PART I: SITUATION AND METHOD OF STUDY

CHAPTER ONE
SITUATION

1.1 Motivation for Study

1.1.1 Introduction

Interest in value-added production, specialty crops, and agritourism has been consistently increasing among the mainstream agriculturalists in Virginia. (NASS, 15) Although the growing interest in diversified agriculture[1] has not been captured statistically, anecdotal evidence exists via the increasing number of requests for information on new enterprises in VCE offices, and the increased coverage for new types of enterprises in agricultural media.

1.1.2 Purpose of Study and Stakeholders in the Study

This study sought to gain a better understanding of the key factors and motivations for agricultural producers as they decide to diversify the enterprise mix of their farm businesses, and outlines the implications as they affect key stakeholders. The primary stakeholders addressed by this study are agricultural producers and Virginia Cooperative Extension (VCE). Other stakeholders addressed include lenders, agribusiness, and public policy makers. Although the consumer is also a stakeholder in this process, they are considered as beyond the scope of this study.

Agricultural producers have the largest stake in the decision to diversify their farm. In many cases, the future financial viability of the farm may be at stake. As farm enterprise diversification becomes more important among the agricultural community, and an increasing number of producers are faced with making decisions about enterprises in which they may have little previous experience, producers will be in need of the knowledge of how they should diversify their farm businesses.

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[1] Diversified agriculture, farm enterprise diversification, and farm diversification are defined by this study as the act of adding one or more unique enterprises to the farm business. A farm enterprise is any unique crop, livestock type, service, activity, or other product that is in some way related to agricultural production.

A detailed understanding of the motivation of the producers, as well as the specific issues they face is critical in order for VCE to properly address the issues faced by agricultural producers when they seek to diversify their farm businesses. Research is necessary in order to identify these issues, as well as to developing strategies for addressing the issues. These issues may not be limited to simply economic or business related, but may very well have cross-cutting implications into other agricultural fields. VCE programs in agriculture have traditionally focused on the production or marketing of specific commodities. Programs that focus specifically on farm diversification are rare, and many agents and specialists lack the research-based tools to assist farmers facing these decisions. This study also investigates areas of commonality among producers who diversify their farm businesses, as well as areas where individual producers are unique, with the purpose of identifying areas in which generalized educational programs will best meet the needs of producers and in what areas an individual approach is necessitated.

As farm businesses change from an operation with a few similar enterprises to more diverse operations, agricultural suppliers often need to change the products and services that they offer to meet the emerging needs of new enterprises. Local markets and processors that currently import raw materials may find it desirable to encourage production of their needed commodities inside of Virginia in order to reduce shipping costs, to increase freshness, or to take advantage of growing public sentiment for locally grown products. New opportunities may exist for the agribusinesses that are progressive in addressing the needs of diversified agricultural operations.

In order to adequately meet the needs of their customers, lenders need to keep themselves abreast of the issues currently facing agricultural producers. As producers decide to diversify their farm businesses, they may be asking for financing of enterprises with which they have little experience. Lenders have a vested interest in making sure that their customers have continuing success with their operations. There may be a need to develop different credit packages and services for producers looking to diversify. In order to facilitate the development of services that will meet the needs of producers planning to diversify, lenders need to understand the motivations of the producers.

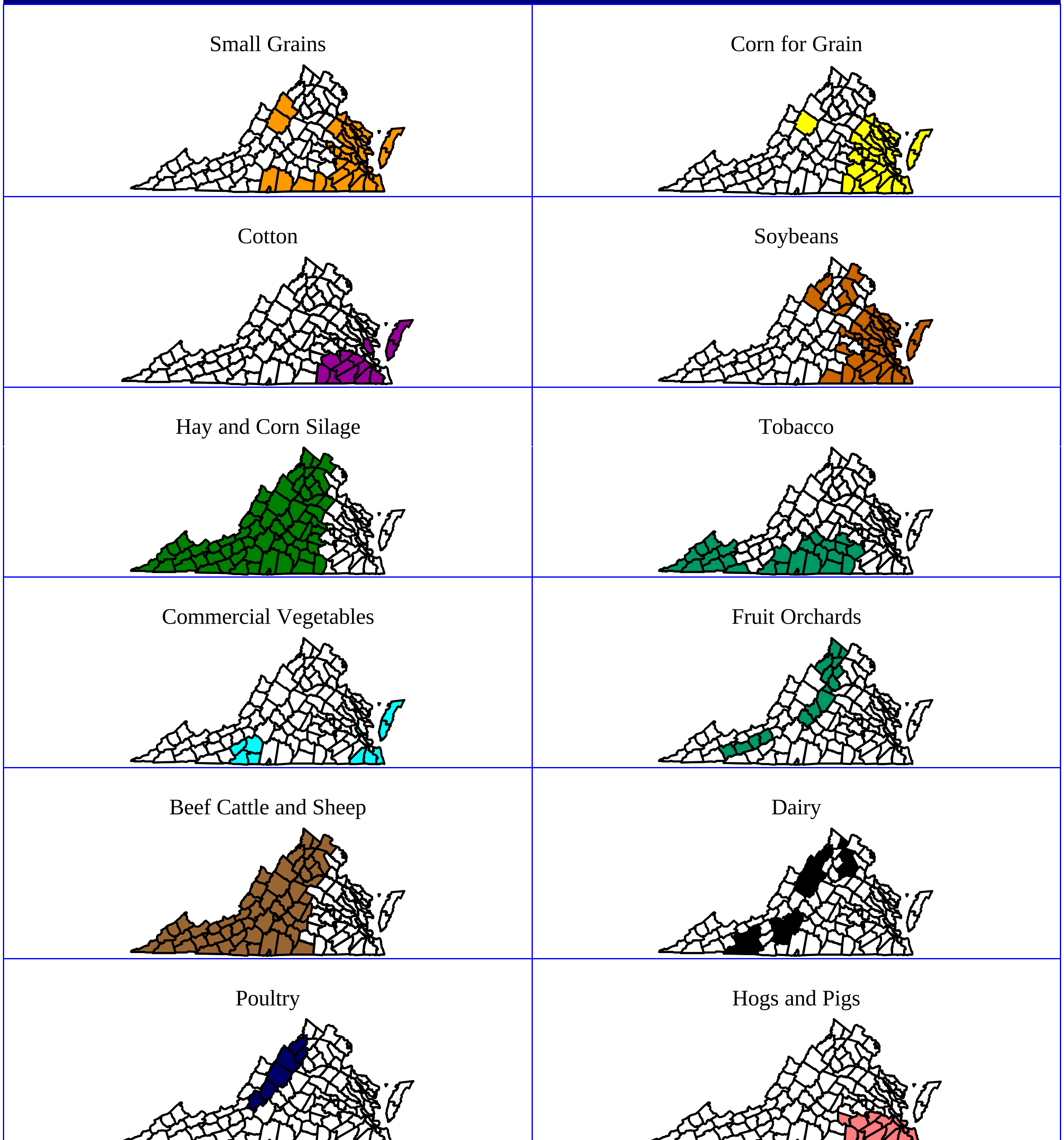
1.2 Characteristics of Virginia Agriculture

1.2.1 Regional Commodity Specialization

Virginia farm businesses have increased in size in terms of acreage and financial assets, and have gone from each producing several different commodities to focusing on just a few similar commodities or enterprises through the years. (NASS, 15) Additionally, production has specialized regionally in Virginia. The various regions of Virginia each have their own unique agricultural specialties; based primarily on the presence of local markets, soil type, climate, and tradition (Figure 1). Certain regions in Virginia also have a competitive and / or comparative advantage over another region due to soil type and market access. For example, the Eastern part of Virginia is largely comprised of soil types that are much better suited for intensive crop production than other parts of the state. The port facilities in Southeastern Virginia give producers in that region access to export markets not necessarily available in other parts of the state.

There are downsides to being specialized to the point of producing just a few similar commodities. In times of depressed markets, specialized producers often have no choice but to produce crops at breakeven or loss levels. Increased environmental concerns with large-scale confined livestock operations have created regulatory issues for producers, and in some cases, even local moratoriums on production. The increasing cost of land, particularly in the urban-rural transition areas, has limited the scope to which many producers can expand. (Section 1.24) Some agricultural producers in Virginia are now reversing the commodity specialization trend of the past several decades and are beginning to diversify their farm businesses.

Figure 1: Primary Production Areas for Major Farm Commodities of Virginia



Source of Data for Figure: Virginia Agricultural Statistics Service, www.nass.usda.gov/va

Table 1: Value and Ranking of Selected Principal Commodities Raised in Virginia (1999)

Crops	Cash Receipts[1]		Value of Production[2]		Acres Harvested	
	Value ($1,000)	*Rank*	*Value ($1,000)*	*Rank*	*Value ($1,000)*	*Rank*
Tobacco	155,883	1	160,036	2	38,300	8
Peanuts	59,983	2	59,983	3	76,00	6
Soybeans	51,137	3	53,460	4	440,000	2
Tomatoes, Fresh Market	41,496	4	41,496	6	3,900	14
Apples	39,977	5	38,175	8	17,000	9
Cotton	38,855	6	33,912	7	108,000	5
Corn for Grain	34,533	7	45,862	5	280,000	3
Wheat, Winter	31,231	8	27,360	9	240,000	4
Hay	22,998	9	185,680	1	1,270,000	1

Livestock[3]	Cash Receipts		Number of head	
	Value ($1,000)	*Rank*	*Number*	*Rank*
Broilers	473,976	1	4,641,000	1
Cattle and Calves	324,546	2	1,600,000	2
Milk, Wholesale	292,648	3	119,000	4
Turkeys	220,752	4	Not available	
Eggs	62,319	5	Not applicable	
Hogs	40,882	6	370,000	3

Source: Virginia Agricultural Statistics Bulletin and Resource Directory, 1999, published September 2000. www.nass.usda.gov/va

[1]Cash receipts are defined as actual cash payment received for the sale of a good.

[2]Value of production is the estimated value of all of the good produced. Value of production is important to note for goods such as hay, which are usually used on the farm where it is produced, rather than sold.

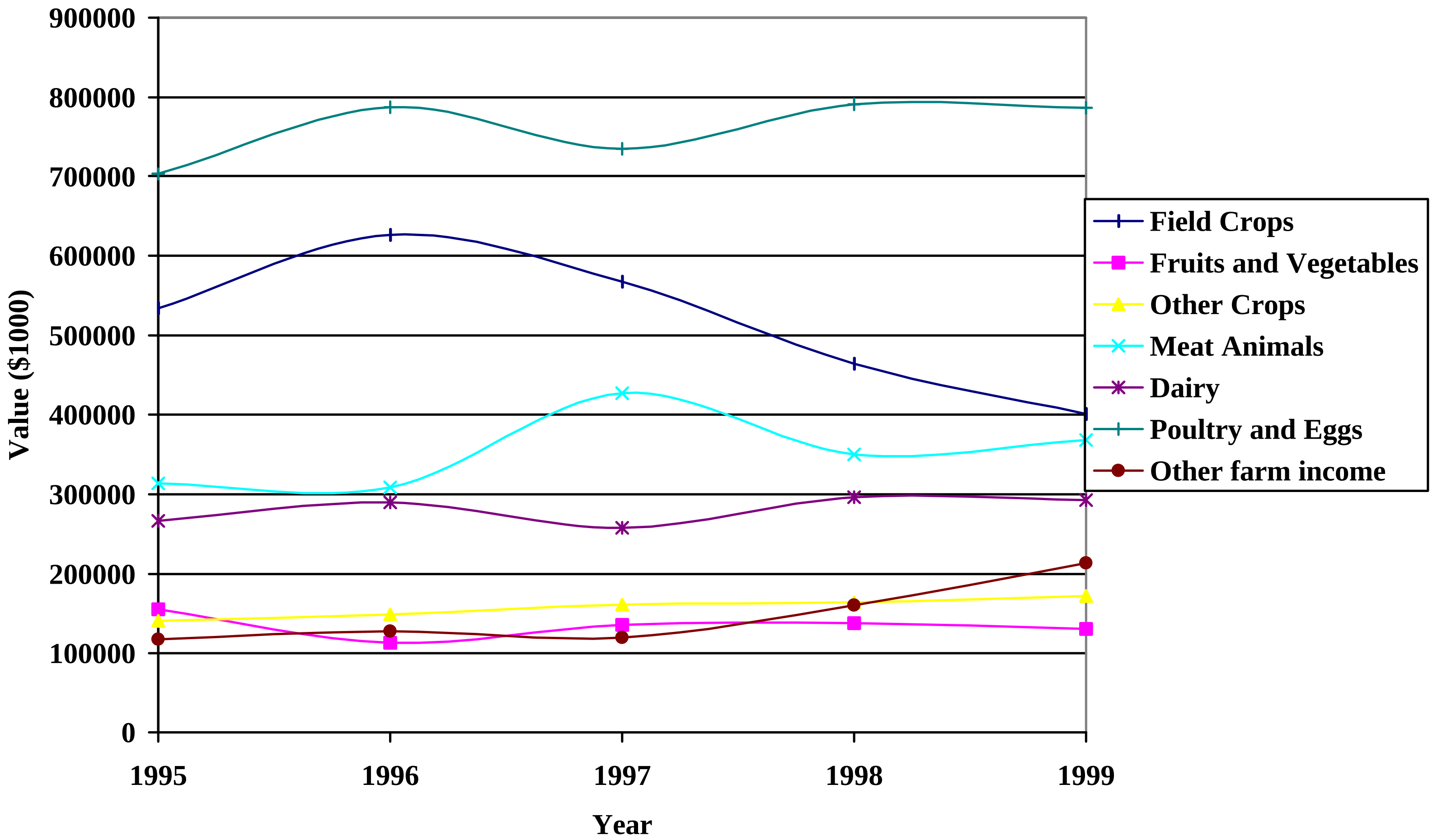
[3]Value of production data was not available for livestock enterprises.

1.2.2 Trends in Value of Production

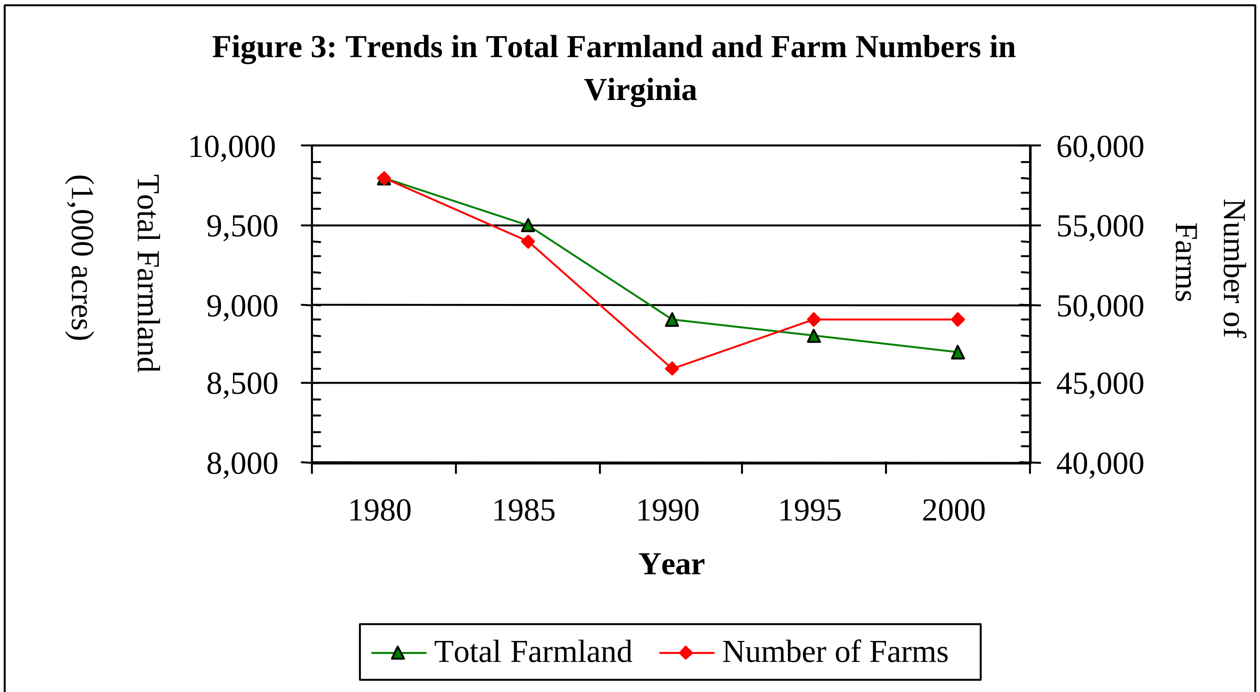
According to the Virginia Agricultural Statistics Service (VASS), during the time period from 1995 through 1999, the value of field crop[1] production in Virginia, in terms of the function of yield times price, has seen an overall downward trend. Vegetables and fruits have fluctuated annually during this time period. It should be noted that the value of crops in the category of “all other crops” has increased over the same time period. This includes the greens industry, wine-grapes, and other minor crops. The value of livestock production in the state remained relatively stable over this same time period, with only seasonal up and down fluctuations. The category of “other farm income” has increased during this period. These trends are illustrated in figure 2.

[1] Field crops include: tobacco, peanuts, soybeans, cotton, corn, wheat, hay, potatoes, barley, sweet potatoes, and rye.

Figure 2: Trends in the Value of Virginia Farm Products



1.2.3 Trends in Farmland and Number of Farm businesses



1.

The number of farm businesses[1] in Virginia has been relatively stable over the past ten years, after a decline in the eighties. (VASS, 83) Over the same time period, farm acreage has been stable to slightly decreasing (Figure 3). There has been a slight decrease in the average farm size in Virginia. In 2000, the average farm size in Virginia was 172 acres, which is the smallest that value has been since 1980. This is not to imply that farm profitability has either decreased or increased as a result of a decrease in farm size. It should be noted that most full-time farm businesses, or farm businesses where at least one of the principle operators uses the farm as their sole employment, are much larger than this size. Most full-time farm businesses range from 300 to 1000 acres, with the largest farm businesses encompassing over 5,000 acres. (VASS, 83) 1.2.4 Farm Assets and Value of Farmland

Real estate is the most expensive asset held by most Virginia farm businesses. In 1988, total farm assets in Virginia were worth over $18 billion, and of this, real estate comprised nearly

[1] The Virginia Agricultural Statistics Service defines a single farm unit as a place that normally sells at least $1000 of agricultural products.

$15 billion. Farm machinery comprised the next highest valued asset, at nearly $1.5 billion dollars. Total farm debt in Virginia was consistently been between $1.8 billion and $1.9 billion between 1995 and 1998, and there was a slight increase every year. Farm debt for the purchase of real estate decreased during this time period, indicating that farm debt for reasons other than farm expansion has been increasing. (VASS, 83, 84)

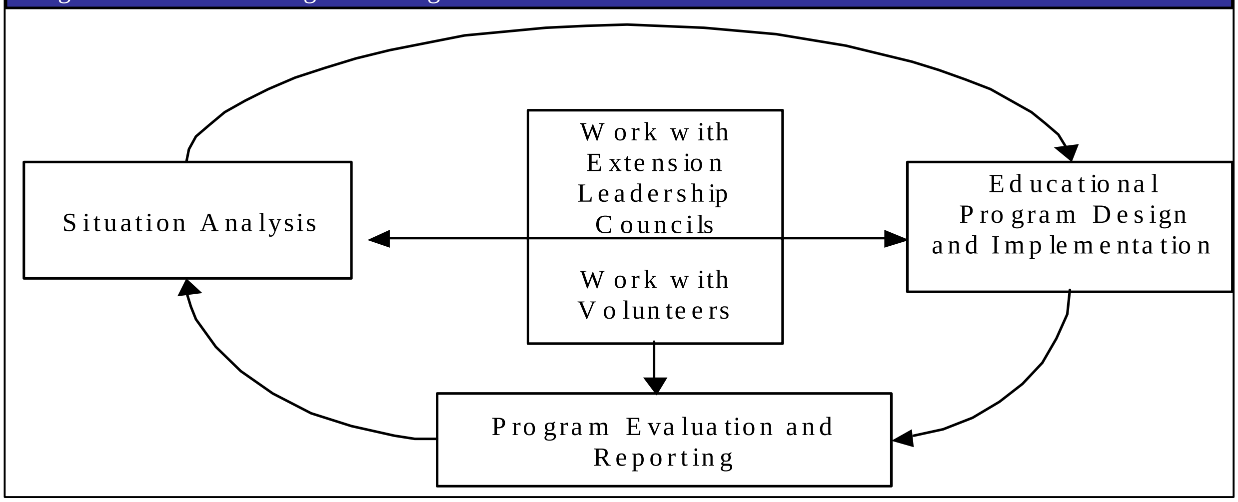
VASS reports that the average value of land and buildings on Virginia farm businesses has increased every year between 1993 and 2000. There are both positive and negative aspects to this trend for producers. The value of the land that they currently own is appreciating in value, thereby increasing their net worth and increasing access to capital. However, as land values increase, producers find it increasingly difficult to expand their farm acreage through additional land.

Table 2: Farm Real Estate: Land and Buildings average dollar value per acre.						
	1995	**1996**	**1997**	**1998**	**1999**	**2000**
Virginia	1,720	1,840	1,840	1,880	1,920	2,130
48 States (avg.)	844	887	926	974	1,020	1,050
Source: Virginia Agricultural Statistics Service, 1999, www.nass.usda.gov/va[1]						

The average farmland value in Virginia is approximately double the value of farmland values nationwide across the last five years. There are competing interests for land in Virginia, such as development and recreational uses, which have helped to drive values higher than the value of the land for solely agricultural uses.

1.3 VCE Educational Programming

Figure 4: VCE Programming Model



Source: Virginia Cooperative Extension Educational Programming Unit
www.ext.vt.edu/vce/educprogspt/prgmdev/process/process.html

Information and knowledge is passed along to producers from cooperative VCE by means of various educational programs throughout the state. An educational program consists of a range of methods for delivery of research-based information from the university to the targeted clientele. Programs can range from periodic mass mailings or news releases to public seminars and workshops to in-depth targeted one-on-one meetings. Programs are developed according to the VCE programming model. (Figure 4)

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[1] Yearly data not available for both categories prior to 1995

CHAPTER 2
METHOD

2.1 Justification

This study used the case study method of analysis. As defined by Yin (13), a case study is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." The primary questions investigated by this study were "Why do agricultural producers diversify their farm businesses?" and "What resources are needed and used by agricultural producers when they diversify their farm businesses?", which could be re-phrased to say "How and why do agricultural producers diversify their farm businesses?" The case study method is particularly suited to questions of the "how" and "why" nature. (Yin, 118)

2.2 Case Design

The multiple case study design has been used in this study. The multiple case design uses multiple businesses in a similar industry, rather than a single business. A single case would not adequately explain the questions that we are attempting to answer, as this study did not focus on a unique case, but rather focuses on developing a representation of the questions faced, and decisions made, by the typical agricultural producer. As asserted by Kennedy and Luzar (586), the single case design is most appropriate for the critical case, the extreme or unique case, or the revelatory case. The critical case is used to refute, confirm, or extend existing theory. The extreme or unique case describes the situation that is so unique or rare that it does not conform to any existing patterns. The revelatory case used when an opportunity exists for observation of a phenomenon that has not been previously observed.

Seven individual farm businesses in Virginia were interviewed in total to comprise the cases used in this study. The farm businesses included in this study were purposely varied by size, principle commodity, demographics and location.

2.3 Focus Group

A focus group was used to assist in defining and framing the issues to be discussed with the farm businesses participating in the case study. The participants in the focus group were two undergraduate students in agricultural economics and animal science, one graduate student in agricultural economics, two farmers involved in diversified agricultural operations, and a regional sales manager for a major agricultural lending and leasing firm. Participants were selected through personal contacts, faculty at Virginia Tech, and agricultural agents with VCE. Participants were asked to fill out a questionnaire that described in detail their past, current, and anticipated future agricultural experiences, as well as limited demographic information. The questionnaire and responses are provided in Appendix I. No financial compensation was provided to the focus group participants.

The focus group consisted of two exercises. The first exercise was a facilitated discussion of the motivation, key factors, and skills necessary for farm diversification. Participants were asked twenty-two questions (figure 4) and encouraged to discuss their answers thoroughly.[1]

In the second exercise, participants were asked to provide a list of specific questions to be asked of case study subjects. The questions were collated according to whether the question should be asked in the beginning, middle, or end of the interview. For the final step in the second exercise, participants ranked the various questions by importance and by appropriateness of the questions. The resulting question lists were then transcribed and duplicate questions were eliminated. (See Appendix II)

The transcript of the first exercise and the list of questions of the second exercise were then analyzed for similar themes. Similar questions and comments were placed together, and ordered according to the rank and order determined in the focus group. From this reformatted transcript, the script of questions for the case studies was formed. Where key questions were not addressed adequately in the focus group, questions were added to the script. However, the majority of questions for the case study were derived directly or indirectly from the focus group discussion. The list of questions used in the case study interviews is provided in Appendix III.

[1] The discussion was audio-taped and written notes were taken. See Appendix II.

Figure 5: Questions for the Focus Group:

Motivation for Decision

1. What is Farm Diversification?
   1.1. Why would a farmer want to diversify?
      1.1.1. How would a farm decide to diversify its farm operations

Key factors in the Decision

2. What are the key factors in the decision to diversify a farm?
   2.1. What are the questions that a farm manager(s) should ask before deciding to diversify?
      2.1.1. What are the relevant financial issues with respect to farm diversification?
      2.1.2. What are the relevant family issues with respect to farm diversification?
   2.2. Would the relevant issues vary with different farm businesses?
      2.2.1. What are the factors that would cause the issues to vary?
      2.2.2. What effect would business structure have on the decision?
   2.3. Most or all of you have had experience in some way. What were the key factors in your decision, or the decisions that you have witnessed?

Tools and Skills Necessary to Diversify

3. Where would a farmer go for information or help with respect to making this decision?
   3.1. What role does information play in the decision to diversify?
   3.2. What types of help would you seek?
4. What equipment or skills would a farmer need in order to make this decision?
   4.1. How would this vary by farm?
   4.2. What skills would be necessary for a farmer to have prior to deciding to diversify?
   4.3. How important is the Internet in this decision today?
5. What are the education traits that would be needed for a farmer who is considering diversification? (Include formal and non-formal education… i.e. college degree vs. attending extension meetings, reading trade magazines, etc.)
   5.1. How important is formal education in farm diversification?
   5.2. How important is non-formal education in farm diversification?
6. If you were considering some type of diversification on your farm, what questions would you want to ask of a farmer whom has already done something similar?

2.4 Case Selection

In order to maintain a good representation of Virginia farm businesses, not all farm businesses that were suggested for the study were selected. Farm businesses that were very unique and therefore would not be a representation of a typical farm were excluded from study. All of the farm businesses studied had or are currently planning to diversify their farm businesses in some way. Farm businesses were also selected based on the geographic location and primary commodity produced. Priority was given to selecting farm businesses that raised crops or livestock that were among the principle crops or livestock of the region. Table 3 summarizes the primary characteristics of the seven farm businesses used in the study.

2.5 Contact of Participants and Case Interviews

2.5.1 Initial Contact of Participants

The participating farm businesses were initially contacted either via telephone or personal contact. In some cases, the individual referring the farm made the initial contact in order to establish a level of initial trust. The purpose of the study was explained to participants and what would be expected of them for participation. Interviews were scheduled either in the initial contact or subsequent contacts. No financial compensation was provided to the participants.

Table 3: Summary of Case Study Farm Businesses

Geographic Region	Principle Commodity or Commodities	Number of Principle Owners	Size of Farm (acres)	Diversified activities
Southwest	Dairy	1	250	Produce, pumpkins, beef cattle, agritourism
Northwest	Dairy and apples	3	300	Pumpkins, produce, agritourism
Northwest	Fruit Orchard	4	1000	Retail stand, produce, agritourism
Northern	Dairy, grains	4	1200	Pumpkins, agritourism, beef cattle
Southside	Tobacco, produce	3	750	Produce, agritourism
Central	Hay, tobacco	1	300	Produce, cattle
Southeast	Grain	3	2200	Cotton, strawberries

2.5.2 Case Interviews

Interviews with the farm businesses were scheduled at the farm's convenience, and were conducted on the farm, or at a location of the farm's choosing. All owners and key decision-makers were asked to be present at the interview. This was not accomplished in all cases, due to time conflicts of individuals.

The interview focused on a scripted oral questionnaire that incorporated the questions developed from the focus group response. All farm businesses were asked the same questions in the same order, and the interviewer took notes directly onto the questionnaire form. All interviews were also audio taped to ensure that all comments were captured. The form incorporated checkboxes for likely responses and space for additional comments and notes. (See Appendix IV). When necessary, questions were rephrased for clarification, or explained to the participants. The interviews lasted approximately from one hour and fifteen minutes to two hours to complete. Interviews with multiple family members and business owners present tended to take longer, due to increased discussion of answers.

2.6 Analysis

WinMax pro[1] software was used to analyze the text of the case interviews. The texts of the transcripts of all farm interviews were coded according to selected demographic characteristics, and according to common themes. Each question response and theme segment was further categorized according to the theme or topic of the response. Once the texts were completely coded, trends were identified by analyzing the intersection of various producer traits and themes or topics.

For each code, the program reported the number of coded segments and total lines of text. These numbers helped to provide insight into the relative importance of the various themes, ideas, and topics to the participating farm businesses, and the frequency with which they entered discussion. A text segment is a unique portion of text from an interview transcript that encloses the thought or concept of interest to a particular theme. This is the portion of text that is coded. Since the text segment can vary in length, the reporting of total lines of text encompassed by a code gives the researcher an idea of the total volume of text devoted to that theme. Figure 5

[1] www.winmax.de

illustrates the text coding process. The complete list of codes and sub-codes, along with relative frequencies of each, are provided in Appendix VI. As the results of the study are reported in the following section, the numbers of text segments and lines of text will be reported for themes, ideas, and topics.

It should be noted, that in a qualitative study, the numbers of text segments and lines of text are only a partial indicator of importance. The comprehension of the ideas presented by the case study subjects is critical in making conclusions about the topics being studied. Reliance on occurrence of text segments and lines of text would not give the researcher a clear view of the true situation, since certain concepts would be easier to convey than others, and the relative importance of a concept cannot be measured simply by counting the number of words that it took to convey it in an interview. Therefore, in the presentation of results and implications of this study, care is taken to explain the concepts presented by the participants, in addition to reporting the frequencies of certain themes and ideas.

Figure 6: Example of Coded Text

Question: *Where did you find Information for your new enterprises?*

Code: [Info Source: Extension]
Code: [Info Source: Growers]
Code: [Info Source: Consultants]
Code: {Info Source: Growers}
Code: [Info Source: Conferences]
Code: {Info Source: Growers}

[A lot of extension stuff… I talked with the extension agent actually], about… [for the strawberries, different growers around the area]… also,[we have a scout we use for our cotton, and he was helpful with {some growers down south of here}], and also [at the production meetings it is easy to {find people who are willing to talk about whatever you want to talk about pretty much}]… that was… I guess those were the main places…

PART II: RESULTS

CHAPTER 3

Key Factors in the Agricultural Producer's Motivation for Diversification and Enterprise Selection

Key Factors in the Agricultural Producer's Motivation for Diversification and Enterprise Selection

- Net Farm Income / Profitability of Farm Business
- Risk Management
- Increasing Family Living Expenses
- Sustainable Growth / Future for the Farm
- Desire
- Market Opportunity
- Improve Quality of Life

3.1 Goals and Vision of Diversified Farm businesses

Insight into the motivation of agricultural producers with respect to diversification is provided by the comments made in response to questions about the goals for their diversification projects and the vision for their farm businesses. The primary goal of all participants interviewed was to increase net income / profitability. For one participant, this was the only goal. All of the participating producers thought they would never achieve all of their goals, in that their goals were dynamically enduring with success, in a sort of "reach for the stars" attitude. This theme of continued optimism and forward thinking was prevalent throughout all of the case interviews.

> *"I don't guess that I'll ever reach my goals… well, I guess that you reach goals, but they're always expanding."*

3.2 Factors in the Initial Motivation to Diversify

There was a striking similarity among the farm businesses in this case study with respect to their motivation for diversification. All of the participants in this study cited increased net income or profitability (treated as synonymous terms) as the primary motivation for diversifying their farm businesses. Other factors were also important to participants, but income-related concerns were by far the most important to the farm businesses involved (21 text segments and 131 lines of text). Risk management[1], increased family living expenses, and creating opportunities for the future of the farm were all secondary motivations for farm businesses to diversify. Most participants cited decreasing real prices for the traditional commodities of their farm and increasing real prices of farm inputs as primary factors in needing to increase the income of their farm.

3.2.1 Income Needs

Root income needs were in the form of either household or disposable income needs or the income needs of the farm. In the smaller farm businesses where the farm was not the primary source of income, household or disposable income needs were a stronger determinant than the income needs of the farm. Conversely, in larger farm businesses where the farm was the primary source of income, the income needs of the farm were more of a determinant of the need to increase the net income of the business. A priori, the association of household or disposable income versus business income with off-farm and on-farm income respectively was not expected. It was expected that farm businesses with more off-farm income would have less desire to increase household or disposable income when compared to the income of the farm business. However, analysis of the discussion of producers participating in this study revealed that the household or disposable income needs of the larger farm businesses were met to a basic level of satisfaction, and the desire to increase farm income came from a desire to see the longer term stability of the farm increase. (See inset on next page) Increasing family living expenses was a secondary factor involved in the need to

> *"I think, from what I've seen, the farm comes first and you take what's there to live on…"*

[1] Risk management in this context refers to overall risk, which includes as subsets price risk, yield and weather risk, and other types of agricultural or business risks.

increase income, but was most important as a factor for participants with school-aged children, in conjunction with the farm as the primary source of income.

> *"We don't make enough money or we don't take enough money out of the farming operation… we take enough to live on and put the rest back into the farm… so we're hoping that this will be something that will help us do the college thing.. (for our children)"*

3.2.2 Desire

The simple desire to try something new was a very common factor in all stages of the motivation to diversify (13 text segments and 54 lines of text). While all had a desire to do something different in the form of new activities, the relative urgency to change hinged on other factors, such as income needs, and varied among participants. Desire was key in the decision to diversify rather than specialize and expand an existing farm enterprise.

> *"…obviously, I'd rather be doing it for the heck of it, and be doing so well with other things that I'm doing it just to try something new, but I am trying something new as a way to supplement the farming operation at this point. It's not all because I want to."*

3.3 Factors in the Motivation for Specific Commodity Selection

Participants used two basic strategies for accomplishing an increase in profitability:

1. Increase gross income significantly via high-return enterprises
2. Decrease total costs via better utilization of fixed costs over multiple enterprises

The strategy employed to increase profitability directly influenced enterprise selection. Participants using the first strategy chose value added or specialty crops and direct marketing or agritourism enterprises. Participants using the second strategy chose complementary enterprises, such as adding cotton to a grain production farm or adding vegetables to a tobacco farm. Other factors considered in enterprise selection were:

- Cash Flow
- Risk Management
- Market Opportunity

3.3.1 Cash Flow

Participants from farm businesses with seasonal production, such as grain, fruit, and tobacco farm businesses, cited cash flow as a greater factor in their motivations than did participants with more stable monthly cash flow, such as participants from dairy farm businesses.

Four of seven farm businesses selected specific enterprises based primarily on the timing of when they would receive income from or would be spending money on that enterprise. The remaining participants expressed a need to find enterprises that would provide positive cash flow during the spring and early summer months. Providing cash flow during these times of the year helped participants to decrease their annual operating debt requirements, which led to increased overall profitability, due to decreased interest expenses. Participants accomplished the goal of spreading out cash flow via both new enterprise selection and individual variety and cultivar selections within enterprises. Examples include:

> *"… you notice that most of the diversification that we did was earlier stuff, and that was a part of it, because if you can pay your expenses during the summer, and not have to borrow, it makes a big difference…"*

- Growing strawberries for cash flow in the spring
- Planting early season apples for cash flow in the early summer
- Growing Christmas trees for late-season cash flow.

3.3.2 Risk Management

Diversifying in order to manage risk was a factor in motivation (17 text segments and 77 lines of text) for many of the participants interviewed (4 of 7 farm businesses). Participants from farm businesses that were involved in crop or fruit production as the primary enterprise considered risk management as an important motivation for diversification, while participants involved in dairy production did not see risk management as a factor. All of the participants interviewed mentioned factors that equated to using diversification to manage risk, although it was not necessarily a conscious factor in their decisions. For example, one participant answered “no” when asked if risk management was a factor in the decision to diversify the farm, but later related how the income provided by the new enterprise was a cushion or hedge against price fluctuations in the farm’s principle commodity, which was milk. Those participants that did recognize the risk management aspects of diversification cited numerous types of risk that were being managed.

3.3.2.1 Weather Risk

Managing weather risk was very important to the participants interviewed with crop production as a primary enterprise. For fruit producers, spring freezes were the primary weather risk events being managed, whereas farm businesses with field crops as the principle commodity were primarily concerned with drought. In two cases, the decision to diversify was initiated by a catastrophic weather event that destroyed the principal crop and forced the participants to find a substitute crop within the same season. The weather event being managed influenced the diversified enterprise or crop selection. Participants with spring freezes as the primary risk sought crops that were grown later in the season, when freezing would not be a risk. Where drought was the primary weather risk, crops that were more drought tolerant, or were grown during times of the year when drought was typically not a problem, were favored for diversification.

“… and we had a frost that just wiped the apple crop out. I said well, you’ve got to do something, so I planted a bunch of pumpkins.”

3.3.2.2 Price Risk

Only one of the seven farm businesses in the study mentioned explicitly mentioned price risk management as a motivation for diversification, but participants from four other farm businesses pointed out the advantages of having different enterprises that did not follow the same price trends. For example, a grain farmer that added cotton to his enterprise noted that while corn and soybean prices tended to move together, cotton prices were influenced by different factors.

3.3.2.3 Financial Risks of New Enterprises

Participants were generally not concerned about the production-related financial risks of trying new enterprises. Participants from six of seven farm businesses were comfortable with the enterprises they were undertaking, and limited risk by starting relatively small. Participants tried new enterprises on a very small scale initially, and then expanded as it showed success. There were concerns about potential liability issues associated with agritourism and direct marketing enterprises, which indicated that concerns increased as non-production related financial risks entered into the decision to diversify.

3.3.3 Market Opportunities

An important factor in determining the specific enterprises undertaken by the participants was market opportunity (21 text segments and 100 lines of text). All participants had considered the potential demand for the enterprises they undertook. The market opportunities were identified in a variety of ways, such as increased prices for specific commodities, or increased customer requests for a particular product. In some cases, the market opportunities were presented to the participants, such as existing customers requesting specific products. In other cases, participants diversified into new activities based upon perceived demand for the enterprise. The specific market research conducted by participants will be discussed in detail later in this case study.

3.4 Motivation for Continued Diversification

After the case study participants had initiated their farm diversification, two unique factors, in addition to the continuation of the previously mentioned factors, caused them to continue with the diversification enterprises. These factors were:

1. Expansion or future growth of the farm
2. The participants' quality of life

3.4.1 Expansion or Future Growth of the Farm

The expansion or future growth of the farm was not the initial motivation for diversification of all the participants in the case study, but was a secondary motivation for 6 of the 7 farm businesses in the study. Analysis of participants' discussion on expansion or future growth indicated a difference between those with more than one year of experience in the diversified activities than those participants in the early planning or initial stages of adding a new enterprise. Participants in the beginning stages of diversification were generally not looking beyond the immediate or near future with their decisions to diversify their farm. This was a trend reported by participants that had been involved in diversified activities for a number of years as well, i.e., that when they started, they were not thinking beyond the near or immediate future. However, once participants experienced success with their diversified activities, they started to look beyond the immediate future and to how the new activity would fit into long-range goals for the farm. (13 text segments and 55 lines of text)

As expected a priori, participants with multiple generations involved in the farm business tended to plan for the future growth more than farm businesses with only one generation currently involved in the farm. All participants with multiple generations conveyed the thought that the diversified activities would provide a means for the next generation to have better chances for success with the farm. Five of seven participating farm businesses even saw the diversified activity as a means for the next generation to become involved in the farm outside the scope of the traditional production aspects of farming.

"…as far as I'm concerned, there's more potential in this than in other things that we've done…"

The diversified activities were seen as a means of generating interest back into the farm for future generations. The thinking behind this was that the next generation may not necessarily be interested in the work or lifestyle of the traditional farm enterprises, such as dairy or crop production, but may be interested in some of the non-traditional enterprises, such as agritourism or value-added production. The sentiments reflected here could be likened to the old adage about providing a better life for your children than you had yourself.

3.4.2 Quality of Life

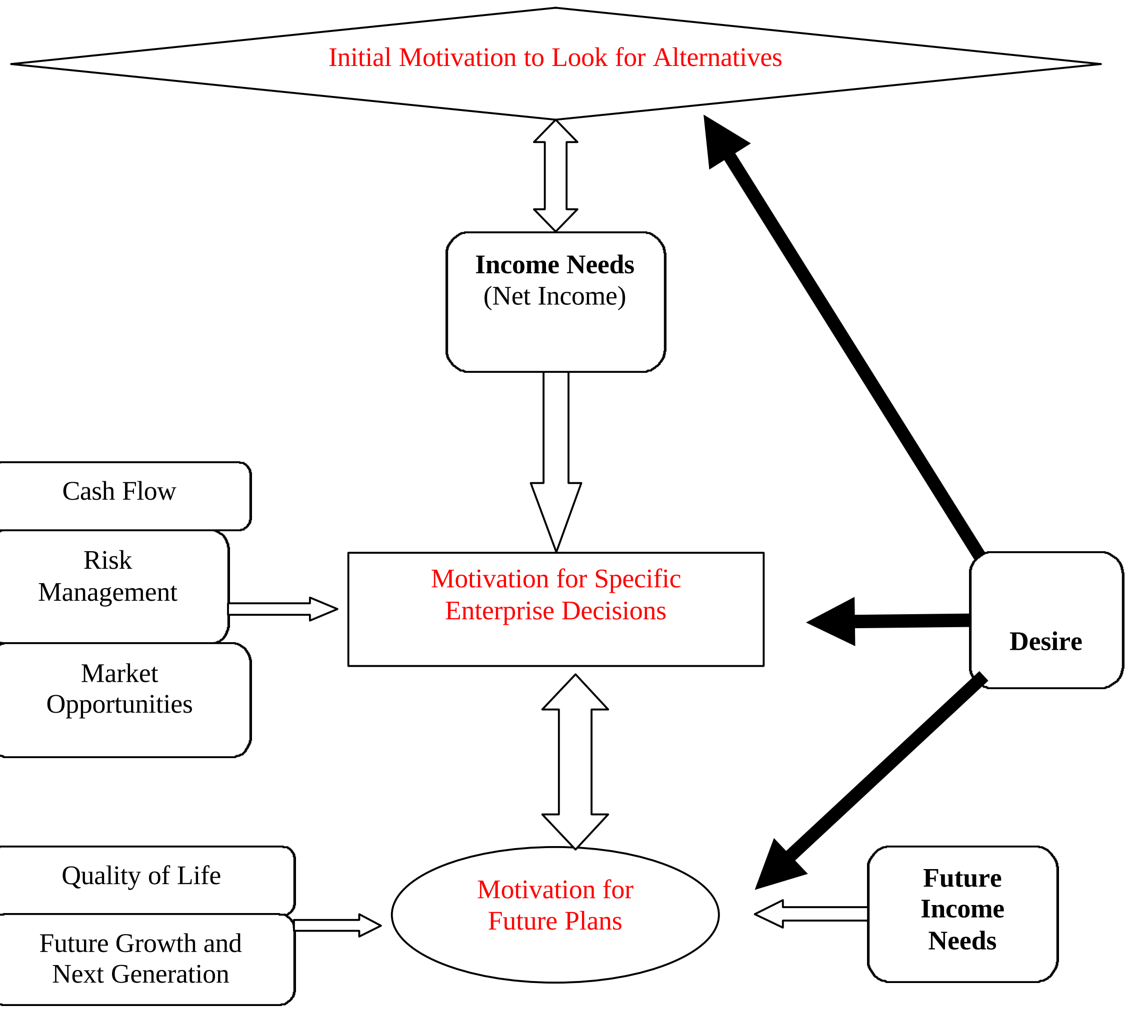
As participants diversified their farm businesses and were successful with their enterprises, they indicated that quality of life became a motivation to stay with the projects. As participants successfully diversified their farm businesses, they saw their quality of life increased via increased personal income and increased job satisfaction. Increased job satisfaction was particularly important to the participants involved in agritourism and direct marketing. Participants discovered that they received a great deal of personal satisfaction from their direct interactions with the public, and this became a motivation to continue and expand these enterprises.

3.5 Sustainability

The theme of sustainability was very strong and was being accomplished via a variety of strategies. The economic side of sustainability was the primary initial focus of the diversified activities, but it did not stop there. There were several comments throughout the interviews that led into the more holistic and ecological benefits of the diversified projects. Three participating farm businesses cited the advantages of an improved crop rotation, from a risk management perspective, but also with respect to soil, disease, and insect management. Participants from 4 different farm businesses felt that the current commodities that they produced had a threatened future, either due to political or industry changes, e.g. tobacco production and apple production. By diversifying their commodity portfolio, participants saw a more sustainable future for their farm businesses.

> *"I guess that the main thing would be to, at some point, by either cutting expenses or increasing income, bring the farm back to a profitable, enjoyable, and sustainable level… the manner in which that happens has still to be figured out…"*

Figure 7: The Flow of Motivation



3.6 Implications

3.6.1 Producers

Understanding the motivations for diversification is a very important function of the planning process for producers. Time, money, and efforts can be utilized most effectively when the goals for the projects are clearly defined in the beginning stage of planning. Producers must seek to answer two key questions:

1. "What are my motivations for diversifying my farm?"
2. "How can I best satisfy my motivations?"

Once these questions have been answered, producers can begin to move forward in the planning process.

3.6.2 Virginia Cooperative Extension

VCE programs can help producers to explore their motivations beyond the immediate needs, and seek out the long-term goals for their projects. Desire is a key component of the decision to diversify. In cases where desire is not present, it may be in the best interests of the producer to not start a new venture, but rather to find ways to make their existing enterprises more profitable. By enabling the producer to see beyond the immediate concerns, VCE can help the producer to make more efficient enterprise decisions as they plan for the future of their farm businesses.

3.6.3 Lenders

Producers in this study were motivated primarily by a need to increase the income or profitability of their farm. However, participants sought to minimize the scale and size of their investments as they added new enterprises, due to both risk and financial concerns. Participants in this study did not seek to take on significant debt in order to add new enterprises. If lenders wish to offer products to producers like those in this study, they will need to create and offer debt products that are minimal in cost to the producer, such as small capital short-term lines of credit and loans.

CHAPTER 4

PLANNING AND INFORMATION GATHERING BY PARTICIPANTS

4.1 Planning

Participants in this study fell into two general categories when it came to planning for diversification:

1. Those who plan after trying (5 of 7 farm businesses)
2. Those who plan before doing (2 of 7 farm businesses)

Overall, there was very little formal planning conducted by participants in either category. Most of the planning done by participants was of the information gathering nature, and is outlined in detail in another section. This section will describe the two types of planners identified by the study, and the similarities and differences between them.

4.1.1 Planning After Trying

Participants in this category typically had an idea and tried it on a very small scale, without much prior planning or research. These participants typically were driven by more pressing financial needs than that of the participants who tended to plan more initially. Participants in this category did not have formal estate plans or transition plans for moving the farm to the next generation. These participants typically did most of the research in the second or third year of the enterprise, rather than prior to starting, and after realizing some success with the enterprise, they expanded the enterprise.

> *"We just kind of have seen a need for it and started growing it…"*

4.1.1 Planning Before Doing

The largest farm businesses in the study fell into this category, and all had formal estate plans and written transition plans. These participants typically did a great deal of planning prior to starting a new enterprise. Most of the research about a new enterprise was done prior to starting. The participants in this category were planning for anticipated longer-term needs, rather than immediate income needs. At least two participants in this study identified specific lost opportunities because they had spent more time planning than was necessary before starting their enterprises. They also indicated that questions about new enterprises, particularly those for which there is little locally based research, often cannot be answered effectively without trying the enterprise on a small scale.

4.1.3 Planning Traits Common to All Participants

Despite the detailed planning of some of the participants in this study:

- There was very little documented planning.
- There were no formal business plans, contingency plans or long-range plans.
- All of the participants had mental pictures of these plans, but most had not discussed them with the other family members.
- All of the participants verbally recognized that they did not plan as much as they felt that they should.

Five of seven participating farm businesses felt that although they did not have any written plans, that they could develop them easily if they took the time to do so. The common theme with all the plans that were expressed verbally involved seeing a sustainable growth of the farm.

4.2 Where Agricultural Producers Seek and How They Use Information about Diversification

Participants in this study used a wide array of sources for the information that they needed for the new enterprises implemented on their farm businesses. The most common sources of information used by participants were other farmers, and VCE agents and specialists.

> *"Everything that I have done, I have sought out someone's advice on varieties, how to grow them, marketing…*

Information sought by participants fell into two basic categories:

1. Production Information
    a. Production information includes information such as recommended planting dates, variety selection, nutrient management, pest control, etc.
2. Business Information

a. Business Information is a much broader category that includes such information as marketing strategies, pricing, liability protection, legal and regulatory compliance, business structure, etc.

Many sources of information were used for both types of information, but preference was given to certain sources for specific types of information.

Information needs of participants with respect to farm diversification were being met with varying levels of effectiveness. In many cases, the specific information being sought by participants was not available in an easily accessible or useful form. The lack of information in certain forms and topic areas ties directly into the research and planning done by participants.

4.3 Sources of Information and Their Relative Importance to Participants

The participants in this study used eight sources of information when investigating new enterprises. (Table 4)

Table 4: Use of Information Sources by Participants in Study

Source	**Number of Text Segments**	**Lines of Text**	**Farm**						
			1	*2*	*3*	*4*	*5*	*6*	*7*
Producers With Experience	19	64	☑	☑	☑	☑	☑	☑	☑
Extension Agents and Specialists	16	44	☑	☑	☑	☑	☑	☑	☑
Friends and Family	5	16	☑	☑	☑			☑	☑
Industry Representatives / Consultants	6	19		☑	☑	☑			☑
Lenders	9	28		☑	☑		☑		
Farm Press	3	7	☑	☑		☑			
Other Government Agencies	4	13			☑	☑			☑
Accountants	6	12		☑		☑			

The most important source of information for agricultural producers in this study was other producers who had previous experience in the targeted activity. All participants most frequently cited other producers as the primary and most frequently used source of information. VCE agents and specialists were the second most common source of information used by participants, and were the only other source used by the participants interviewed. Participants cited using friends and family and private industry representatives and consultants as information sources. Only two of participants interviewed used their lenders, accountants or attorneys, farm press or government agencies other than VCE for information.

4.4 Information Mediums Used by Participants

There were four basic mediums used for obtaining information by the participants in this study. They are:

- Verbal Communication
- The Internet
- Printed Media
- Production Conferences and Trade Shows

4.4.1 Verbal Communication

All of the participants interviewed used verbal communication as the primary medium for obtaining information about new enterprises, particularly production and marketing information and with the other producers with experience. The advantage of this medium to participants was the ability to ask questions and discuss the information in detail.

4.4.2 The Internet

A majority of the participants interviewed reported an increasing use of the Internet to obtain information; because of the accessibility and the breadth of information available, including access to university extension sites and agribusiness sites. The reliability and disorganization of information found on the Internet were cited as drawbacks to this medium. Production recommendations and supply prices were the most commonly cited pieces of information sought on the Internet.

4.4.3 Printed Media

Printed media was the least cited form of medium used by participants in obtaining information about new enterprises. This category includes all information found in the farm press, as well as information found in formal extension publications, product brochures, and industry literature. Many of the participants expressed an interest in using printed media for gathering information, but a common frustration cited by several participants was the lack of printed information on the topics that they were researching.

> *"…basically it's internet and people already involved in it… not many books written on the subject…"*

4.4.4 Production Conferences and Trade Shows

Larger farm businesses in the study were the main users of production conferences and trade shows. Attendance of these meetings was not limited to those conducted in the local area, with participants from larger farm businesses reporting attending meetings in Ohio and Nevada. Participants from smaller farm businesses tended to stay closer to home, where they attended local VCE meetings, or none at all. All of the participants in the study had at least one individual for whom the farm was the sole source of employment, so the limitation of off-farm employment for attending trade shows could not be adequately evaluated. The motivation for attending conferences and trade shows was driven by the opportunity to meet and talk with other producers, followed by the information provided by VCE personnel and the industry representatives, who were not necessarily from the same local area as the producer.

4.5 <u>How Information Sources Were Used by Participants</u>

There were clear trends in the ways that participants used the various sources of information when researching new enterprises. Different sources were used for specific types of information. The specific expertise of the information source was not necessarily the criteria used for the type of questions being asked of that individual.

4.5.1 Information Sought from Other Producers with Experience in Enterprise

The participants of the study held the information gained from other producers in high regard. There was a very common sentiment that other producers had a perspective and insight into the key issues that was lacking in other sources of information. This sentiment was particularly evident with information relating to production techniques and marketing tactics. A key example was found with the participation in production conferences and trade shows. While there was information being provided by a variety of sources at these functions, the opportunity to meet with other producers was considered the most important aspect of the meetings.

> *"…there was one evening session that was 'What Flew and What Flopped', and we learned a lot.. really interesting… things that you thought that you might want to do, they brought out some points that made you think about it again.."*

The participants in this study were not always successful in finding producers in their area who were willing to share information. A common frustration related was the difficulty of locating local producers who were willing to share information, due to fear of competition. In other instances, there were no other producers in the local area who had attempted the targeted enterprises. These were other reasons given for attending regional production conferences, as producers from outside the local area were more willing to share what they consider to be trade secrets, or confidential business information. Participants felt the need to move beyond their local areas to find their most preferred source of information. Producers with previous experience were asked about all aspects of the enterprises, including cultural production techniques and suggestions, marketing strategies and advice, time and labor requirements, and other details about the enterprise.

Participants did not limit their questioning to the owners of the farm businesses with previous experience; participants related talking with the hired labor of other farm businesses to obtain a more detailed perspective of the enterprise. Some participants found experienced individuals in unexpected locations. For one participant a useful source of information was a family friend who worked for an urban park system had previous experience with a targeted farming enterprise.

4.5.2 Information Sought from VCE Agents and Specialists

Information provided by VCE was the second most common source among participants. Participants sought plant variety recommendations, cultural practice recommendations, marketing practices and suggestions, historical price trends, suggested market layouts, sample enterprise budgets and yield expectation data from VCE. Four of seven participating farm businesses mentioned using VCE for other types of information, such as marketing and business-related information. Production information obtained from VCE was quite wide-ranging, and was obtained in various forms.

Participants did not limit their gathering of extension information to VCE. Two of seven farm businesses obtained information from other state extension services, including both documents such as bulletins, budgets and fact sheets, and information gained from personal conversations with extension agents and specialists in other states. The participants cited as the primary motivation for going to other states for extension information was a lack of local research or information about the particular enterprise of information. Participants that had obtained information out of state indicated a preference for local extension information, if it was available.

An important function served by VCE in participant's information gathering processes was to establish contacts with other producers involved in the same enterprise. This was accomplished on an individual basis with agents, and via VCE sponsored meetings and conferences. Two participants indicated they had participated in useful informational tours of other farm businesses organized by VCE.

4.5.3 Information Sought from Friends and Family

All of the participants in the study stressed the importance of the information and advice received from family and friends, who were used as sounding boards for enterprise ideas. The advice provided by family and friends often helped the participants to digest and clarify the information provided by other sources.

A key function served by family and friends was to provide a different perspective, particularly between generations. Members of the younger generation tended to value the experienced opinions of the older generation, while the older generation valued the different outlook of the younger generation. Friends from a non-agricultural background were particularly useful for advising those involved in agritourism and direct marketing, as they provided the perspective from off the farm that often could not be realized by the participants themselves.

4.5.4 Information Sought from Private Industry Representatives and Consultants

Representatives of private industry identified by the participants of this study included seed and chemical salesmen, field representatives and scouts, as well as other specialized consultants in the retail and agritourism field. Participants from smaller farm businesses tended not to make use of private sources of information as much as participants from larger farm businesses.

Private industry was used as a source for all types of information. Specialized production consultants and scouts were used for specific production information, such as the fertilizer, pest control and other input requirements for various crops. Field representatives and scouts were also used to find other producers in the area currently producing the enterprise being considered. Field representatives and field scouts were being used as a sounding board for various ideas, much as with friends and family, rather than as a source of specialized information by the producer. Overall, the functions of the private industry representatives were very similar to the functions of VCE.

Private consultants were a source of marketing and business information for participants involved in agritourism. Corn maze designers that were hired by two of the participants provided a great deal of information as a part of their services. The information provided by these specialized consultants included suggested marketing tactics, area mailing lists, and spreadsheets of income expectations based on the number of customers per hour at various price levels. Two of the four farm businesses involved in agritourism also used media consultants for advice and information about advertising and marketing their activities to the public.

4.5.5 Information Sought from Lenders

The participants in the study did not use lenders as a direct information source. This was primarily due to the fact that the specific enterprises being considered were not large scale, and did not require the incurrence of debt in order to initiate. Plans were discussed with the lender for the information benefit of the lender, rather than as a part of the information gathering function of the producer. Participants with ongoing financial relationships with their lenders felt a need to have the lender made aware of the new enterprises, but typically did not actively seek their advice. What information was gathered from lenders was in the context of the lender as a sounding board for various ideas, much as with friends and family, but the lender was not considered to be a source of specialized information by the producer.

4.5.6 Information Sought from Accountants and Attorneys

Where accountants and attorneys were used as information sources, they were typically used as sounding boards for ideas, rather than sources of specialized information. In one case, a farm set up a separate company for their diversified activity, which required the services and advice of an attorney. Participants acknowledged that if the enterprises they were investigating had been on larger scale, they would have sought the advice of an accountant and attorney.

4.5.7 Information Sought from Farm Press

The farm press was typically used as an occasional and serendipitous source of information. Typically, a producer would read an article about a particular enterprise in a farm publication that would spark their interest, or give them an idea for another similar enterprise. Participants did not actively seek information about an enterprise from the farm press.

4.5.8 Information sought from Government Agencies other than VCE

Three of the seven participating farm businesses utilized government agencies such as the Virginia Department of Agriculture and Consumer Services and the Small Business Administration, as well as local government planning, zoning, agriculture, and economic development offices. The information being sought from these offices varied, but typically was related to local zoning codes and how they related to their enterprise ideas.

4.6 Unmet Information Needs of Participants

Participants were not always successful in obtaining all the information they felt was important for their diversification decisions. Information that participants were looking for either did not exist, or was not easily accessible to them. The specific pieces of information that were lacking varied quite a bit by farm. However, the unmet information can be summarized into some general categories:

- Lack of locally based research
- Business structure and resource allocation information for diversifying farm businesses
- Agritourism and niche market information

The first category of unmet information needs of participants is a general lack of locally based research into specialty crops and enterprises. Agricultural research in a given area is typically conducted on crops and practices that are the norm for that area[1]. As participants began

[1] Virginia's Agricultural Research and Extension Centers have each become specialized through the years, dedicating research projects largely to the crops and livestock typically grown by the majority of farm businesses in the region. For example, fruit research is conducted largely in the Northern Shenandoah Valley, while vegetable research is conducted primarily on the Eastern Shore of Virginia.

to diversify their farm businesses into crops and practices that are not typically grown in the area, they found that locally-based or local regionally based research data was not available for the crops and practices that they are considering. Without local research, such information as proper planting dates, variety selection, and appropriate cultural practices are not known. Participants found themselves conducting their own on-farm research, in a trial and error fashion. Information about the appropriate business structure and resource allocation for diversifying farm businesses was also lacking. Five participants in the study gave examples of how they did not know beforehand how the new activity would affect the other existing enterprises on the farm. It was not clear if any of the participants had actively sought out this information while they were planning their enterprises, or if they learned of the difficulties after having started the new enterprise.

Participants that were delving into agritourism and niche market enterprises had a particularly difficult time in finding information. Specific examples of information gaps in the area of agritourism were:

- Lack of understanding of local zoning laws and how this affected the plans for the new enterprise.
- Lack of information on how to plan for liability issues associated with agritourism.
- Lack of information about proper advertising and marketing of agritourism and niche marketing enterprises, and how to advertise such that customers arrive at different times.

The participants did not seek much of this information out beforehand. It was learned by experience that they should have planned for these items.

Participants in this study were fulfilled by the ability to set their own price, but they experienced difficulty in knowing exactly how to set the price. Participants from three farm businesses admitted that they were probably under-pricing their products. Participants in this study typically relied on informally surveying existing customers, bartering, and trial and error for price discovery.

4.7 Implications

4.7.1 Producers

Producers who prefer to try new enterprises without prior planning need to take care to not over-extend their physical, financial, and emotional resources. Participants in this study that preferred to try something before planning related several examples of how they made mistakes by straining resources unexpectedly. Frequently participants in this category underestimated the extent of time, equipment, labor and financial resources needed for a new enterprise. Such mistakes and inefficiencies could be avoided by taking some time to plan a new enterprise. Producers who tend to fall into this category would likely require some self-discipline to take time in planning, rather than moving quickly and blindly into a new venture. Alternatively, producers may need to take care to minimize the scale of their new enterprises initially, in order to minimize the impact of unexpected resource constraints of the new enterprise.

Producers considering new enterprises for their farm businesses should:

- Seek out producers who have experience in either the specific enterprise or the type of enterprise that they are taking into consideration.
    - Producers with previous experience tend to provide the most specific answers to questions about a new enterprise. However, producers should keep in mind that the information provided by other producers is typically very specific to the conditions on that producer's farm, and may not necessarily be easily replicated on another farm.
- Seek out a mixture of types of information while investigating new enterprises.
    - Production information is typically both the most commonly available type of information and the one most sought after by producers. Budgeting and marketing information, along with information on how the new enterprise will affect the resource allocation on the farm is of equal or greater importance than production information when considering a new enterprise. Participants in the study tended to seek out primarily production information first, and then discovered that they had a need for the economic-type information. Those who were more planning-oriented tended to seek out the economic information sooner, and found it useful in making enterprise decisions. New producers would be well served to look for more information than simply the

production information when planning a new enterprise. Table 6 is a list of types of information that producers that should look for when planning a new enterprise for their farm.

- Utilize extension and university research and information.
  - Although the participants in this study used VCE primarily as a source of production information, such as variety selection, nutrient requirements, planting dates, etc, three also found VCE as a useful source for marketing and economic information. Some participants may have underutilized this side of VCE information in their researching of new enterprises. Producers would benefit from exploring the economic and business-related information that VCE offers.
- Look beyond their local area in their information search, particularly when investigating an enterprise that is not typically done in the local area.
  - Many of the participants in this study found that when they were investigating specialty crops and enterprises that producers in their local area were often unwilling to share information, for fear of added competition. Producers outside the local area were typically much more open about their enterprises, as they did not see the newcomer as a threat to their market. VCE and private industry contacts were commonly used to find other producers outside the local area.
- Look for information from extension sources beyond their local extension office.
  - Extension services of neighboring states may have conducted more research or have more information on a particular enterprise than the home state's extension service. The Internet is a useful method of finding extension information from beyond the local office, since many state extension services have comprehensive websites that contain publications and contact information for their agents and specialists.
- Go to production conferences and trade shows
  - The trend in this study was that larger farm businesses tended to participate in these events, while smaller and part-time operations did not. Participants who participated in conferences and trade shows found them to be a very good

source of information. The advantage of these events is that they are a "one-stop shop" for all types and sources of information. Speakers at these events typically are from a variety of backgrounds, including extension/university, producers, and agribusiness. The networking and interaction opportunities found during breaks and social events are of particular value for producers seeking information. Conferences and trade shows provide the novice with a unique opportunity to find information from several different sources in one short time, from both within and outside their local area.

- Increase their marketing skills for pricing non-commodity based enterprises
    - Major commodities, such as grains, milk and beef cattle are mostly marketed by producers by way of a well-defined and structured market. Prices are determined by regional, national, and global supply and demand functions at centralized markets. Individual producers have very little control over the price of their product, and comply with industry quality standards. The more sophisticated marketing skills for these systems involve recognition of global supply and demand factors, seasonal pricing patterns, and local price basis. There are abundant sources of information for the traditional commodity markets that can assist the producers in their marketing decisions. However, producers need not have any marketing skills to participate in these markets, if they choose to simply act as a price taker and sell their products at the current cash price at the time of sale.
    - When the producer moves to a non-traditional enterprise, existing marketing skills are often not sufficient. Enterprises such as agritourism and direct marketing require specific and unique marketing skills that are very different than the traditional agricultural markets require. These non-traditional markets provide the producer the opportunity to have a great deal of control over the price received for their product, which is an appealing aspect of the enterprise. Pricing non-commodity enterprises requires that a producer understand what economic variables or conditions explain the price for their product, in addition to the demand elasticity for their product, and understand how to translate that dynamic into a competitive price. Since the market for these

products is usually local in nature, the demand elasticity will vary from location to location. Information is typically not available on the local demand elasticity for specialized crops and enterprises, and producers must rely on their own skills to collect and interpret information.

Table 5: Types of Information Important to Producers When Adding New Enterprises

Production Information	Resource Information	Skill and Knowledge
✓ Cultural Requirements (soil types, nutrient needs, moisture requirements, etc.) ✓ Planting dates and season length ✓ Timing and duration of critical activities (pruning, spraying, harvesting, etc.)	✓ Financial Requirements ✓ Time requirements ✓ Labor requirements ✓ Equipment Requirements	✓ Specialized skills needed ✓ Specialized knowledge needed

4.7.2 Virginia Cooperative Extension

The most common source of information for participants in this study was other producers with experience in the enterprise being investigated. The value of information that these other producers can provide should not be underestimated by VCE as educational programs are developed. Experienced producers should be recruited as volunteers for participation in the development of new programs from the very early stages. These producers will not only provide insight into the methods and practices that are being used in the enterprises being discussed, but will also be very helpful in identifying the issues that are relevant to producers.

The most common problem faced by participants as they searched for production information on a new enterprise was the lack of research-based information that was suitable for their particular region. Participants usually tried new crops and enterprises on a small scale and learned the viability and production skills for them by trial and error. Through the application of proven research methods, producers could become both more efficient and quicker in the testing and learning of new crops and enterprises. The role of VCE in this process should be to both evaluate the need to conduct locally-based public research into new crops and enterprises as the local interest increases, as well as enabling their clientele to conduct their own research effectively on their farm businesses.

CHAPTER 5

RESOURCES, FINANCIAL TOOLS, AND CONSTRAINTS

This section will describe how the participants in this study used their resources as they diversified their farm businesses, what resources were acquired, and what resources were either misused or limiting.

Resources Used in Diversification

- Physical Resources
  - Land (existing land used)
  - Labor (some seasonal labor added)
  - Facilities (modified to fit new enterprises)
  - Equipment (some specialized equipment purchased)
  - Cash (generally investments were minimized)
- Information sources
  - Other farmers with experience (production, marketing and management information)
  - VCE (production and limited marketing information)
  - Friends and family (advice and moral support)
- Skills
  - Management skills (time management, labor management, resource management, retail management)
  - Production skills (production techniques for new crops, skills for non-crop/livestock enterprises)
  - Marketing skills (very limited)

Limiting Resources

- Physical Resources
  - Labor (both skilled and unskilled)

    - Land (both quality and quantity)
    - Cash (self-limited… participants chose not to take on debt)
- Information (all sources)
    - Production information (limited local information)
    - Marketing information (supply/demand information for specialty crops and enterprises)
- Skills
    - Management skills (time management and resource management limitations often hurt success)
    - Marketing skills (marketing of specialty crops and enterprises more challenging than traditional commodities. Active marketing of specialty crops vs. passive marketing of commodities)

5.1 Use of Existing Resources

A common theme identified in the interviews conducted for this study was the efficient use of existing resources when the participants began their diversification projects. There were very few additional resources acquired prior to beginning a project. Participants recognized what physical and non-physical resources they had available, and how they could be used in different ways to complement the new enterprises.

Participants looked for enterprises that matched their existing resources. When asked if they specifically did look for enterprises that matched their resources, five of seven farm businesses answered "yes", but even the remaining two had ended up with enterprises that matched the existing resources. Therefore, it appears that the matching of new enterprises to existing farm resources is very important to participants, whether it be a conscious or unconscious effort.

> *"… you can't go off the deep end… I mean, we don't know what we're doing as it is… but at least we know something about growing corn…"*

The above quote is from a participant planning to add a corn maze to the farm as part of an agritourism project. This farm is a dairy farm, and has raised several hundred acres of corn for several decades. The farm's existing land, labor, equipment and the producer's existing knowledge all complement growing a corn maze. The desire to match new enterprises was driven primarily by wanting to minimize the need of additional financial resources.

5.2 Resources Acquired for Diversification

Two participants did acquire additional land for new crops, but most continued to work within existing land resources. Acquired physical resources included specialized equipment and structures for the new enterprises. Examples include building a larger retail facility, purchasing specialized plasticulture equipment for use in a vegetable operation, and increasing farm labor during busy seasons.

5.3 Limiting and Misused Resources

Land and labor in some combination were both limited physical resources for participants in this study. Financial capital, information availability, and knowledge were the most common limiting non-physical resources. Participants from six of seven farm businesses indicated that they had usually found ways to work around the limitations of the availability of these resources. However, all participants in the study had specific instances when a lack of physical or non-physical resources limited the scope or success of their enterprises.

5.3.1 Land

Land that was suitable for expansion of the farm was either not available or was priced higher than the potential value of the intended agricultural use for the participants to easily expand as their enterprises grew. Land rental opportunities existed for participants from three of seven farm businesses, but it was noted that the producer was much less willing to make any long-term investment in rented land, due to the uncertainty of long-term availability. Participants from four of seven farm businesses had expanded their farm acreage as far as they felt possible before considering new enterprises. These participants looked to diversification as a means by which to increase the size of the farm business within the existing physical land boundaries of the farm. Participants did not expect land limitations to improve in the future, and most expected this limitation to worsen as alternative uses for the land become more prevalent in their areas.

5.3.2 Labor

Availability of a work force with the willingness to work on a farm, was the most common limited resource for the participants in this study. Workers who were willing to work the unusual and long hours and perform the tasks associated with farm enterprises were not easily found. All participants were struggling with how they would accomplish their diversification goals within the limits of their existing labor supply. However, none of the participants had ever excluded any specific enterprises due to a lack of available labor, but the size and scope of many enterprises was often limited by available labor.

> *"… the biggest weakness that I see is that anything that we do new or extra involves more people that we don't have"*

New enterprises often created a conflict with scheduling labor resources for competing enterprises. In such cases, additional labor was not necessarily the solution to the problem, but better job scheduling would have helped to alleviate the scheduling. There was little optimism that the labor issues would improve in the future. Most participants saw labor as being one of the greatest constraints in their future.

5.3.3 Finances

Limited financial resources were another limiting physical resource for participants from six of seven farm businesses. The availability of excess financial resources was very limited for most participants. Financial strains did not necessarily exclude activities, but most often it caused the participants to not diversify into multiple activities at once, or limit the investment into the new enterprises that were added.

All of the participants from the three dairy farm businesses in this study expressed a desire to diversify into processing their own milk for value-added production. However, none had undertaken this enterprise as yet because of the large financial investment required to start such an enterprise. This enterprise was incorporated into future plans, if financial conditions improved. All participants tended to have limited optimism about financial limitations improving in the future, more so than with labor and land limitations.

5.4 Financial Decision Making Tools Used in Diversification

Participants used financial decision-making tools in a limited fashion as a means of helping to decide upon starting a new enterprise. Most participants used some sort of self-developed criteria, rather than a formal business school type criterion. Participants typically did not feel that the scale of the investments made in the new enterprises warranted a great deal of financial analysis.

Participants in this study commonly used both enterprise and partial budgets. Some participants generated their own budgets, while others relied on budgets provided by VCE or private consultants. The level of formality of the budgets used varied from a few figures scratched out on the back of an envelope to complex computer-generated spreadsheets. Overall, budgets, both producer generated and those enterprise budgets provided by an outside source, were among the more important of available financial tools to participants.

The rate of return on the investment was a criteria used by several of the participants in the study, although there was typically not a formal system used for evaluating the rate of return. Several of the participants alluded to using criteria that equated to a quasi-rate of return evaluation tool, but in a very simplified form. Generally participants on larger farm businesses were more tolerant of lower rates of return to enterprises, if they found there to be other benefits to the enterprise. An example of this is the producer who planned to keep cotton in his rotation, despite the decreased rate of return over the past few years, due to the benefits of the crop to his overall rotation. Participants from larger farm considered the rate of return for the farm business as a whole, rather than looking at individual enterprise rates of return.

Smaller and limited resource[1] farm businesses tended to place significance on using payback period analysis for their enterprise investments. A relatively short payback period of two or three years was key to these participants. One farm business related having eliminated certain enterprises due to the long-term investment involved with that enterprise, in favor of adding several smaller scale, short-term investment enterprises. Participants from larger farm businesses rarely considered the payback period as an important factor, and tolerated longer

[1] The United States Department of Agriculture (www.usda.gov) defines limited resource farm businesses as "Any small farm with gross sales less than $100,000, total farm assets less than $150,000, and total operator household income (from all sources) less than $20,000." There was one limited resource farm included in this study.

periods, in the five-year or longer range. The limited resource producer in the study also placed great emphasis on the breakeven of an investment, while one of the participants from larger farm businesses admitted not even knowing the breakeven on one enterprise.

Other tools used by participants when making their decisions included the use of sample budgets and spreadsheets for analyzing various size and product output scenarios and benchmarks, particularly with respect to advertising expenditures. Where participants worked with consultants to establish certain enterprises, they often used tools provided by the consultant.

While participants typically did not use financial decision-making tools before deciding to take on an enterprise, participants from three of seven farm businesses indicated they used tools after starting the enterprise as a means of evaluating continuation. The most common reason for using tools in this way was simply that participants did not have access to hard numbers that could be used to estimate the costs and returns of new enterprises. Participants were better able to properly evaluate the financial viability of the enterprise, having gained some experience with the new ventures.

5.5 Regulatory-Based Constraints to Diversification

Few participants experienced regulatory–based constraints to their diversification projects. However, those who did have regulatory constraints found them to be very difficult to work around. The regulatory issues that participants faced originated from federal, state, and local levels.

Participants that produced specialty crops felt that the increasing restrictions of the Environmental Protection Agency (EPA)[1] constrained their ability to grow some of these crops. One fruit producer feared that pesticide regulations would cause his business to fail to be profitable if the price of pesticides continued to increase, and the number of useful pesticides continued to decrease. The requirements of the Worker Protection Standard[2] were considered a constraint to participants of produce and specialty crops as well.

State and Federal labor policies and regulations were a constraint to participants that made use of migrant labor. Participants from farms with fruit orchards in particular made several comments about the problems that they had experienced as a result of their dealings with the

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[1] www.epa.gov

[2] www.epa.gov/pesticides

state labor department and federal immigration and naturalization service employees. Some feared that a continued increase in labor regulations would decrease their farm viability. Participants from one farm with a fruit orchard was seeking to find ways to eliminate migrant labor through diversification, citing the "hassle of the labor department" as a major motivation.

Local zoning rules were a constraint to one farm in the study. This farm, involved in agritourism, reported that their largest expense in their enterprise would be expenses incurred as a result of compliance with the local zoning ordinance. Furthermore, these participants expressed that they had a great deal of difficulty in obtaining accurate information about zoning compliance from the local county agriculture department.

The participants in this situation felt ill prepared to deal with the amount of legal paperwork and planning documentation that was required of them. The requirements of the county zoning office had caught them by surprise, and they did not plan enough time to fulfill the obligations of the permitting process and still advertise their enterprise effectively. The main problem that these participants had with complying with the county regulations was primarily due to two main factors, their enterprise was unique and not accounted for in the local zoning ordinance, and the participants did not have the experience and specific skills necessary to quickly and effectively meet the permitting requirements of the county.

5.6 Implications

5.6.1 Producers

Producers need to:

- Identify what resources that they currently have available on the farm for diversification.
    - Experienced diversified participants in this study stressed the importance of using all available resources when adding new enterprises to their farm businesses. The use of existing physical resources helps to minimize the expenses of a new enterprise via sharing the fixed cost of the new enterprise with other existing enterprises. When diversifying into enterprises that draw upon the existing non-physical resources available to the producer, such as knowledge and skills, producers have less of a need

to develop new skills and knowledge, and tend to feel more comfortable with the new enterprises.

- Take some time to make a list of existing land, labor, equipment, and facilities on their farm businesses.
    - For each item, the peak times of use should be noted. A timeline can then be created to identify the times of the year when physical resources are being used the most, and would not be available for a new enterprise. Similarly, the slack times for each resource can be identified. Once the timeline is established, enterprises can be identified that will fit into the existing physical resource base when they are available.
- Producers should take care to identify their unique skills, background and other non-physical assets.
    - Resources such as specialized skills, knowledge, locations of the farm, etc. are included in this category. Often the individual does not easily see these types of resources. An external perspective from someone outside the business can be very helpful in identifying these resources for the producer. Once the non-physical resources have been identified, they should be categorized, and then the producer can look for enterprises that use them.

5.6.2 VCE

VCE programs will need to focus on enabling producers to identify what resources that they have available for new enterprises. Perhaps more importantly, the limiting resources of the farm will need to be identified. The production of the ability to match these programs to the appropriate enterprise will be a key component of the VCE program. The skills that producers will need to develop for the enterprise that is chosen will need to be identified and developed.

5.6.3 Public Policy-Makers

As farm businesses diversify, they often change the character of their farm businesses from what may be considered the norm for their area. At least one farm in this study discovered that as they changed the makeup of their farm, that they no longer fit the mold of the local zoning policy as an agricultural enterprise. If the trend in Virginia or individual localities is to be a further diversification of farm businesses into non-traditional enterprises, policy makers will need to take a detailed look into how policy might need to be adapted to not hinder the future of agriculture. Policies and regulations that are intended to protect and enhance the future of agriculture may in fact hinder agriculture as farm businesses change their enterprises to meet the changing economic and social conditions they face.

5.6.4 Agri-business

The participants in this study often had difficulty in finding specialized crop and enterprise supplies and services as they diversified into crops and enterprises that were not typically produced in their areas. If diversification becomes a major trend in Virginia, then agricultural supply firms will need to diversify their product lines as well. Since increasing inventory space can be expensive, agricultural suppliers may find that increasing their special-order capacity may be the appropriate solution. Crop consulting services will also need to become more diverse in the services that they provide.

CHAPTER 6

COMMON THEMES OF CASE STUDY

Qualitative analysis using Winmax software identified several common themes from the case study interviews, such as the motivations for diversification, and the methods by which farm businesses accomplished diversification. As similar ideas were noted, they were coded according to the theme. Once the text segments for each theme was coded, the themes were analyzed individually to investigate any patterns within the theme.

Table 6: Common Themes Identified by Qualitative Analysis of Case Study Transcripts using Winmax Software

Theme	Number of Text Segments	Lines of Text	Producer						
			1	*2*	*3*	*4*	*5*	*6*	*7*
Be Patient When Diversifying	7	25		☑			☑	☑	
Control Over Price as a Motivation for Diversification	7	29	☑	☑	☑				
Enjoy What You Do	14	53	☑	☑	☑	☑	☑	☑	☑
Diversification as a Means of Expanding Within Boundaries	17	85		☑	☑	☑	☑		☑
Go Against Tradition	9	58	☑	☑	☑		☑		☑
Keep Changing	8	26	☑	☑	☑		☑		
Phase out or Scale Back Old Enterprise	17	82	☑	☑	☑		☑	☑	☑
Quality of Life Perspective Changes with Experience	11	81	☑	☑	☑	☑	☑	☑	☑
Start Slow and Minimize Investments	31	135	☑	☑	☑	☑	☑	☑	☑
Started for Survival	21	113	☑	☑	☑				☑
Stretched Thin	20	103	☑	☑	☑	☑	☑	☑	☑

6.1 Be Patient When Diversifying (7 text segments and 25 lines of text, 3 participants)

A common piece of advice given by the participants in this study who had been involved in diversification for several years was to be patient with new enterprises. New enterprises take time to establish, and often will not appear successful in early stages. Many of the participants in this study related experiences where they nearly gave up on an enterprise after the first year or two, but found them to be profitable after time went on. Key to this theme was the concept that a producer has to be willing to experience some failures along the way. Not all enterprises will be successful. Producers trying to diversify their farm businesses need to be able to handle disappointments along the way, both emotionally and financially.

Being patient with an enterprise did not mean that changes should not be made to the venture when necessary. For example, one participant related the experience of having tried a new type of forage grass for hay production. The first year of the crop was very poor, due to improper fertilization. After doing some research into the unique nutrient needs of this crop, the nutrient deficiency was corrected, and that crop became successful.

"…you got to stick with it to see what it (is) going to do."

Weather variability was another reason given by participants to be patient with new enterprises, particularly when the new enterprise was a new crop to the farm. In any given year, various regions of Virginia are subject to periods of drought, excessive rainfall, heavy storms with hail, or untimely freezes, all of which could potentially damage a crop. Several seasons are often required to properly evaluate how a new crop will fit into the microclimate of a given area. The grain producer who had diversified into cotton provided a good example of this point. His principle motivation for moving into cotton was market driven, in that the price for cotton was near record high levels at the time, while the prices of the other commodities already produced on the farm were unchanged. However, he has continued with cotton even though the market has since weakened because of the advantage that cotton provides as a hedge against poor weather conditions. This producer has discovered that in normal years, cotton performs as well as the other crops in the rotation. In dry years, however, cotton is not as adversely affected by hot and dry weather, and thereby limits the losses that could be experienced if more drought susceptible crops, such as corn, were grown.

Patience was particularly essential for participants diversifying into agritourism and direct-marketing enterprises. The four participants in the study involved in agritourism and direct marketing[1] all experienced rather low numbers of customers in their first and sometimes even their second year of operation. By the third year of operation, all had seen a drastic increase in customer traffic, and most have seen a continued positive trend since that time. This is in part because the most effective form of advertising for these enterprises related by participants in this study was through word of mouth by past customers. Word of mouth advertising, particularly for enterprises with very short seasons, takes time to be effective.

> *"… if you try something, give it at least three years. If it doesn't work then, chuck it and try something else. You've got to give it at least three."*

All the participants in this study noted a need to be patient with expenditures of capital. This point links closely with the theme of starting slowly. At least one participant in the study had experienced times when they had tried to diversify and expand enterprises too quickly, and found themselves short of financial resources as a result of inadequate positive cash flow.

6.2 Control Over Price as a Motivation for Diversification (7 text segments, 29 lines of text, 3 participants)

The ability to have control over the price they receive for their products was given as a key advantage by participants diversifying into agritourism, direct marketing and value added enterprises. Along with the type of enterprise diversified into, all of the participants in this theme shared other characteristics. Participants contributing to this theme historically produced commodities that were sold to a processor, such as fluid milk or apples for processing. With these commodities, the producer had no control over the price received. Many did not even know the price at the time of sale, but found out what they were to be paid long after delivering the product. This lack of control over price was a source of frustration for many participants.

New enterprises sought out by the participants in this theme varied quite a bit, but they did share one key trait. All of the new enterprises allowed the producer to have control over the decision of how the products sold would be priced. All products were subject to the vagaries of

[1] Although there were five total participating farms involved with an agritourism venture, one was still in the planning stages of their first year when the interviews were conducted.

market supply and demand, and the participants had to take this factor into account when setting the price, however, the control over the decision of price was perceived to be more important to the participants than the actual price received.

Participants felt that they might actually be under pricing their product for agritourism and agritainment activities. These ventures were different from the previous enterprises conducted by the farm the process of determining the appropriate price for their products was both a challenge and a source of job satisfaction by participants. Participants often found themselves surprised at the willingness of their customers to pay higher prices than they were charging.

One interesting trait shared by the participants who wanted control over price was that they had been involved in their diversified activities for a number of years. Participants in the starting stages of agritourism, value added production, or direct marketing did not mention this theme. It is likely that the advantage of setting their own price was not a conscious motivation in the initial stages of deciding to diversify.

6.3 Enjoy What You Do (14 text segments, 53 lines of text, 7 participants)

This theme refers not only to the motivations behind diversifying the farm, but also infers some of the reasons for the success of diversification by the participants. This theme has many levels. Producers not only need enjoy what they do, but enjoy the way that they do it. While participants began diversifying their farm businesses because they needed to increase their income, the selection of specific enterprise was shaped in large part by the individual desire of each producer to do something that they would enjoy. The enterprise selected was not always the one with highest potential income, i.e., a lifestyle versus financial motivation was present

Adding a new enterprise to the farm usually increases the workload for the producer. By selecting enterprises that provide personal satisfaction and enjoyment, the increased workload was more easily tolerated, and often welcomed. Financial rewards alone do not appear to be enough of a motivation to accept the long hours and hard work associated with a diversified farm.

6.4 Expand Within Existing Boundaries (17 text segments, 85 lines of text, 5 participants)

Diversification provided several participants with the opportunity to expand the business without increasing the size of the existing operation. Three participants in this study cited this as a motivation for diversification of their farm businesses. The conditions driving this theme were the size of the operation and the type of principal commodity produced by the farm.

Participants from larger farm businesses placed a greater importance on the ability to expand within their existing physical boundaries than did participants from smaller farm businesses. One farm in particular had two large blocks of land that were separated by several miles. The producer from this farm related that he would spend half a day just checking the second block of land for work suitability. For this producer, a long-term goal of the farm diversification was to increase net income of the farm to the point that he could afford to let the second block of ground go. This producer and others in the study recognized that they had grown beyond the point of efficiency in the specialized portions of their farm businesses, and were experiencing diminishing returns to their efforts. By scaling back their overall production, participants would be able to more efficiently allocate their labor and equipment resources, and increase the production efficiency across all enterprises on the farm.

> *"…we hope that this will bring in the income that will keep us at our level, and possibly let us even be smaller and do a better job… I'm not looking to get bigger"*

Participants in the study could not expand acreage or herd size further, due to resource or regulatory constraints. Increasing income through adding new enterprises was the means by which these farm businesses expanded their operations. One participant's farm had become land-locked by highways and other structures. There were no viable opportunities to expand the acreage or herd size of the base operation, as the capital improvements on the base farm were not portable, and did not have a sale value equal to the cost of replacement elsewhere.

Participants from dairy farm businesses were particularly aware of the need to expand within existing boundaries. Environmental regulations dictate that farm businesses over specific herd sizes have manure containment facilities[1]. Furthermore, the logistics involved with the disposal of stored manure requires a certain amount of cropland in close proximity to the base farm. The costs of building the facilities needed to comply with environmental regulations prohibit many farm businesses from pursuing herd expansion. As an alternative to herd

[1] Environmental Protection Agency: Concentrated Animal Feeding Operations Effluent Guidelines: www.epa.gov/ost/guide/cafo/index.html

expansion, enterprise diversification provided the means by which two of the participants from dairy farms in this study expanded their operations.

6.5 Go Against Tradition (9 text segments, 58 lines of text, 5 participants)

Knowledge and practices are handed down from generation to generation on family farm businesses, and influence the enterprise mix. Contrary to the idea of staying in the mainstream, participants in this study were willing to adopt non traditional enterprises. Furthermore, some participants indicated a preference for finding enterprises that were out of the ordinary, both in their local area, and even for U.S. agriculture as a whole. These participants could be described as innovators or visionaries with their farm enterprise decisions. They actively sought out the new and emerging trends in agriculture. In at least one instance, participants from a farm in this study found themselves to be trendsetters. These participants found that after they had realized some success with their agritourism enterprise, several neighboring producers began adopting similar enterprises. Producers need to learn to avoid letting tradition alone dictate their diversification decisions.

Three participants found themselves worried about failing in the public view. Despite their reservations, these participants saw the potential benefits of success to outweigh the humiliation they might suffer with failure. Participants with the worry of the scrutiny of their peers were all new to their enterprises. Other participants may have had similar reservations early on in their diversification projects, but did not specifically mention them during the interviews.

"…but if you do this and you flop, you're failing in public, and you talk about making a fool of yourself…"

Participants from six out of seven of the farm businesses in this study felt set apart from their peers, or in some cases, the older generation on their own farm. A very common theme of learning to change the way that the producer looks at their farm was evident. This theme encompasses everything from changing the way that one participant thought of how their orchard looked when switching to pick-your-own from a conventional system, to how to schedule tasks on the farm.

"I think the most important thing is to learn to grow (the farm)… you can't sell what you don't have…"

A common observation of the case participants was that often time producers fail to see beyond the range of vision of previous generations for the farm. This state of having blinders on, limits producers from realizing new and emerging opportunities. The participants in this study saw this condition as a common constraint for many of their peers, and questioned the willingness to pursue diversifying their own farm businesses as a result.

> *"…I think that the future of agriculture is promising to the person that can see past the way their dad did it…"*

6.6 Keep Changing (8 text segments, 26 lines of text, 4 participants)

There was a common ideal of continued innovation among participants in this study, particularly among the experienced innovators in the study. Participants new to diversification were focused on the initial change, and did not see the future changes that would be needed. Conversely, participants involved in diversification for a number of years considered it very important to keep changing the product mix, advertising, production practices, etc, of the enterprises on the farm.

This theme refers to the continual building of added enterprises through small changes, rather than making wholesale changes to the entire farm business enterprise mix. Producers base the changes on the lessons learned with each year's experience. This theme could be alternatively titled *don't give up*. That is, keep changing the enterprise until it works, rather than trying it one way and giving up.

Continual changes and improvements were of particular importance to participants who added agritourism and direct marketing enterprises. Participants recognized and felt a need to keep their products and events new and fresh each season in order to retain existing customers and to and attract new customers. Customer feedback and close observation of emerging consumer trends were vital to these participants. It is important to note that the base or foundation activity and/or commodity of these agritourism or direct marketing enterprises are kept constant. Changes were made to the enhancement of the foundation of the enterprise, rather than replacement it.

> *"… you've got to keep on your toes and see what's going on…"*

6.7 Phase Out or Scale Back Old Enterprise (17 text segments, 82 lines of text, 6 participants)

6.7.1 Processed Fruit and Grain Producers

Participants commonly saw their new enterprises as having a more promising future than their traditional commodities. Quality of life also played a role for some participants within this theme. After realizing success with new enterprises, the producers of processing fruit and grain hoped to eventually phase out portions of or scale back the former enterprises, while increasing the scope and size of new, more profitable enterprises. These three participants did not intend to completely phase out the old enterprises, as they still would serve a useful purpose on the farm at a smaller scale.

6.7.2 Tobacco Producers

The two participants in this study who raised tobacco see the diversification of their farm businesses, in part, as a means by which they can continue to farm when and if tobacco was no longer an option for them, if tobacco no longer was allowed be grown in the U.S. These participants were not seeking to necessarily phase out tobacco per se, but rather be prepared for the future if tobacco was phased out or eliminated completely by forces beyond their reach or control.

6.7.3 Dairy Producers

The two participants from dairy farm businesses in this study that had been involved in their diversified endeavors for a number of years were considering eventually phasing out their dairy operations. The motivation for phasing out the dairy was not a profitability concern, as was the case with the grain and fruit producers, or a regulatory concern, as with the tobacco producers. Participants who were dairy producers saw the new enterprises as an opportunity to improve their quality of life by reducing their daily workload. Conventional dairy production requires as much or more continuous, day-to-day work than any other type of agricultural production. One farm had already begun to scale back the overall herd size of their dairy in order to reduce the amount of labor needed to milk, which helped to facilitate his ability to leave the farm occasionally for family events and vacations. Another dairy producer planned to phase out

> *"I realize now that the dairy cows in the future is becoming less important"*

the dairy portion of their diversified enterprise completely as the farm business transitioned to the next generation, as the younger generation was not interested in the dairy farm lifestyle.

6.8 Quality of Life Perspective Changes With Experience (11 text segments, 81 lines of text, 7 participants)

The perception of quality of life issues changed as the participants' lifestyle changed to accommodate the enterprises that were added to the farm. Although all participants recognized that if the goal of increased farm income was realized that they would feel more secure financially, participants from five of seven farm businesses did not anticipate all of the positive quality of life changes that a successful new enterprise might bring. There was a general expectation of a decreased quality of life during the times of increased workload created by the additional enterprise(s), and little anticipation of an immediate increase in their overall quality of life. What started with trepidation of long hours became hope of future security and the satisfaction of a more rewarding lifestyle.

Participants from the five of seven farm businesses who had realized success with new ventures, and had the benefit of hindsight, had a much different perspective than the participants from the two farm businesses just starting out. As participants diversified, and had success, they discovered that their quality of life increased. The reduction of financial burdens was a great relief to these participants. They found that as their financial worries decreased, they were able to enjoy the work more, and did not mind the increased workload that the new enterprises brought with them. Some participants anticipated this change early on in the planning of their new enterprises, while others focused on the worries of longer hours.

Participants engaged in agritourism and direct marketing found that they attained a great deal of pleasure and satisfaction from their interactions with the public. The two participants in the initial planning phase of agritourism and direct marketing, and without any experience, did not foresee the benefits of working with the public, and quite conversely, felt additional trepidation at the prospects of interacting directly with the public on their farm businesses. The changes in attitudes can be seen as simply as in how participants phrase their interaction with the public

> *"We have had people that has stopped here to pick strawberries from all over the world… and it was real interesting to get to meet these people."*

before and after they start these enterprises. Participants without experience with public interaction relate their concerns about "dealing with the public", while those with at least one year of experience, in retrospection, use phrases such as "meeting new people" or "interesting people that you meet". Furthermore, these experienced participants often related that they had created new friendships from their interactions with the public on their farm businesses.

6.9 Start Slow / Small and Minimize Investments (31 text segments, 135 lines of text, 7 participants)

A universal theme among participants in the study was the strategy of starting slow or small and minimizing investments with new enterprises, and was considered a critical part of being successful with their ventures. Resource and information limitations were the most common reasons given for starting slow or small with new enterprises. Participants preferred to learn how to properly manage the new enterprise on a very small scale first, and gradually grow the enterprise as they became more comfortable in their knowledge and skill levels. Additionally, participants started out slow in new ventures to see whether or not they would enjoy the new enterprise, or to see if they felt they had the ability to develop the new skills they would need.

> *"… to see if we want to deal with the public or not… instead of putting a lot of money into… (a large investment)… and finding out that we don't like dealing with the public…"*

Three of seven participants also limited the size and scale of new enterprises for reasons of limited resource availability, rather than or in addition to a lack of information or skills. The limitations of both financial and non-financial capital created limits to the initial scale of the new enterprises.

> *"It wasn't a risk because we did is so slow, and we used what we had… we didn't go out and buy anything."*

6.10 Started for Survival (21 text segments, 113 lines of text, 4 participants)

Driven by catastrophic weather events on the farm, severe financial stress, or both, four participants first tried a new enterprise out of desperation and with very little planning, versus for pure desire and with careful planning. The size and enterprise mix of farm tended to have very little impact on whether or not a farm started their enterprise for survival. Participants from rural areas were not as prone to start diversifying for survival as their counterparts in areas that were experiencing a transition from rural to urban.

6.10.1 Catastrophic Weather Events

A subset of participants from two of the four farm businesses contributing to this theme were motivated to initially start at least a portion of their new enterprises by catastrophic weather events. These farm businesses were fruit orchards that had suffered severe mid-season crop losses due to either late freezes or hailstorms. The new enterprise was typically in the form of an annual vegetable crop, such as pumpkins or green beans, which offset the expected income loss from the lost fruit crops. Participants in this subset did not expect to grow these new crops more than just the one year that they needed to raise them for survival, but after realizing success with the new crops, they decided to continue to raise them in subsequent years. Although risk management was not the primary motivation or even a conscious motivation for the participants, these new crops served as a hedge against the risk of their traditional crops.

> *"I guess some people like to lift their hands if they're crops get destroyed, and waits for someone to bail them out…. But I don't look at it that way…. I'm going to find a way to make it growing something else."*

6.10.2 Financial Survival

Participants from the other two farm businesses contributing to this theme started their diversified enterprises as a means of financial survival. Decreasing farm profitability due to depressed or volatile commodity prices had created expectations among these participants of a very poor financial outlook for their farm businesses. These participants decided to look for a new enterprise to help increase or stabilize their farm income. As with the participants who were forced to diversify by a weather event, the participants forced to diversify by financial stresses found that after realizing success with their new ventures, they continued with them

> *"Well, when we started with this, it was more of just a survival thing… Now, we're beginning to look more to that (the future)…"*

because of the success and because they enjoyed them.

6.10.3 Survival Creates a Risk Management Strategy

An interesting trend among the participants who started their new enterprises for survival is that these farm businesses tended to choose enterprises that were dissimilar from their traditional enterprise base, such as adding pumpkins to a dairy farm or strawberries to a grain farm. Participants that were not diversifying for survival tended to diversify with crops and enterprises very similar to existing enterprises, such as different types of fruit or varieties in an orchard, or adding watermelons to a farm already producing pumpkins and cantaloupes. This trend is possibly driven by a subconscious risk-management motivation by the participants. That is, they are driven to diversify because their current enterprise is failing, so they are looking for another venture that will do well in the current conditions. This method is not unlike the investment portfolio diversification strategies employed by investment financial planners, where stocks that perform well in bullish markets are linked with stocks that perform well in bearish markets, thus reducing the overall risk of the portfolio as a long term investment.

6.11 <u>Stretched Thin</u> (20 text segments, 103 lines of text, 7 participants)

Adding enterprises to the farm had the consequence of increasing the workload of producers in this study. New activities often required additional hours of work during key times of the year, when the seasons of various enterprises overlapped. This was recognized as the primary downside to the addition of new enterprises by six of the seven participating farm businesses, and as an issue by the other participating farm business. These participants juggled the costs of additional work with the benefits of a more secure financial situation. Participants found themselves behind on work, and often having to prioritize jobs, so that the most important tasks were completed first. Occasionally some jobs would not get done completely or effectively, which would result in reduced yields or performance of the various enterprises. Participants from five of seven farm businesses related that they did not foresee the full impact of the addition of new enterprises would have on their existing enterprises.

> *"You know you just don't add another enterprise and maintain everything else like it is"*

Participants from the three farms with young children on the farm also wrestled with the extra time requirements of adding enterprises to the farm. Activities that lent themselves to having the whole family participate, such as agritourism and direct marketing, helped to alleviate some of these concerns for the participants from two of these farm businesses.

Contrary to the overall impetus of this theme, participants from two of seven farm businesses found that the extra income from the addition of a new enterprise that stretched them very thin during a particular time of the year would allow them to cut back on the primary enterprise, thus allowing them more free time overall. This was particularly true of dairy farm businesses that had expanded into agritourism ventures. These farm businesses concentrated on a single event that was during a specific time of the year.

> *"… about two months out of the year you are backed clear up against the wall, but rest of the year you can go your own pace."*

The participants largely felt content in their decisions. They felt that the extra work was worth the rewards that they received in both additional income and a reduction in stress over financial issues. That is not to say that the participants were completely satisfied with their workloads. It was a continued concern, and many felt that they would have difficulty trying to take on any additional workload, if conditions dictated such.

Diversification does not always translate into longer hours for the producer. One producer in the study related that his personal time had actually increased as a result of adding new enterprises to his farm. In this case, the farm was primarily a dairy farm, and the new enterprises that had been added had enabled him financially to cut back on the size of the dairy portion of his farm. As a result, he had been able to find more free time on a day-to-day basis to spend more quality time with his family. This producer, as with the others in the study, reported being more happy as a result of diversifying their farm businesses, which ties back into the theme of enjoying what they do.

6.12 Implications of All Common Themes

6.12.1 Producers

The common themes of this case study lead to several implications for producers who are looking to diversify their farm businesses.

- Producers should look for enterprises that they would enjoy doing. They must realize that new enterprises will often lead to longer hours working on the farm during certain times of the year, and if they enjoy the work involved with that enterprise, it makes it much easier to deal with the long hours.
- Diversification can help a farm that is at the practical limit of land size to expand the business within the physical boundaries of the farm.
- Producers need to be careful to not let tradition keep them from trying new ventures.
- Diversified farm businesses need to keep changing to keep up with changing markets and production conditions.
- Starting slow with new enterprises helps to minimize potential losses and allows an inexperienced producer to learn the new enterprise slowly. However, producers need not miss opportunities because they started too slow with a new venture.
- Labor and resource management are critical with diversification. Producers need to plan for the resource strains that new enterprises will place on the farm.

6.12.2 VCE

VCE programs for producers that are planning to add new enterprises to their farm businesses can draw many key points from the common themes of this case study.

- VCE will need to stress patience and goal setting to producers.
- VCE programs will need to enable producers to see beyond the traditional commodity base and practices for their area and to go against the traditional ways of doing things.
- VCE programs will need to address skill development in areas not commonly addressed by VCE programs, such as public interaction skills and niche market pricing.
- VCE programming will need to help to identify opportunities earlier for producers, and help them to make the diversification decisions much earlier in the process, perhaps when their resource base is not stretched to the limit since producers often wait until they feel like they have no choice but to do something different to diversify their farm businesses.

- Programs will need to teach resource management skills to producers.
- VCE will need to develop information on the resource requirements of various enterprises, and help producers to see how they interact with existing activities.

PART III: RECOMMENDATIONS

CHAPTER 7: RECOMMENDATIONS

7.1 Skill and Information Needs of Participants

This study has brought to light the key issues, skills, and resources used by participants in their decision to diversify their farms. Participants clearly have specific areas in which they need to develop skills and have need of research-based information when diversifying their farms, particularly when the new enterprises are dissimilar from the existing farm enterprises. These areas are:

- Business and Enterprise Planning Skills
- Business Information
- Enterprise Production Skills
- Production Information
- Resource Management Skills
- Marketing Skills
- Market Information
- Public Interaction Skills
- Financial Decision-Making Skills

Virginia Cooperative Extension has a role in ensuring that the educational needs of these participants are adequately met as they plan for and implement diversification on their farms. This study has identified areas in which Virginia Cooperative Extension (VCE) is currently adequately meeting the needs of producers who are diversifying their farms, and others in which further program development is necessary.

The following pages contain several illustrative tables that demonstrate the areas where skill development and information needs existed for participants in this study, and would be a likely starting point for an educational program for VCE. The first three tables relate the association between the common themes and skill and information areas identified in this study. Table 7 illustrates the basic association between the skill and information needs areas with the common themes of the study. From this table, the relative uniformity or uniqueness of various skill and information types across the common themes can be ascertained, as well as the skills and information types associated with each common theme. Table 8 illustrates to the extent which the given skill or information need was met for participants in this study in the context of each theme, and table 9 adds the sources of skills and information for each theme. The degree to which specific information and skill areas were met for participants in this study varied according to the form of enterprise diversification. Tables 10 – 12 illustrate the association between the skill and information areas and the type of enterprise diversification and to what degree and who met the needs.

Table 7: Skill and Information Needs of Participants by Common Theme

Skill and Information Needs	Common Themes											Total Number of Occurrences
	Be Patient	Control Over Price	Enjoy What You Do	Expand Within Boundaries	Go Against Tradition	Keep Changing	Phase Out Old Enterprise	Quality of Life Perspective Change	Start Slow / Minimize Investments	Started for Survival	Stretched Thin	
Business and Enterprise Planning Skills	X			X	X	X	X		X	X		7
Enterprise Production Skills	X		X	X	X	X			X	X	X	8
Resource Management Skills				X	X	X	X	X	X	X	X	8
Marketing Skills	X	X			X	X			X			5
Public Interaction Skills		X			X			X				3
Financial Decision-making tools skills	X	X		X	X	X	X		X	X	X	9
Business Information	X	X		X	X	X	X		X	X	X	9
Marketing Information	X	X			X	X			X			5
Production Information	X		X	X	X	X			X	X	X	9
Total Number of Skill / Information Types Associated with Given Theme	7	6	2	6	9	8	4	2	8	6	5	

Table 8: Relative Meeting of Skill and Information Needs of Participants per Common Theme

Skill Needs	Common Themes: Be Patient	Control Over Price	Enjoy What You Do	Expand Within Boundaries	Go Against Tradition	Keep Changing	Phase Out Old Enterprise	Quality of Life Perspective Change	Start Slow / Minimize Investments	Started for Survival	Stretched Thin
Business and Enterprise Planning Skills	Partially Met			Partially Met	Met	Partially Met	Partially Met		Partially Met	Unmet	
Enterprise Production Skills	Partially Met		Partially Met	Met	Partially Met	Partially Met			Partially Met	Partially Met	Partially Met
Resource Management Skills				Unmet	Unmet	Unmet	Unmet	Unmet	Unmet	Unmet	Unmet
Marketing Skills	Partially Met	Partially Met			Partially Met	Partially Met			Unmet		
Public Interaction Skills		Partially Met			Partially Met			Partially Met			
Financial Decision-making tools skills	Met	Partially Met		Partially Met	Met	Partially Met	Unmet		Unmet	Unmet	Unmet
Business Information	Partially Met	Partially Met		Partially met	Met	Partially met	Partially Met		Partially Met	Unmet	Partially Met
Marketing Information	Partially Met	Partially Met			Partially Met	Partially Met			Unmet		
Production Information	Partially Met		Partially Met	Met	Partially Met	Partially Met			Partially Met	Partially Met	Partially Met

Table 9: Meeting of Skill and Information needs / Source of Skills and Information per Common Theme

Skill Needs	Common Themes: Be Patient	Control Over Price	Enjoy What You Do	Expand Within Boundaries	Go Against Tradition	Keep Changing	Phase Out Old Enterprise	Quality of Life Perspective Change	Start Slow / Minimize Investments	Started for Survival	Stretched Thin
Business / Enterprise Planning Skills	Self			VCE, Other Producers, Consultants, Self	Self	Self	Self, VCE		Self		
Enterprise Production Skills	Self, Other Producers VCE		Self, VCE, Consultants Other Producers	Self, VCE, Other Producers	VCE, Other Producers, Self	Self			Self	Self	Self, Other Producers, VCE
Resource Management Skills											
Marketing Skills	Self	Self, VCE			Self, Consultants	Self, Others			Self, VCE, Consultants		
Public Interaction Skills		Self			Self			Self			
Financial Decision-making skills	Self	Self, VCE		Self, VCE	Self, VCE	Self	Self, VCE				
Business Information	Self, Other Producers, VCE, Consultants	VCE		Self, VCE, Consultants, Others	VCE, Consultants, Self	Self	Self, Consultants		Self, Other Producers, Consultants, VCE		Self, Other Producers, VCE
Marketing Information	Self, Other Producers, VCE, Others	Self, VCE, Consult.			Self, Others	Self, Others					
Production Information	Self, VCE, Other Producers		Other Producers, VCE	Other Producers, VCE	Other Producers, VCE, Self	Self, Other Producers, VCE			Self, Other Producers, VCE	Self, VCE, Other Producers	Self, Other Producers, VCE

Green = Skill or Information Sufficiently Met, Yellow = Skill or Information Partially Met, Red = Skill or Information Not Met

Table 10: Meeting of Skill and Information Needs for Different Enterprise Types

Skill and Information Needs	Type of Enterprise Added: Agri-tourism	Direct Marketing / Value-Added	Specialty Crop or Commodity Dissimilar to Existing Enterprises	Conventional Commodity (similar to existing enterprises)
Business and Enterprise Planning Skills	Partially Met	Partially Met	Partially Met	Partially Met
Enterprise Production Skills	Partially Met	Partially Met	Partially Met	Met
Resource Management Skills	Unmet	Unmet	Unmet	Unmet
Marketing Skills	Partially Met	Partially Met	Partially Met	Met
Public Interaction Skills	Partially Met	Partially Met	Unnecessary	Unnecessary
Financial Decision-making tools skills	Partially Met	Partially Met	Partially Met	Partially Met
Business Information	Partially Met	Partially Met	Partially Met	Partially Met
Marketing Information	Partially Met	Partially met	Unmet	Met
Production Information	Partially Met	Partially Met	Partially Met	Met

Table 11: Skill and Information Needs per Information Source and Enterprise Type

Skill and Information Needs	Information / Skill Source																				Number of Information Sources / Number of Enterprise Types
	VCE				Other Producers				Private Consultants				Other (Friends, Lenders, etc.)				Self-Developed				
	Agri-tourism	Added	Specialty / Dissimilar Crop	Similar Enterprise	Agri-tourism	Added	Specialty / Dissimilar Crop	Similar Enterprise	Agri-tourism	Direct Marketing / Value-Added	Specialty / Dissimilar Crop	Similar Enterprise	Agri-tourism	Added	Specialty / Dissimilar Crop	Similar Enterprise	Agri-tourism	Added	Specialty / Dissimilar Crop	Similar Enterprise	
Business and Enterprise Planning Skills	X	X	X	X					X				X	X	X	X	X	X	X	X	**3.25**
Enterprise Production Skills			X	X	X	X	X	X	X		X	X					X	X	X	X	**3.25**
Resource Management Skills																					**0**
Marketing Skills		X	X	X	X	X			X				X	X			X	X	X	X	**3**
Public Interaction Skills																	X	X			**0.67**
Financial Decision-making tools skills		X	X	X					X												**1**
Business Information		X	X	X					X				X	X			X	X	X	X	**2.5**
Marketing Information		X	X	X	X	X		X	X		X	X	X	X			X	X	X		**3.5**
Production Information		X	X	X		X	X	X	X		X	X					X	X	X	X	**3.25**
Total Use of Information Sources	**1**	**6**	**7**	**7**	**3**	**4**	**2**	**3**	**7**	**0**	**3**	**3**	**4**	**4**	**1**	**1**	**7**	**7**	**6**	**6**	

Table 12: Skill and Information Needs per Enterprise Type, Source and Level of Need Satisfaction

<u>Skill and Information Needs</u>	Type of Enterprise Added			
	Agri-tourism	Direct Marketing / Value-Added	Specialty Crop or Commodity Dissimilar to Existing Enterprises	Conventional Commodity (similar to existing enterprises)
Business and Enterprise Planning Skills	VCE PC O S	VCE O S	VCE O S	VCE O S
Enterprise Production Skills	OP PC S	OP S	VCE OP PC S	VCE OP PC S
Resource Management Skills				
Marketing Skills	OP PC O S	VCE OP O S	VCE S	VCE S
Public Interaction Skills	S	S	S	S
Financial Decision-making tools skills	PC	VCE	VCE	VCE
Business Information	PC O S	VCE O S	VCE S	VCE S
Marketing Information	OP PC O S	VCE OP O S		VCE OP PC
Production Information	PC S	VCE OP S	VCE OP PC S	VCE OP PC S

Green = Skill or Information Sufficiently Met, Yellow = Skill or Information Partially Met, Red = Skill or Information Not Met
VCE = Virginia Cooperative Extension
OP = Other Producers with Experience
PC = Private Consultants
O = Other sources (friends, government agencies, lenders, etc.)
S = Self developed skill or information

7.2 VCE Educational Program Framework

The tables in section 7.1 set the stage for a framework for a VCE educational program to address the needs of producers who add new enterprises to their farms. There are key areas where the skill and information needs of the producers in this study were either not met sufficiently or considered to be unmet. Additionally, there are certain types of skill and information that were more universally needed by the producers in this study across contexts, and therefore would be more adapted to education in larger group or generic settings. Skills and information types that are more situation specific might be better suited for small group or one-on-one types of programs.

7.2.1 Unmet Skill and Information Areas

Unmet needs of producers indicate an area of opportunity for VCE to develop programs. The skill and information areas where the needs of the participants in this study were unmet were:

- Business and Enterprise Planning Skills, in the context of the "Started for Survival Theme"
  - The participants who contributed to this theme had the common trait of having started their new enterprises for survival, due to financial stress or catastrophic weather events. It is likely that a lack of sufficient business planning may have led to this situation. (Table 8)

  Educational Program Type:

      - Large group sessions, workshops, and printed / online media\
      - Generic (not farm business or enterprise specific)

  Educational Program Details: The audience for a program aimed to satisfy this need would be a very broad cross-section of producers, and would not necessarily be limited to just those considering new enterprises for the farm. Current VCE programs need to further stress the need for business planning for farm business operations, and work to enhance these skills in producers.
- Resource Management Skills
  - The skills to adequately manage limited resources, particularly labor and time, were perhaps the most universally unmet skill need for participants in this study. (Tables 8, 10)

<u>Educational Program Type:</u>

- Large group sessions, small group workshops, and one-on-one meetings
- Generic and specific

<u>Educational Program Details</u>: The audience for a program aimed to satisfy this need would include all producers considering new enterprises for their farms. Broad, more generic programming could be used to raise the awareness of producers for their need of resource management skill development, and to deliver the basic skill development information. Once producers have achieved a basic level of education in this area, however, the programming will need to be done on a more personalized basis, since each farm business and producer has a unique set of resources to match to a wide array of possible enterprises.

- Financial Decision-Making Skills
  - In the context of the theme of "Starting Slow / Minimizing Investments:"
    - All of the participants in this study cited the importance of starting slow with new enterprises. One of the reasons given for starting slow was a limited amount of available financial capital for investing in new enterprises. The use of financial decision-making tools would benefit producers in this circumstance greatly. (Table 8)
  - In the context of the theme of "Started for Survival"
    - Participants contributing to this theme started their new enterprises under conditions of heavy financial stress or as the result of a catastrophic weather event, both of which required an investment with a quick return on investment. None of these participants cited using any financial decision making tools in their decision. Such tools would assist a producer in a similar situation to evaluate different enterprises and select the one with the greatest short-term return on investment. (Table 8)
  - In the context of the theme "Stretched Thin"
    - Financial decision-making tools could assist producers with limited labor or time resources to evaluate the affects of various combinations of lost productivity in one enterprise for the benefit of another enterprise on the entire business. (Table 8)

Educational Program Type:

- Small group workshops, one-on-one meetings
- Generic in workshops, specific in one-on-one meetings

Educational Program Details: Regardless of the context under which the financial decision making tool is needed, these skills could be taught to producers in the context of a group setting. There would be a likely need of individual follow-up with producers to assist them in customizing an analysis for their specific situation.

- Marketing Information (In the context of Specialty Crops)
  - Participants in this study who added specialty crop enterprises found themselves lacking sufficient marketing information for these crops. This led, in part, to the theme of starting slow and minimizing investments. (Table 10)

Educational Program Type:

- Publications, large group meetings, small group workshops
- Specific

Educational Program Details: VCE programs aimed at addressing this need will need to be multi-tiered. Research-based market information needs to be developed for specialty crops at the university level. Then, this information needs to be passed on to producers, which can be done in the form of printed publications and in general production meetings. In cases of very specialized crops and enterprises with a very unique and small niche market, producers may need to be able to conduct their own market research. Educational bulletins and programs will need to be developed to teach producers how to conduct such research.

7.2.2 Partially Met Skill and Information Areas

Most of the skill and information areas identified in this study were partially met by various sources. Opportunities are identified for enhancing existing educational programs.

- Enterprise and Business Planning Skills and Information
  - None of the participants in this study had any written business plans. Many of the problems that participants had experienced with time and financial allocations with the new enterprises could have been reduced with some more detailed business planning. (Tables 8, 10)

Educational Program Type:

    - Publications, large group meetings, small group workshops, one-on-one meetings
    - Generic for groups and specific for one-on-one meetings

Educational Program Details: The format of this programming will vary with the audience and should take on various stages. First, producers need to be made aware of the benefits of business and enterprise planning. Then, basic planning skills can be passed along to producers via regional meetings and publications. Finally, extension professionals will need to work individually with producers to help them develop a customized plan for their farm business.

- Enterprise Production Skills and Information
  - Enterprise production skills were partially met in seven of eight relevant common themes and in the context of three of four types of enterprises added to the farm business. Added enterprises that were very similar to the existing enterprises on the participants' farm businesses used virtually the same production skills and therefore required very little skill development. Participants relied on private consultants, other producers, and trial and error to add skills for agri-tourism and direct marketing / value added enterprises. (Tables 8, 10)

Educational Program Type:

  - Publications, small group workshops and one-on-one meetings
  - Generic (research methods) and specific (production methods)

Educational Program Details: The audience for a VCE educational program to enhance the production skills of producers of agri-tourism, direct marketing / value added and specialty crop enterprises will be diverse. Large meeting formats will likely not sufficiently meet the needs of these producers. Programming for these types of enterprises will need to take on the form of small workshops, twilight meetings, and one-on-one contact. Participants also cited a lack of relevant local production research as a limitation. VCE should develop workshops and resources for producers to enable them to conduct scientific production research on their own farms as they evaluate potential crops and enterprises. In some cases, VCE may need to conduct local field trials of alternative crops on cooperating farms.

- Marketing Skills and Information

- Marketing skills were partially met in the context of all four relevant common themes and three of four types of enterprises added for the participants in this study. When participants added enterprises that were similar to an existing enterprise on the farm business, for example, adding plum production to an apple orchard business, the marketing skills required for the new enterprise were very similar to the skills needed for the existing commodities, and therefore substantial marketing skill development was not necessary. Market information for the conventional commodities was easily accessible to participants. (Tables 8, 10)

<u>Educational Program Type:</u>

- Publications, small group workshops, one-on-one meetings
- Generic (skill development), specific (information)

<u>Educational Program Details</u>: As with the production skills and information, the audience for a VCE educational program to enhance the marketing skills of producers of agri-tourism, direct marketing / value added and specialty crop enterprises will be diverse. Large meeting formats will likely not sufficiently meet the needs of these producers. Programming for these types of enterprises will need to take on the form of small workshops, twilight meetings, and one-on-one contact. Additionally, market information for niche and specialty markets in large part was not available for the participants in this study. Participants relied on informal conversations with customers and trial and error for their marketing efforts. Producers who diversify into specialty and niche markets will need to have the ability to develop their own market information. VCE will need to develop resources and programs in market research techniques, and in some cases, collect primary market data for niche and specialty markets to alert producers to the larger-scale trends that may be occurring.

- Public Interaction Skills
  - Public interaction skills were important for participants who added agritourism or direct marketing enterprises to their farm businesses. The participants in this study developed these skills gradually over time as they gained experience with the enterprises. As reported in the theme “Quality of life perspective change”, participants had trepidation in the prospect of interacting with the public on their farms before gaining experience. (Tables 8, 10)

Educational Program Type:

- Small group workshops
- Specific

Educational Program Details: VCE should add programming to help develop public interaction and speaking skills with producers who diversify into enterprises that require these skills. Large meetings, printed material or one-on-one work would not be appropriate beyond awareness raising and basic skill development. Small groups similar to "toastmaster" activities, where participants would have the opportunity to discuss and develop their speaking and public interaction skills would be the most effective means to address this area of skill development.

- Financial Decision Making Skills
  - Financial decision making skills were unmet in the context of three of eight relevant common themes, and were partially met in another three. These skills were partially met in providing skills in the use of enterprise budgets and breakeven costs, in all four categories of types of enterprises added to participant's farms. VCE was the primary source for these skills and information with the exception of agri-tourism enterprises, where private consultants were the only providers of information. (Tables 8, 10)

Educational Program Type:

- Publications, large group meetings, small group workshops and one-on-one meetings
- Generic for skill development and specific for application

Participants in this study only used very basic financial decision making tools, such as enterprise or partial budgets and breakeven costs. As producers consider adding new enterprises and investing financial and other resources, they need the ability to compare their options on a financial basis. Through the use of such tools as net present value, internal rate of return, and payback period, producers could more soundly evaluate the financial implications of a new enterprise on their farm business and make a more informed decision. Educational programming in this area would benefit producers who are not considering new enterprises as well, in the context of making equipment purchases and other capital investments for the farm business. Publications and large group meetings should be used to raise awareness of producers and to conduct generic and basic skill development. Small local workshops and one-on-one work will be necessary to fully develop financial decision making skills in producers, since these skills are detailed and require extended learning time.

7.2.3 Priority Areas by Enterprise Type

In addition to the prioritization of programming by the degree to which needs are currently met that was illustrated in sections 7.2.1 and 7.2.2, VCE programs should also consider the prioritization by enterprise type that is brought to light in table 12. Participants in this study had the most information and skill limitations when they added agritourism, direct marketing / value added and specialty crop or other dissimilar enterprises to their farm businesses. Furthermore, VCE had very little presence as an information source in the area of agritourism enterprises and a diminished presence in the area direct marketing / value added enterprises. Priority areas were indicated as an information source in the areas of agritourism and direct marketing / value added enterprises. However, these enterprises tend to be specific to each business resource mix, and therefore programming will need to be tailored to the makeup of producers in a given area. Surveying is necessary to determine if agritourism and direct marketing enterprises are more concentrated in certain regions of the state, and if so, which regions. If regional concentration exists, these regions of concentration should be targeted for regional programming.

7.2.4 VCE Resource Solutions

There are two specific resources that can be developed that will be very useful to producers, extension agents, lenders and others advising producers in the decision to diversify farms. These are:

- Farm Enterprise “Betas”
  - Stock market investment advisors use the concept of “Beta” to help determine the optimal portfolio blend for an individual’s investment goals. The Beta coefficient is essentially a measure of an individual’s security’s risk in relation to the risk of the entire market. The market portfolio (the portfolio of all securities traded) is assumed to have a Beta of 1, and an individual security’s Beta shows the relative risk compared to that of the market. For example, if security A has a Beta of 1.5, then that security would be expected to have gains in a bullish market 1.5 times that of the

market portfolio, but would have losses 1.5 times greater than the market portfolio in a bearish market, which would be considered an investment more risky than that of the market portfolio. If security B has a Beta of 0.5 would be expected to have a return of 0.5 times that of the market portfolio in a bullish market, but losses of only 0.5 times that of the market portfolio in a bearish market. If an individual had a portfolio that consisted of 50% of Security A and 50% of Security B, the resulting *diversified* Beta would be equal to 1, or the same relative risk as that of the market portfolio, without actually owning a portfolio containing every security in the market. In short, Beta measures the responsiveness of a security to movements in the market portfolio. (Ross, Westerfield and Jaffe, 257)

  - A similar system to that of the Beta concept can be designed as a farm diversification decision aid, where farm enterprises would be substituted for securities in the previous example. Coefficients can be created for a variety of factors involved in the farm diversification decision, and used in a model to evaluate various enterprises and their ability to meet that producer’s goals. The coefficients would need to be general enough to be used by a wide range of producers, with some features customizable for a specific farm business. For example, one of the most important issues identified in this study involves the problems that producers face with respect to time and labor management as they add new enterprises. Enterprises could be assigned a time/labor factor for each month of the year, and as different enterprise mixes are assembled, the cumulative time/labor factors would be compared against the farm’s existing time and labor supply. This would identify times of the year when additional labor may be necessary for the farm. If the producer has the goal of adding enterprises that do not require the hiring of additional labor, this tool could be used to find the correct mix of enterprises to meet that specific goal. Similar factors and coefficients could be developed for all of the important factors identified in this study, and built into a model that enables the producer to make an informed decision regarding the farm diversification decision. This system would be most useful for producers as they are evaluating new enterprises, rather than as a planning tool for existing enterprises.

- Web-based Farm Diversification Decision Guide

- Building on the farm enterprise beta concept, a comprehensive web-based farm diversification decision guide can be developed to assist producers in the farm diversification decision. This web guide would be an online version of the farm diversification beta model, where a producer would read about the issues of farm diversification, and then use a series of forms and menus to compare alternative enterprises and determine the optimum mix for meeting their goals. This tool could be developed to stand-alone or be a part of a more comprehensive educational program. Producers, extension agents, lenders, and others could benefit greatly from such a tool. Specific functions that this tool should perform include:
    - Assist the producer in assessing farm diversification goals
    - Develop an inventory of available resources and assets for the farm
    - Assess income and cash flow needs of the farm
    - Recommend enterprises that meet the producer's goals, needs, resources and assets
    - Allow the producer to explore other options, in order to see how changes in resource, assets, or goals can affect available options
    - Provide a timeline for diversification and a list of recommended actions for the producer
    - Allow the user to customize the tool to the unique resource base and goals of the individual producer This is a critical function, since the participants in this study each had a unique combination of resources and goals for diversifying their farms

Both the farm enterprise betas and web-based decision guide tie directly into the results of this study. They offer solutions to the unmet needs of producers as outlined in sections 7.2.1 and 7.2.2. Specifically, the following skill and information areas would be addressed, in whole or in part, by these solutions:

- Business and Enterprise Planning Skills and Information
- Resource Management Skills
- Financial Decision-making Skills
- Production Information

7.3 Other Recommendations

Beyond the recommended actions for VCE given in section 7.2, recommendations for other key stakeholder groups have been developed from this study.

7.3.1 Agricultural Lenders

The producers in this study did not actively seek out the counsel of their lenders prior to adding new enterprises, thus, if agricultural lenders desire to be involved in the producer's diversification decision, they will need to be proactive in doing so. Lenders can reach out to their customers who are considering adding new enterprises and help them to see what options they might have from a lending perspective, and how adding the new enterprises might help or hurt their current debt load.

7.3.2 Public Policy Makers

Public policy needs to be adapted to the changing nature of agriculture in areas where farms are choosing to add new and unique enterprises to the farm. This study identified local zoning ordinances as one potential source of problems for farms as they add new enterprises. A farm in this study found that their new agritourism enterprise did not fit within the bounds of an agricultural enterprise as defined by the local zoning code. This led to unexpected delays and expenses for the enterprise. If the intention of local zoning ordinances is to help keep agriculture as a viable entity within a community, then these ordinances must seek to help, and not hinder agricultural enterprises.

Local governments need to revisit their zoning and other ordinances that pertain to agriculture as the character of agricultural enterprises change in their localities. State and federal policy makers will need to keep diversified agriculture in mind while writing new and revising old farm policies, realizing that the previous definition of what constitutes a farm or agriculture may no longer apply, in that an increasing number of farm businesses may also take on characteristics of retail and service businesses.

7.3.3 Agri-business

Participants in this study indicated that they needed to go to suppliers outside of their immediate areas in order to find supplies for non-traditional enterprises. This is potential business that is lost by the local agricultural supplier. Since inventory costs can be expensive for these niche items, local agricultural suppliers might find a profitable opportunity in performing the service of finding and delivering the specialty products that their customers are currently traveling to find.

This study identifies an agricultural service business opportunity for a firm that would specialize in outsourced specific management functions of new enterprises for farm businesses. Project managers would work on a contract basis with individual farms to investigate, coordinate, and implement new enterprises on a farm. The individual project managers would need to be well trained in agricultural business as well as have some entrepreneurial skills. This would be of particular value in cases where the added enterprise is a direct-marketing, agritourism, value-added, or another enterprise that would require unique and different management skills than the producer or existing farm manager possesses. Through the employ of contract managers, producers can more quickly realize their financial need motivations for adding new enterprises, since project managers would reduce or eliminate the skill development and information gathering needs of the producer, which was a reason given by participants in this study for starting slowly with new enterprises.

7.3.4 Undergraduate and Graduate Education Programs

Agricultural managers will need to draw upon skills not previously thought of as agricultural as they move into agritourism and similar enterprises. Consumer behavior and marketing skills were indicated as requiring significant extension. Courses in agritourism, value-added production and direct marketing need to be offered as part of the undergraduate curriculum. Graduate programs in agricultural and applied economics should implement or enhance their business management offerings.

7.4 Conclusion

The participants in this case study were innovative and forward thinking in their approach to the plans they made for their farm businesses. They have provided many lessons that can be used by other producers, VCE and others in the agricultural industry as they search for new methods and practices for the future of agriculture in Virginia. Other producers seeking to diversify their farms need to take a long and hard look at themselves, in order to evaluate their motivations for both themselves and their farm businesses. Likewise, extension and others in the agricultural industry will need to become well versed in the issues of farm diversification so that they are prepared to best serve their clientele and customers.

Perhaps the most important lesson to be learned from this study is that adding new enterprises to the farm does not follow a single path or process. Producers who add new enterprises need to be patient with new enterprises and be prepared both emotionally and financially for the possibility of failures along the way. The way that producers think about themselves and their farms need to change as they add new enterprises. A producer must have the desire and ability to learn new and different types of marketing, management, and production skills.

Opportunities exist for VCE to expand its programs and services to better meet the needs of entrepreneurial agricultural producers who diversify their farms into specialty crops and services. The unique needs of these producers are not currently being adequately met by VCE. Research, education and information for producers regarding the new and emerging crops and agricultural enterprises are not being provided at the level needed by these producers. Of particular need is programming in the areas of business management and specialty marketing. VCE had established itself as a reliable and unbiased source of production information with the participants in this study. By building on that strength, VCE can enable many producers to create a sustainable future for their farms with a comprehensive programming effort in the area of enterprise diversification.