how much income will be required and when during the season it will be required (to balance income against labor and investment needs).
- Consider possible sources of investment capital as well as operating capital.
- Consider whether there are any custom services (i.e., processing) available to offset initial capital requirements.
- Bear in mind current and future competition for your enterprise.

- 1) How confident are you in your ability to *raise the initial capital* required and to sustain the added financial burden over time?

Not at All Confident	A Little	Somewhat	Very Confident
0	1	2	3

- 2) How comfortable are you with the possibility that you could *lose* a substantial portion of this investment should the enterprise fail?

Not at All Comfortable	A Little	Somewhat	Very Comfortable
0	1	2	3

- 3) How thoroughly have you researched the *potential total revenue* (i.e., total yield x expected price) and expected expenses this option would generate?

No Research	A Little	Somewhat Thorough	Very Thorough
0	1	2	3

- 4) How thoroughly have you researched the *expected expenses* (i.e., labor, equipment, processing, marketing, and other costs) required for this option?

No Research	A Little	Somewhat Thorough	Very Thorough
0	1	2	3

- 5) How confident are you that the total revenue minus all expected expenses will result in a *profit* that you consider worth the effort?

Not at All Confident	A Little	Somewhat	Very Confident
0	1	2	3

- 6) How comfortable are you with the expected amount of *time* before the enterprise becomes profitable?

Not at All Comfortable	A Little	Somewhat	Very Comfortable
0	1	2	3

7) How strong is the *demand* for the proposed product?

No Demand	A Little Demand	Some Demand	High Demand
0	1	2	3

8) How much *effort* are you willing to invest in marketing the proposed product?

No Effort	A Little	A Fair Amount	A Lot of Effort
0	1	2	3

9) What is the *potential* for market demand in the foreseeable future?

No Demand	A Little Demand	Some Demand	High Demand
0	1	2	3

Add the total score for all of the questions for Issue #5: _____

Divide by 9 (*the number of questions for this issue*) _____

Issue #5 Total (*Round to the nearest hundredth*) = _____

This is your Issue #5 Score. Record this score on page 8.

If any of the questions in Issue #5 received a rating of 0, this is probably not the best option to pursue at this time.

Issue #6: Potential Community Impact

Many proposed enterprises may be invisible to neighbors and the surrounding community. Others may have impacts – on traffic patterns, natural resources, or the local economy, for example – in ways that neighbors consider as positive or negative.

Before you begin:

- Talk with someone who has experience with the proposed enterprise and find out whether the enterprise had any effect—positive or negative—on relationships with neighbors. Consider whether these effects are likely to be similar in your own venture.
- Consider how important community impact is to you, and whether it should be a determining factor in whether or not to pursue a diversification option.

1) To what degree do you expect the proposed enterprise to *benefit* the local community?

No Benefit	Little Benefit	Some Benefit	Much Benefit
0	1	2	3

2) To what degree do you foresee a *negative* reaction to the proposed enterprise from the community?

Very Negative	Somewhat Negative	A Little Negative	Not Negative at All
0	1	2	3

Add the total score for all of the questions for Issue #6: _____

Divide by 2 (*the number of questions for this issue*) _____

Issue #6 Total (*Round to the nearest hundredth*) = _____

This is your Issue #6 Score. Record this score on page 8.

If any of the questions in Issue #6 received a rating of 0, this is probably not the best option to pursue at this time.



Step 3: Consider your priorities

While each of the issues above is important when looking at the feasibility of a new enterprise, *this guide does not pretend to know what is most important to you and your unique farm*. To get a better idea of how this option fits into your own goals and priorities for your farm, mark the three issues that are *most* important to you. Look over your answers to the questions in these three sections and give them special weight.

Step 4: Calculate total score

Now that you have completed all of the questions, you are ready to calculate the total score for this option. To do this, add together the Issue Scores. Record this score to compare with other options.

Name of Option: _____

SCORES ►

1: Interests and Goals (from page 2) _____

2: Business Management Skills (from page 3) _____

3: Production-related Skills/Resources (from page 4) ... _____

4: Physical and Natural Resources (from page 5) _____

5: Profitability (from page 7) _____

6: Potential Community Impact (from page 7) _____

TOTAL score for this proposed option _____

Step 5: Compare with other options

You can use the Diversification Compass to compare as many options as you would like. *Remember: the score for each option should serve only as a guide in making your decisions. The process of filling out these worksheets may ultimately be more valuable to you as you consider your next steps.*

Next Steps

Whatever option or options you decide to look into further, you'll have to do a good deal more research and legwork before you decide whether or not to make the financial and time commitments necessary to make your ideas happen.

Ideas for further research and considerations:

- Make contacts with other people who are already involved in the kind of enterprise you are considering. Their practical experience can be invaluable.
- Can you test this option on a small scale to get a feel for what is involved, and to see whether the enterprise can be grown at a pace you are comfortable with?
- Contact your nearest Extension, Small Business Administration, or Farm Financial Management office for more information about how to get business planning help.
- Contact your state department of agriculture for more information on resources available for a particular diversification option, and for resources related to business planning help.
- Attend conferences and workshops in your own and neighboring states to learn about new ideas and to meet entrepreneurial growers.
- Scan newspapers and magazines (both agricultural and non-agricultural) to learn about new consumer trends.



Additional Resources

Websites, organizations, and publications available to help you plan.

Publications and Guidebooks

“A Primer for Selecting New Enterprises for Your Farm” by Tim Woods and Steve Isaacs of University of Kentucky Cooperative Extension Service. Available at: www.uky.edu/Ag/AgEcon/

“Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses” by the Minnesota Institute for Sustainable Agriculture and the Sustainable Agriculture Network. Available at: www.misa.umn.edu

“Evaluating a Rural Enterprise” by Preston Sullivan and Lane Greer, Appropriate Technology Transfer for Rural Areas (ATTRA). Available at: www.attra.ncat.org

“Farming Alternatives: A Guide to Evaluating the Feasibility of New Farm-Based Enterprises” by the Natural Resource, Agriculture and Engineering Service of Cornell University. Available at: www.nraes.org

“How to Write a Business Plan” by Verlyn K. Anders, Center for Industrial Research and Service. Available at: www.ciras.iastate.edu

“Starting a Value-Added Agribusiness: The Legal Perspective” by Mark J. Hanson, Illinois Institute for Rural Affairs. Available at: www.iira.org/pubsnew

“Your Plan: A Step-by-Step, Start to Finish Business Plan Guidebook” by the Small Business Advancement Center at the University of Central Arkansas. Available at: www.sbaer.uca.edu

Organizations and Agencies

Agricultural Innovation Center (Missouri Department of Agriculture) at: www.aginnovationcenter.org

Agricultural Utilization Research Institute (Minnesota) at: www.auri.org

Appropriate Technology Transfer for Rural Areas at: www.attra.ncat.org

Center for Industrial Research and Service (Iowa) at: www.ciras.iastate.edu

Center for New Crops and Plant Products (Purdue University) at: www.hort.purdue.edu/newcrop

Farm Planning and Practices Page (Minnesota Department of Agriculture) at: www.mda.state.mn.us

Minnesota Grown Opportunities (Minnesota Department of Agriculture) at: www.mda.state.mn.us/mgo

Missouri Alternatives Center at: www.agebb.missouri.edu/mac

New Farm Options (University of Wisconsin Extension) at: www.uwex.edu/ces/agmarkets/

Small Business Advancement National Center (University of Central Arkansas) at: www.sbaer.uca.edu



Community Outreach and Assistance
Partnership Program



UK **COOPERATIVE EXTENSION SERVICE**
University of Kentucky – College of Agriculture



PRIMER
for
Selecting New Enterprises
for Your Farm

Tim Woods and Steve Isaacs

Agricultural Economics
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AGRICULTURE & NATURAL RESOURCES • FAMILY & CONSUMER SCIENCES
4-H/YOUTH DEVELOPMENT • RURAL & ECONOMIC DEVELOPMENT

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University of Kentucky, Kentucky State University, U.S. Department of Agriculture and Kentucky Counties Cooperative



Preface

This publication is designed to help producers evaluate new enterprises for their farms or family businesses. It is based on a set of worksheets to help evaluate the **Profitability**, **Resource** requirements, **Information** needs, **Marketing** decisions, **Enthusiasm** for, and the **Risk** associated with a new enterprise. **PRIMER** is the acronym for these six factors. The text of the publication includes a discussion of each of these factors along with some introductory Yes/No/Maybe questions about each factor. There is also an introductory score sheet for each factor to get you thinking about the feasibility of a new endeavor. The worksheets at the end of the publication are more detailed and ask for information or ask questions that need to be answered before the decisions are made about the new enterprise.

This is not a substitute for a whole farm plan, business plan, or marketing plan. Nor does it serve as a substitute for partial budgeting, full-cost enterprise budgeting, or the development of a mission statement for the business. However, it does help the user ask the right questions to evaluate the economics of an enterprise or profit center within the current business, and it can help in developing all the planning tools mentioned above.

This publication was designed to work across a wide range of crop, livestock, value-added, or service enterprises. Therefore, some of the worksheets raise questions that may not apply to all enterprises. Users should tailor their responses to their specific situations and use all available information to make a decision. Also, the order of PRIMER elements does not mean that enterprise evaluation should flow in sequence from Profitability to Risk. There is no particular order meant to be implied by this guide. All the issues should be addressed together as each component influences the others. PRIMER is simply a convenient and useful way to present the information.

The text and worksheets in this publication are also available on the Agricultural Economics web page under Extension/Publications. The departmental web site is www.uky.edu/Ag/AgEcon/. Users may want to make multiple copies of the worksheets to evaluate different enterprises or to evaluate different scenarios of the same enterprise.





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Using This Publication

The PRIMER worksheet concept is introduced on page two with a preliminary score sheet for each element. Circle your most likely response on each score sheet. Add your points from all six score sheets and see where you fall in the score sheet summary. This may give you some early indication of whether to go on.

Each PRIMER section in the text opens with some thought provoking questions. These basic questions about you, your resources, your preferences, and your potential are a necessary, and often overlooked, basis for beginning a more formalized analysis. Check a response to each question. If you answered more Yes's than No's or Maybe's, then you are a good candidate to pursue your options in a more formalized and detailed analysis.

Each member of the family who will be affected by a new enterprise should also answer the questions. Compare your results. Look for areas of agreement. Beware of potential conflicts.

Finally, detailed worksheets are found at the end of the publication that allow you to proceed deeper into your evaluation. These PRIMER worksheets ask some specific questions that you need to answer before "moving ahead."





Introduction

Kentucky farmers must deal with a number of questions as they seek to diversify their farm businesses. Farmers often ask, “What can I produce to sustain or improve profits on my farm?” Policy makers and farmers are often seeking a miracle crop or livestock enterprise that will bring immediate prosperity. The search for “*what*” to produce has led many farmers to experiment with new and different crop and livestock opportunities with varying degrees of success. Success or failure often depends on how well issues beyond the “*what*” are dealt with. Perhaps the major emphasis should not be on “What to produce?” but on “How to select the right enterprise for my farm.”

New or expanded enterprises are likely to have a different set of financial, marketing, management, and policy options than growers have experienced with traditional enterprises. Focusing on “How to select the right enterprise” instead of the “What to produce” will allow you to thoroughly evaluate a wide range of options instead of concentrating on a few “*pie in the sky*” alternatives that might work for a few producers and fail for many.

PRIMER = Profitability + Resources + Information + Marketing + Enthusiasm + Risk

The PRIMER Method

Schoolchildren used to learn to read from a primer, a thin book that laid the foundation to a lifetime of reading. Similarly, an agricultural **PRIMER** can lay the foundation to evaluate a wide range of farming options.

The letters in **PRIMER** represent the basic factors to consider when making a decision about new or expanded enterprises for the farm. **P** stands for profitability, **R** stands for resources, **I** represents information, **M** represents marketing, **E** stands for enthusiasm, and **R** stands for risk.

These six factors: profitability, resources, information, marketing, enthusiasm, and risk are the basic elements which should drive any decision to adopt a new enterprise on the farm.



PRIMER Score Sheets

PROFITABILITY

Cash Cow10
 Probably profitable – just needs a little
 planning8
 Profitable if I can get some start-up funds6
 Profitable, but easily duplicated and
 limited market4
 Can make a profit if all the stars line up right .2
 Profits unlikely, but still looks like fun0

RESOURCES

Have everything I need10
 Need a few minor, low-cost items8
 Missing one important resource, but can
 acquire it at some expense6
 No experience with enterprise, but can
 develop it in time4
 No experience and need to acquire
 some major resources2
 Starting from scratch0

INFORMATION

Production and marketing info well in hand .10
 Need to do a little homework8
 Need to do a fair amount of homework6
 No one has ever seen this done here before,
 but can find info elsewhere4
 No access to a computer, extension office
 or library2
 Starting from scratch0

MARKETING

Promising, accessible markets already
 exist – people are begging for this product .10
 Accessible markets but will take a little
 effort to develop8
 New retailing or cooperative marketing will
 have to be developed, but still a good market 6

MARKETING (continued)

It may take some time and money to help
 consumers appreciate the value of this
 product/service4
 The market is pretty well saturated with
 similar products2
 Selling ice to Eskimos0

ENTHUSIASM

I can't sleep at night, this idea is so exciting .10
 I'm excited about it but some of my
 family members are reluctant8
 It's as good an idea as any of the others
 I've come up with6
 I could get excited, but only if it works
 out fairly soon4
 I'm out at the first sign of rough sailing2
 Why do I even have to do this?0

RISK

I'm very comfortable with the return
 estimates relative to the risk involved10
 I'm reasonably comfortable8
 Somewhat comfortable6
 It looks OK, but there's just a lot
 still unknown4
 I think I could make it, but there
 are possibilities for significant loss2
 I'm better off buying a lottery ticket0

TOTAL SCORES

Very promising, move ahead48-60
 Has promise, but will still need
 some work38-47
 Has promise and some serious hurdles.
 Carefully evaluate whether this is
 a good fit28-37
 Beware! May not be a good fit<26



Profitability

<p><i>The first of the PRIMER factors is Profitability. Clearly any new or expanded enterprise must add to the overall profits of the farm.</i></p>	Question	Yes	No	Maybe
	Does this enterprise have promise to deliver large enough revenue relative to the investment required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Can I build in special competitive factors that can enable profits to be durable over time?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is there a considerable up front cost to be incurred?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Can I set specific, measurable, attainable profit goals for this enterprise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

New enterprises should be budgeted closely with estimates of costs and returns. Many proponents of new or unique enterprises tend to be overly optimistic about potential returns. The kind of questions to ask about a budget include: “What if prices are 25% below these estimates?”, “What if some disease or weather factor cuts my yield by a third?”, “What if it takes twice as much labor as I’ve anticipated?” These types of questions can help evaluate both the relative profitability and riskiness of the enterprise.

Profitability can be identified by deducting various kinds of expenses from total estimated revenue. The **PROFITABILITY WORKSHEETS** (found at the end of this publication) begin with estimating a total revenue amount as the total yield times the expected price. This can be estimated on a per acre, per head, or whole farm basis. The total revenue amount, of course, can vary widely, and will need to be revisited when we come to the marketing and risk worksheets. Still, an estimate of total revenue needs to be made using the best information available on what can be expected for yield and price to the farmer.

The **PROFITABILITY WORKSHEETS** provide a first estimate of the level of profitability by subtracting cash costs from the total revenue. It is generally helpful to organize these cash costs by category, such as fertilizer, feed, utilities, hired labor and marketing costs. It is also helpful to compare returns over these cash costs when considering several different enterprises.

This provides us with only part of the picture, however. There are additional costs that are very real, including loan payments, the use of equipment, buildings, and other long term assets, family labor, management, and risk taking. Enterprises can vary widely relative to these additional costs. If the budget is constructed on a per unit basis, be sure to multiply by the anticipated number of units to see if total returns will be adequate to make loan payments, to pay fixed costs, and offer a return to family or operator labor over the long run.

Other profitability factors to consider are length of run and comparative advantage. A new enterprise with a payoff in five years may look good strictly from a profitability standpoint but may not pay the bills between now and then. Some agricultural enterprises have short production cycles while others may require months or years to achieve profitability. Fruit crops, Christmas trees,



specialty timber, and other similar enterprises can involve significant cash outlays in the initial establishment phase. Intensive management may be required during the early development phase. Cash revenue from future harvests may not be returned to the investment for years. The second **PROFITABILITY WORKSHEET** is provided to estimate both annual and long run cash flow.

The income needs and debt load of the farm figure heavily into the choice of enterprises. Alternatives for which a farm or a region has some relative advantage in production or lower costs is more likely to be successful. Identifying some geographic, climate, or cost advantage will help identify good alternatives or weed out bad alternatives.



Resources

<i>The second PRIMER factor is Resources. New or expanded enterprises often require new or expanded resources.</i>	Question	Yes	No	Maybe
	Is this enterprise adaptable to my area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Do I have experience with this enterprise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Do I have, or can I get, the resources to produce this product?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Are highly specialized resources required that have limited alternative uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A new enterprise may require investment in machinery, buildings, or land. Labor and management requirements may be different for new enterprises. Farmers already producing labor intensive crops often look toward other labor intensive enterprises as supplements or alternatives. New enterprises with labor requirements that complement rather than conflict with the labor peaks of current farm enterprises may fit well to keep laborers more fully employed. The best resource situation for new or expanded enterprises is when existing resources can be used or adapted. Large investments in capital resources for untried or risky alternatives may not be well received at the lender's desk, especially if they are highly specialized. If current resources of land, labor, and capital can be used, then the risk of entering into a new enterprise is reduced.

The **RESOURCES WORKSHEET** provides a framework for organizing an inventory of current and needed resources for a potential new enterprise. Land, buildings, machinery, start-up capital, and labor are each listed as resources to consider. Additional resources may need to be considered in this worksheet, as well. Long-term inventory, such as seedlings, may be required. Construction of certain structures, such as ponds, trellises, or fencing may need to take place before production begins. The inventory of resources that need to be purchased should include, to the extent possible, an identification of the source of the resource and an estimate of the cost.

Managerial ability and experience are difficult resources to measure or to acquire easily and quickly. Management includes planning and organizing skills. These can be learned. Staffing and directing skills are important if new employees are to be hired and trained. Carefully consider the management intensity level of any new enterprise. Enterprises for which timeliness and high levels of production skills are important will require corresponding high levels of management.

Labor is often one of the limiting resources when examining the feasibility of a new enterprise. The **RESOURCES WORKSHEET** provides a way to compare labor needs with current resources and to plan for any additional hired labor that may be necessary on a month-by-month basis.

Use the **Activities Map** and the **Labor Availability and Requirements** components of the worksheet to assess labor needs. Complete the **Activities Map** to determine the timing of various tasks.



The labor worksheet begins with an estimate of available family and hired labor. Each full time hired worker can be expected to provide between 160-200 hours per month. Labor requirements for current farm enterprises should then be deducted from the total labor available each month. This provides an estimate of the labor available for new or additional enterprises. The next row in the worksheet calls for an estimate of the labor demands anticipated for the new enterprise. Subtracting the new labor required from the current labor available should provide an estimate of the amount of additional hired labor that will be required and the period during which it will need to be available.



Information

The I in PRIMER is for Information. Quality information is critical for making good decisions in any enterprise.

Question	Yes	No	Maybe
Do I have the “know how “ to produce and sell this product?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I don't “know how “, do I know who to ask?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am I willing and able to approach different people for advice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does market research and development appeal to me?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is most of the production information readily available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Good information about unusual or exotic alternatives may be scarce and expensive. In fact, an alternative enterprise for some producers is providing information, for a fee, to other interested parties. The more unusual the enterprise the less likely that conventional sources will be able to meet the need for technical or economic information. Farmers have benefited from several generations of high quality, research based information delivered through the Cooperative Extension Service into every county in the state. Kentucky Extension agents are well informed, but they shouldn't be expected to be experts on every one of hundreds of agricultural alternatives. Private or trade organizations may be alternative sources of information, but membership or consulting fees should be anticipated.

An inventory of useful information sources for a particular enterprise can become a valuable resource in its own right, and can greatly aid in on-going management decisions. The **INFORMATION WORKSHEET** provides a means for organizing key information sources by subject matter area; production resources, financial resources, and marketing resources.

There are several sources that can provide a wealth of information on each of these areas. The worksheet allows the farmer to compile a listing of key people with special knowledge of the enterprise, including other farmers, agents and specialists, and others. Trade shows and associations can also provide valuable information, and may be offered on a state, regional or national level. Computer web sites and Internet communications can provide specialized information from around the world. While this information may need to be altered to adapt to current growing and resource conditions, it can also be used to access a wide range of expertise.

Maintaining accurate and current information, including detailed record keeping systems, should be considered a cost of taking on a new enterprise. It usually takes some time to develop the management expertise required to bring the enterprise to its profit potential. Good information management, which includes knowing how to efficiently sift through the mountain of potentially useful information, can speed the farmer toward better decisions about or on enterprise development.



Marketing

The M in PRIMER is for Marketing. This component is likely the key to success or failure of any new enterprise.

Question	Yes	No	Maybe
Am I willing to spend as much effort in marketing as in production?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is "selling" a new product to a customer something I'm comfortable with?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is having people "drop in" at the farm something I can tolerate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there several promising customers who could be pursued?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Will I have to do the major part of the marketing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Will it require a lot of effort to prepare the product for market?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Many farm products have typically been sold as commodities rather than marketed with a view toward developing greater value delivery and profit opportunities. A commodity marketing strategy may be difficult to sustain for certain alternative enterprises, especially those that may involve specialized market channels. Many alternative enterprises have limited sales potential, emphasizing small, niche markets that may be quickly oversupplied if too many producers enter the market. These are called "*thin markets*" and thin markets are susceptible to wide price swings with over and underproduction. Often the most successful niche marketers are those who zealously develop and guard their market outlets. Skill in marketing will often be the most important success factor in the sustainability of a new enterprise.

Sales and communication skills, good customer relationships, cooperation with other producers, and a determination to successfully develop an enterprise are all resources good marketing people depend on. These resources can be developed, but may require some time and patience. Truly different and innovative enterprises will likely involve a commitment to product and market development; working with customers to communicate the features and benefits of the product.

Another key factor in marketing products includes product differentiation. Manufacturers of most consumer goods recognize the importance of setting their product apart from all others by the use of brand names, advertising, quality differences, and other distinctive features of their product that consumers especially value. Similar opportunities exist to differentiate many agricultural products. Careful research on customer/consumer preferences can reveal some of the more promising unique product features that can be developed. Continuous product improvement, building the marketing effort around valued product features, and having a well defined market plan may be the difference between the ultimate success or failure of the enterprise.

Value added is a general concept that involves developing a product beyond the commodity stage. Product differentiation can be related to this. Opportunities often exist to add value to a particular product. Processing, storing, packaging, delivery and other services, offering a range of product



qualities, and bundling with other products are each examples of ways farmers can create a greater value to certain kinds of products. Customers value additional features that are added to the basic product. In many cases the farmer is in a good position to add value to a product, and can do so profitably. Remember, however, the cost of adding value must be lower than the added value to increase profits.

Not all marketing channels are the same or offer opportunities consistent with the goals the farmer may have for an enterprise. Wholesale, retail, co-ops, contracts, and direct sales (on- or off-farm) are just some of the outlets that may be available. There are unique benefits and costs associated with each channel, and each channel must be evaluated for its current marketing suitability and profit potential.

The first **MARKETING WORKSHEET** allows the farmer to rate some market factors and opportunities. The second worksheet helps explore market development needs and value-adding opportunities. The third worksheet asks about some additional product considerations.

The final **MARKETING WORKSHEET** allows for comparison of several different markets. Wholesale markets, larger volume distribution and sales to firms that resell and redistribute the product to retailers, are quite different from direct farmer-to-consumer or on-farm kinds of markets. Many different marketing channels exist, each with distinctive product and service needs, opportunities, and challenges. Specific wholesale markets can include selling through brokers, marketing cooperatives, or other individual firms that deal with a variety of retailers. Direct markets can include farmer-to-retailer, institutional markets, such as restaurants, hotels, hospitals, schools, and businesses, and farmer-to-consumer, such as farm markets or subscription delivery. There are additional innovative ways to market product right on the farm, including pick-your-own and entertainment farming.

The worksheet should help assess the advantages and disadvantages of various marketing channels. Each channel will have various features commending it, but will also have certain limitations. Different marketing channels may be more suitable for different stages of the long-term enterprise development process. The proximity of the farm to a market, the reputation of key firms or persons involved, and the degree of farmer-customer interaction can each be key features toward evaluating the relative attractiveness of the different channels. There are typically a variety of fees that correspond to the different channels. Gain full knowledge of these fees while developing a marketing strategy.

Prices received by the grower often vary widely across marketing channels. Research on historical prices, trends, and reasonable estimates of upper and lower bounds should be included here. It may be difficult to get good price information for truly unique products that have little market history. Still, dialogue with prospective customers in selected markets should provide means for making an estimate. A reasonable assessment of the sales volume that could be moved through different channels will help to identify a total revenue estimate. The total revenue potential from on-farm sales of a product may be quite limited compared to the potential of a marketing cooperative despite the higher price that might be found through on-farm sales.

Partners should be chosen carefully for any business venture. Many new enterprises are inherently risky. Finding firms or partners with a history of successful marketing experience can minimize some of the marketing risk. Growth potential within a particular marketing channel should also be considered and compared to the growth objectives and goal the farmer has for the enterprise in general.

Different marketing channels offer different degrees of value-adding opportunity for the farmer. This may be an important consideration in which marketing channel to choose. Long-term goals for the



product may eventually include additional processing, packaging, developing additional related products or moving into related but different market channels. The marketing worksheets include sections for identifying promising value-adding opportunities comparing these across different marketing channels.

A good marketing program will feed knowledge about key consumer preferences back into a product improvement program. Quality improvements through new variety research, new production or processing techniques, or better post-harvest handling can translate into a strong market development program. Product development that is responsive to customer needs builds in a competitive advantage for the enterprise. Partners that can assist in the on-going product development process need to be identified.

The creation of new market opportunities may require partnership with other producers. Certain market channels may require larger volumes or longer season deliveries than can be provided from an individual operation. Steady markets that pay well can be developed in many cases when desired delivery volume, timing, and quality can be worked out. This may involve joint marketing efforts through newly formed cooperatives or associations. The development of these markets can be critical when smaller direct farmer-to-consumer markets become saturated.



Enthusiasm

<i>The E in PRIMER stands for Enthusiasm. It perhaps could also stand for emotion or entrepreneurial ability.</i>	Question	Yes	No	Maybe
	Is this something I will enjoy doing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is there enough variety in the production and marketing activity to keep this interesting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is this something I can get better at with practice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Few endeavors in life or in business are going to be successful if enthusiasm is missing from the equation. Liking what you do is a key to being good at it. On the **ENTHUSIASM WORKSHEET** list three good reasons for starting up your new enterprise. You may have more than three, but you should have at least three good reasons. In the optimism of planning a new enterprise, it may be difficult to think of reasons for getting out of business. However, now is the time to set some benchmarks that would help you know when it's time to call it quits. Weeks, months, or even years into an endeavor your judgment may be clouded by the investment of time, dollars, and emotion that has gone into your enterprise. Sunk costs never provide a very good basis for decision making, but sunk costs along with a strong dose of pride and tradition have kept many farmers in business long after the economic conditions have suggested otherwise.

On the **ENTHUSIASM WORKSHEET** list three good reasons for getting out of (or not getting into) this enterprise. During the evaluation stage you are likely to be as objective as you will ever be. Give serious thought to these reasons and keep them in mind should the enterprise not turn out to be quite as good as expected. Remember that while enthusiasm and strong emotions can be beneficial as motivational factors, strong emotional ties to an enterprise can also cloud the objective judgment of the best managers.

The final component of the **ENTHUSIASM WORKSHEET** is a listing of goals for the new enterprise. While the goal exercise is found near the end of the PRIMER worksheets, it really suggests one of the first questions that should be asked of any new endeavor, "Why do I want to do this?" A good set of specific, measurable, and attainable goals will help answer this question. There should be short, intermediate, and long run goals for the enterprise and these goals should be reviewed at least annually to assess progress or to allow for revision.

Enthusiasm and progress toward goals can sometimes be difficult to observe or measure. However, successful managers almost always have a clear picture of where they are headed, they enjoy what they do and, they work hard at it.



Risk

The final R in PRIMER is for Risk. This may include production, financial, or marketing risk.

Question	Yes	No	Maybe
Is this enterprise adaptable to my area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there significant sources of production risk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there significant sources of financial risk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there significant sources of marketing risk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Many new enterprises or modifications to conventional enterprises are often referred to as alternative enterprises. Alternative enterprises differ from traditional, or conventional, enterprises in that they are usually subject to more production and market risk. These risks also translate into financial risk as lenders view nontraditional enterprises as greater credit risks. In addition, few alternative enterprises have the risk dampening effects of government programs to offset wide swings in production and price. There may be legal risks associated with new enterprises in the form of licensing and taxing requirements along with local, state, or federal regulations. Human risks relating to liability issues, labor quality and quantity, and managerial ability should also be considered.

Riskier enterprises require different risk management strategies. Diversification, irrigation, insurance, marketing plans, contracts, credit reserves, and low debt loads are only a few strategies that should be considered in evaluating and adopting new enterprises. Keep in mind that the more unusual or obscure the enterprise, the riskier it will be. The **RISK WORKSHEET** suggests some production, financial, and market risks that should be considered. Some strategy should be in place to deal with each of the risks that are associated with the new enterprise.



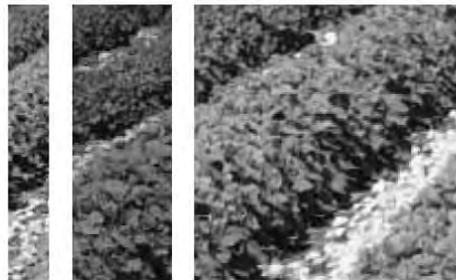
Conclusion

Successful farmers have always identified the enterprises that offer them the best combination of profit, stability, and satisfaction for the resources available on their farm. Successful farmers will continue to seek and find the next best alternative available to them. It may be an established enterprise with improved management practices or it may be a completely new enterprise with new information requirements, new marketing skills, new risks, and new management practices.

The **PRIMER** evaluation method is a tool to help farmers select the right enterprises for their farms. However, an understanding of these factors will also assist educators, lenders, policy makers, and agribusinesses as they support or participate with the farmers in new endeavors. Farmers will not be the only ones affected by new alternatives. Extension and vocational educators will also be called on for information about new and different enterprises. Lenders will be asked for investment capital for enterprises about which they have little knowledge of the production or marketing risks involved.

Policy makers will need to understand the implications of new farm products with little or no history in the public policy arena and a limited base of support. Farm input suppliers and purchasers of products will likely be faced with broader inventories and a more diverse clientele with a wider range of needs and desires than ever before. Information demands from all these groups will increase as Kentucky agriculture becomes even more diverse.

Farmers, educators, lenders, agribusinesses, and policy makers will be required to evaluate the new production, market, and policy implications of a changing Kentucky agriculture, whatever the future holds. The **PRIMER** method is one tool to aid that evaluation.





Appendix PRIMER Worksheets

PROFITABILITY 1:
enterprise budgeting

PROFITABILITY 2:
annual and long run cash flow budgeting

RESOURCES:
inventory, activities map, and labor flow

INFORMATION:
sources and costs

MARKETING 1:
rating market factors

MARKETING 2:
market development

MARKETING 3:
additional product considerations

MARKETING 4:
market channels

ENTHUSIASM:
goals and justification

RISK 1:
production and financial risk

RISK 2:
market risk





UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE **Worksheet**

Profitability 1

Use this worksheet to estimate a budget for the proposed enterprise on a per acre, per head, or whole enterprise basis. This generic budget worksheet can be used for crops or livestock.

GROSS RETURNS

Amount _____ times price _____ equals _____

CASH COSTS

QUANTITY

SEED _____	TIMES PRICE _____	EQUALS _____
FERTILIZER _____	TIMES PRICE _____	EQUALS _____
LIME _____	TIMES PRICE _____	EQUALS _____
PESTICIDES _____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
FEED _____	TIMES PRICE _____	EQUALS _____
VET SUPPLIES _____	TIMES PRICE _____	EQUALS _____
MINERAL _____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
FUEL _____	TIMES PRICE _____	EQUALS _____
ELECTRICITY _____	TIMES PRICE _____	EQUALS _____
WATER _____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
HIRED LABOR _____	TIMES PRICE _____	EQUALS _____
MACHINE HIRE _____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
MARKET FEES _____	TIMES PRICE _____	EQUALS _____
PACKAGING _____	TIMES PRICE _____	EQUALS _____
TRANSPORTATION _____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____
_____	TIMES PRICE _____	EQUALS _____

TOTAL CASH COSTS

GROSS RETURNS MINUS TOTAL CASH COSTS

EQUALS RETURN OVER CASH COSTS

This is the amount left over to pay loan payments, depreciation on capital assets, investment on owned capital, payments for family labor, and a payment for management and risk taking.



Profitability 2

Use this worksheet to estimate the amount and timing of cash flowing into and out of the business. One table is for a typical year, the other is for projects whose cash flows will vary each year.

ANNUAL CASH FLOW BUDGET (TYPICAL YEAR)

ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1. BEGINNING BALANCE												
2. PRODUCT SALES												
3. SERVICE REVENUES												
4. CAPITAL ASSET SALES												
5.												
6.												
7. TOTAL CASH INFLOW												
<hr/>												
8. PURCHASED INPUTS												
9. LABOR												
10. UTILITIES												
11. CAPITAL ASSET PURCHASES												
12.												
13.												
14. TOTAL CASH OUTFLOW												
<hr/>												
15. NET CASH FLOW (7 MINUS 14)												
16. PLUS LOAN PROCEEDS												
17. MINUS LOAN PAYMENTS												
18. ENDING BALANCE												

LONG RUN CASH FLOW FOR MULTI-YEAR PROJECTS

ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1. BEGINNING BALANCE												
2. PRODUCT SALES												
3. SERVICE REVENUES												
4. CAPITAL ASSET SALES												
5.												
6.												
7. TOTAL CASH INFLOW												
<hr/>												
8. PURCHASED INPUTS												
9. LABOR												
10. UTILITIES												
11. CAPITAL ASSET PURCHASES												
12.												
13.												
14. TOTAL CASH OUTFLOW												
<hr/>												
15. NET CASH FLOW (7 MINUS 14)												
16. PLUS LOAN PROCEEDS												
17. MINUS LOAN PAYMENTS												
18. ENDING BALANCE												



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Resources

Use this worksheet to inventory available resources and to estimate resources to be purchased or hired.

INVENTORY

ITEM	AMOUNT/SIZE/CAPACITY	CURRENTLY AVAILABLE	TO BE PURCHASED/HIRED	
			SOURCE	COST
LAND _____				

BUILDING/FACILITIES				

MACHINERY _____				

WATER _____				

START-UP CAPITAL _____				

HUMAN RESOURCES				

MANAGEMENT ABILITY				

MARKETING ABILITY				

EXPERIENCE				

ACTIVITIES MAP PLACE AN "X" IN THE APPROPRIATE TIME PERIOD

TASK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PLANNING START-UP _____												
SITE PREPARATION _____												

HARVEST _____												
MARKETING _____												
CLEAN UP _____												

LABOR AVAILABILITY AND REQUIREMENTS

LABOR (HOURS)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL AVAILABLE FAMILY AND HIRED LABOR _____												
CURRENT LABOR REQUIREMENT _____												
BALANCE AVAILABLE FOR NEW ENTERPRISE _____												
LABOR REQUIREMENT FOR NEW ENTERPRISE _____												
SURPLUS OR DEFICIT _____												



Information

Use this worksheet to determine information needs, available resources and potential costs of information.

PRODUCT INFORMATION: Books, extension publications, magazines, internet, etc.

DESCRIPTION	SOURCE	COST

FINANCIAL INFORMATION: Balance sheets, income statements, cash flow budgets, etc.

DESCRIPTION	SOURCE	COST

MARKETING INFORMATION: Potential outlets, input suppliers, price trends, etc.

DESCRIPTION	SOURCE	COST

HUMAN RESOURCES: Consultants, specialists, attorneys, veterinarians, etc.

NAME	ADDRESS	PHONE	COST

EDUCATIONAL OPPORTUNITIES: Trade shows, extension meetings, short courses, etc.

DESCRIPTION	DATE	LOCATION	COST



UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE Worksheet

Marketing 1

Rate the following market factors or opportunities on a scale of 1 to 7.

	LITTLE OR NONE				CONSIDERABLE		
	1	2	3	4	5	6	7
MARKET SATURATION							
CONSUMER AWARENESS							
PRICE PREMIUM FOR KENTUCKY PRODUCT							
REGULATION, INSPECTION, GRADING							
EXISTING GRADING AND DISTRIBUTION INFRASTRUCTURE							
OPPORTUNITY FOR BRANDING							
OPPORTUNITY FOR SERVICE ADD-ONS							
OPPORTUNITY TO DIFFERENTIATE PRODUCT							



Marketing 2

MARKET DEVELOPMENT

Is this product relatively new to most consumers within your targeted markets? YES NO

List the top three factors necessary to strengthen this product within your targeted market.

1. _____
2. _____
3. _____

Will you need to be involved in consumer product promotion or education? YES NO

If so, what approaches may be useful to build consumer awareness and interest in your product?

What partners may have a shared interest in developing market opportunities for this product?

Other producers, local retailers, consumer groups, others?

Is market development dependent on shared marketing with other products? YES NO

Where might there be opportunities for cooperative effort?

Are you willing to work with other producers to develop new market opportunities? YES NO

VALUE ADDING OPPORTUNITIES

What are the three most promising value-adding opportunities that you may eventually pursue?

1. _____
2. _____
3. _____

UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE **Worksheet**

Marketing 3

ADDITIONAL PRODUCT CONSIDERATIONS

What special quality considerations do you anticipate will be expected from your major targeted markets?

What opportunities are available to improve features of the product through on-going product development?

Where are product improvements likely to come from? University research? Own farm research? Other?

Is the success of this product dependent on consumers recognizing distinctive features about the product?

Identify the three features you think customers/consumers value the most about your product.

1.

2.

3.

How are these features promoted?



Marketing 4

Use this worksheet to compare alternative marketing channels.

PRODUCT & MARKET CHARACTERISTICS	TARGET MARKETS		
	WHOLESALE MARKETS	DIRECT MARKETS	ON FARM/ PICK YOUR OWN
Location			
Key Firm(s)			
.....			
Number of farmer/customer transactions per year			
Days/year devoted to marketing			
MARKETING FEES (\$ total)			
Storage			
Packaging			
Handling & delivery			
Advertising			
Insurance (marketing related)			
Licensing/Legal fees			
Membership fees			
Other			
Total Marketing fees			
PRICES			
Historical average (3-5 years)			
Lower bound			
Upper bound			
Target sales volume (units)			
Total revenue potential			
MARKET RELIABILITY			
Years firm or market has been established			
Growth potential			
VALUE-ADDING OPPORTUNITIES FOR THE FARMER (limited, some, many)			
Additional customer services			
Special packaging			
Delivery			
Processing			
Preserving			
Special promotion			
Other			

UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE **Worksheet**

Enthusiasm

Use this worksheet to determine how badly you want to get in and how badly you want to stay in.

List three good reasons for getting INTO this enterprise.

1. _____
2. _____
3. _____

List three good reasons for getting OUT of (or not getting into) this enterprise.

1. _____
2. _____
3. _____

List your specific goals for this enterprise:

1st Year _____

Within 5 years _____

10 years _____



Risk

Use this worksheet to anticipate what can go wrong and what can be done about it.

PRODUCTION RISKS

Is this enterprise sensitive to changes or extremes in weather conditions? If so, how?

Local climate conditions you should know for your location:													
Spring							Fall						
50% Frost probability rate	_____												
10% Frost probability rate	_____												
Average annual rainfall	_____												
Average monthly rainfall	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	

Describe your strategy for prolonged drought.

What are your major weed, insect, or disease problems?

What cultural, mechanical, or chemical control practices are available?

Will you need to use pesticides? YES NO

Do you have a current pesticide certification card? YES NO

Will the success of the enterprise be jeopardized if a particular machine breaks down at a key time? YES NO

Do you have backup equipment? YES NO

Is this enterprise dependent on the availability of reliable labor? YES NO

FINANCIAL RISKS

How much capital will be borrowed?

What are the terms of the loan?

Length? _____

Interest Rate? _____

Periodic payment? _____

How long will it take for profits from this enterprise to pay back the initial investment cost? _____

Financial measures you should know for your business:

Liquidity ratio _____

Debt/Asset ratio _____

Return on Assets _____

Net farm income _____

Repayment capacity _____

Are other enterprises or off-farm income available to offset negative cash flows due to crop failure or low prices? YES NO



For More Information consult:

NC Specialty Crops Program: Provides crop production information, marketing reports and links to articles published on-line. Available at http://www.cals.ncsu.edu/specialty_crops/

Jeanine Davis' Organic and Alternative Crops Resources: Providing access to up-to-date, practical information on selected crops and agricultural enterprises. Available on-line at <http://www.ncherb.org> and <http://www.ncorganic.org>

Appalachian Sustainable Agriculture Project: A non-profit organization in Western North Carolina dedicated to marketing local agricultural products. Publishes a local food guide. Good research information. Available on-line at: <http://asapconnections.org>.

NC Department of Agriculture & Consumer Services Marketing Division: Promotes the sale of NC products, develops and expands markets, reports farm market prices on major commodities, and determines and certifies official grades of farm products. Available on-line at <http://www.agr.state.nc.us/markets/index.htm>

University of Kentucky - New Crops Website: Information about production and marketing of alternative crops. Available on-line at <http://www.uky.edu/Ag/NewCrops/>



All photos by Jeanine Davis unless otherwise indicated. Appalachian Sustainable Agriculture Project can be found at <http://www.asapconnections.org>.

Disclaimer: This information and decision tools are provided as aids to help farmers make informed decisions. Use of any of these materials is not a guarantee that the farmer will grow a successful crop or make a profit.

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