

# Gender and motivation for agri-tourism entrepreneurship

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## Abstract

The purpose of this study was to explore the potentially gendered nature of motivations for agri-tourism entrepreneurship among Virginia farm families. Three elements of Chiappe and Flora's [Gendered elements of the alternative agriculture paradigm. *Rural Sociology*, 63(3), 372–393] modification of Beus and Dunlap's [Conventional versus alternative agriculture: The paradigmatic roots of the debate. *Rural Sociology*, 55(4), 590–616] alternative agricultural paradigm were tested as a possible theoretical framework for agri-tourism motivation. Chiappe and Flora [Gendered elements of the alternative agriculture paradigm. *Rural Sociology*, 63(3), 372–393] found that overall the alternative agriculture goals of men and women were similar: for example, both men and women were seeking independence, an opportunity to contribute to the community, and diversity of product. However, there were very different meanings and contexts attached to each of these ideas. For example, when discussing independence, women were more focused on “expense-reducing” rather than the “income-inducing” activities preferred by their male counterparts. Results of this study indicate that women were found to have higher motivation for agri-tourism entrepreneurship in all categories, but not consistently significant or in ways that necessarily supported the framework.

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## 1. Introduction

The last three decades have seen a significant increase in the number of farm families diversifying their on- and off-farm production. A well-established body of literature identifies the reasons for such diversification. These factors include environmental pressures, climate change, a decline in terms of trade in agriculture, low-income elasticities in commodities markets, and over-reliance on raw products. Government policies have also had an influence as a result of reduction in and loss of government-supported agricultural programs. These and other reasons have induced farm families to explore diversification of farm production in order to maintain family farms (Benjamin, 1994; Bowler, Clarke, Crockett, Ilbery, & Shaw, 1996; Davies & Gilbert,

1992; Doyle & McGehee, 2002; Jennings & Stehlik, 1999; McGehee & Kim, 2004; Weaver & Fennell, 1997; ). For over two decades, agri-tourism has been offered up as one such form of diversification (Bowen, Cox, & Fox, 1991; Cawley, Gillmor, Leavy, & McDonagh, 1995; Embacher, Bramwell, & Lane, 1994; Evans & Ilbery, 1989; Hjalager, 1996; Lobo et al., 1999; Oppermann, 1997; Pizam & Poleka, 1980). The definition of agri-tourism utilized in this study is that of Weaver and Fennell (1997, p. 357): “rural enterprises which incorporate both a working farm environment and a commercial tourism component”. Examples of agri-tourism may include farm stays, bed and breakfasts, pick-your-own produce, agricultural festivals, farm tours for children, or hay rides (Clarke, 1996, 1999). For a more detailed discussion of the definition of agri-tourism and other issues in the literature, see McGehee and Kim (2004).

The importance of gender in tourism, while understudied, cannot be overlooked. As a market, women are

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often differentiated and recognized by tourism marketers as the chief vacation decision-makers (McGehee, Loker-Murphy, & Uysal, 1997). The portrayal of women in tourism advertising and promotional materials has also been examined (Sirakaya & Somnez, 2000). As an industry, jobs in tourism are often seen as gendered, with many of the entry-level positions such as housekeeping, front-of-house work in hotels, restaurants, and attractions being seen as “women’s work” (Hochschild, 1983; Kinnaird & Hall, 1994; Smith, 1989). Similarly, many value-added agri-tourism activities find their origins among labor traditionally performed by women on the farm: preserving jams, jellies, and other foods, creating household items like quilts and baskets. Given these precursors, it would make sense for gender to play a role in agri-tourism entrepreneurship. Existing research supports this (Jennings & Stehlik, 2000; Neate, 1987; O’Connor, 1995). Jennings and Stehlik (1999) found that in Australia, farm tourism is an innovation that has been taken up primarily by women. Neate (1987) found that in island communities off the coast of the UK, agri-tourism efforts are commonly spearheaded by the female head of the household. O’Connor (1995) discovered the same in Ireland. But little empirical work has focused particularly on the motivations behind this trend.

In continued response to a call to build upon existing agri-tourism research in a logical and organized manner (Busby & Rendle, 2000), this paper utilizes data from an agri-tourism development study conducted in Virginia by McGehee and Kim (2004) to examine possible gender differences in the motivation to become an agri-tourism provider. The study examines the supply side of agri-tourism, specifically the motivation for entrepreneurship by farm families in the form of agri-tourism. The research focus for this study targets the motivations for agri-tourism entrepreneurship among Virginia farm families and tests Chiappe and Flora’s (1998) alternative agriculture paradigm as a potential theoretical framework.

### *1.1. Gender analysis in agriculture: is it applicable to agri-tourism?*

A great deal of work has been conducted in the area of gender and agriculture. The bulk of the work has come out of the development literature, focusing primarily on less-developed regions of the world (Brandth, 2002; Colman & Ebert, 1984; Kunwar, 2004; Slater, 2001; Zuo, 2004). Additionally, women’s unpaid on-farm work has a body of both critical and informative academic literature in the United States (Quisumbing, 2003; Rosenfeld, 1985) and Australia and New Zealand (Keating & Little, 1994; Perry & Ahearn, 1994; Pettersen, 1997; Rogers & Vandeman, 1993; Sachs, 1983; Shortall, 1992; Verstad, 1997). More recently, work has begun in the areas of gender and sustainable, or alternative, agriculture (Chiappe & Flora, 1998; Meares, 1997). Alternative agriculture is defined as small-scale, low-capital agriculture that uses little or no herbicides, pesticides, fertilizers and other chemicals, limits

the use of mechanization, and encourages diversity of crops (as opposed to mass production monocrop agriculture) (Meares, 1997). Types of alternative agriculture include organic, regenerative, sustainable, eco-agriculture, permaculture, biodynamics, natural farming, and low-input agriculture (Chiappe & Flora, 1998).

In their study of women involved in the change from mainstream farming to more sustainable forms, Chiappe and Flora (1998) examined the gendered nature of the alternative agriculture paradigm. They argued that since the study of alternative agriculture had focused overwhelmingly on men, paradigms that came from that research had to be recognized as limited in focus. They pointed specifically to the key elements of the alternative agriculture paradigm identified by Beus and Dunlap (1990, 1994). The paradigm was developed through a content analysis of the written work of leading figures in alternative agriculture (all of them male), then further validated empirically with overwhelmingly male research samples. Chiappe and Flora (1998) found that, when interpreted broadly, many of the alternative agriculture goals of men and women were similar: for example, both men and women were seeking independence, an opportunity to contribute to the community, and diversity of product. However, there were very different meanings and contexts attached to each of these ideas. For example, when discussing independence, women were more focused on “expense-reducing” than “income-inducing” activities. In terms of community contributions, women were focused on providing organic, chemical-free produce to their neighbors at a price that was affordable to all, whereas men were interested in the preservation of farm traditions. Women also reported a desire to educate those in the community who consumed their products. Many indicated this as a primary motivation for developing you-pick operations (a unique example that can be developed both as an alternative agriculture activity and agri-tourism). In terms of diversity, in addition to agreeing with their male counterparts that biodiversity is better for the farm, many women reported that the variety of tasks involved in growing diverse crops was more interesting and rewarding than raising just one crop. As a result, Chiappe and Flora (1998) revised Beus and Dunlap’s (1990) alternative agriculture paradigm to allow for the gender differences they found in their study.

While not all of the major elements of the alternative agriculture paradigm intuitively may be applied to agri-tourism (harmony with nature, for example, may or may not be a component of agri-tourism), three elements do: independence, contribution to community, and diversity of product. Given what is known about motivation for agri-tourism in general, a desire for independence has been identified in a number of studies (Busby & Rendle, 2000; McGehee & Kim, 2004; Miller, 1993; Nickerson, Black, & McCool, 2001; O’Connor, 1995; Weaver & Fennell, 1997). No one, however, has examined gender differences in motivation for agri-tourism within the context of

independence. For example, if the differences are similar to those found in [Chiappe and Flora \(1998\)](#) work, then women will be more motivated than their male counterparts to use agri-tourism as a way to reduce costs—either by keeping employment opportunities within the family, thereby reducing outside expenditures, or by becoming more resistant to unpredictable fluctuations in agriculture income. Men, on the other hand, would be more motivated than women to invest in agri-tourism as a way to increase income and reduce financial reliability on governmental agriculture programs.

The opportunity to contribute to one's community has also been found to be an important rationale for agri-tourism ([Getz & Carlsen, 2000](#); [Maude & van Rest, 1985](#); [Putzel, 1984](#); [Weaver & Fennell, 1997](#)). Again, there has been no examination of gender differences within this category of motivation. Using the work of [Chiappe and Flora \(1998\)](#) as a foundation, their modified alternative agriculture paradigm would dictate that women will be more focused on the opportunities that agri-tourism provides for companionship and for the education of consumers than men. Conversely, men will be more interested in contributing to the community economically by building their successes onto the successes of others and meeting a need in the market.

The use of agri-tourism as a way to diversify the farm has also been found as a motivator ([Cawley et al., 1995](#); [Davies & Gilbert, 1992](#); [Hjalager, 1996](#); [Jennings & Stehlik, 1999](#); [Lobo et al., 1999](#)), but no one has examined possible gender differences within the context of diversity. This is perhaps the weakest element of the paradigm in terms of its applicability to agri-tourism, primarily because of the strong sustainable and environmental focus it has within the context of alternative agriculture that is not necessarily a given in agri-tourism. In alternative agriculture, diversity is more closely linked with nature and crop variety than with a financial or enterprise-based concept of diversity. In addition, women also reported to [Chiappe and Flora \(1998\)](#) that they were attracted to the diverse nature of alternative agriculture as a way to relieve the tedium of monocrop agriculture. While agri-tourism could potentially be seen in a similar manner, the time and energy required of even the most low-maintenance forms of agri-tourism makes this less likely to occur amongst women involved in agri-tourism. However, commonalities may be found between women in agri-tourism and alternative agriculture in the area of resource maximization. Both groups of women may be interested in finding ways to stretch every dollar and to utilize resources maximally. Additionally, men involved in agri-tourism and alternative agriculture may find common ground in the element of diversity through their interest in how it affects the bottom line. For example, it would be appealing to men if there were tax incentives structured in such a way that diversity through agri-tourism is economically advantageous.

This paper will apply [Chiappe and Flora's \(1998\)](#) findings and subsequent theoretical framework to a

different form of agricultural entrepreneurship (agri-tourism) as a way to explore potential gender differences in motivation to engage in agri-tourism enterprises in terms of the three elements of independence, contribution to community, and diversity of product. The primary research propositions are as follows:

1. If women involved in agri-tourism are similarly motivated as women involved in alternative agriculture, then they will be more focused on the independence that comes from cost-reducing activities, such as keeping existing employment opportunities within the family and becoming resistant to the unpredictability of fluctuations in agriculture income, than men. Conversely, men will be more interested in the independence that comes from agri-tourism, both as an additional source of income-generating activity and as an alternative to disappearing agriculture subsidy programs, than women.
2. If women involved in agri-tourism are similarly motivated as women involved in alternative agriculture, then they will be more focused on the elements of contribution to community that are manifest in opportunities for companionship and to educate consumers than men. Conversely, men will be more interested in contributing to the community economically by building their successes onto the successes of others and meeting a need in the market.
3. If women involved in agri-tourism are similarly motivated as women involved in alternative agriculture, then they will be more focused on diversity by fully utilizing resources. Conversely, men will be more interested in diversity through agri-tourism as a tax incentive.

## 2. Methods

Data were collected from farm families throughout the Commonwealth of Virginia. The study used the Virginia farmer's marketing association membership list along with addresses contributed by Cooperative Extension Agents throughout the Commonwealth. After gleaning incorrect addresses, deceased members, and those no longer farming from the list, a total 987 farm families served as the sampling frame for the study. A questionnaire was developed to identify motivation for agricultural entrepreneurship. The instrument was adopted from the study by [Nickerson et al. \(2001\)](#). As a result of discussion with industry and university extension personnel, appropriate changes were made to the instrument to fit the population. A mail-back survey was then conducted following [Dillman \(1978\)](#) protocol. After first-round surveys were mailed, a reminder postcard was sent to every respondent one week later. A second round of surveys was mailed to non-respondents 2 weeks after the mailing of the postcard. A total of 987 surveys were mailed, 412 were returned, producing a 42% response rate. Among them, 29 questionnaires were eliminated due to insufficient

information, leaving 383 available for analysis. This response is typical of other agri-tourism studies, falling between [Vogeler \(1977\)](#) 32% response rate and [Oppermann \(1995\)](#) 68% response rate. While a gender question was not asked of the respondents on the survey instrument itself, the questionnaires were mailed using a database that included a random mix of men and women and were coded accordingly (rather than to “The Family of...”). A follow-up phone call was made to each of the respondents to verify the gender of the person who filled out the instrument. It is important to note that it was not a goal of the study to make any connections between *motivation* to participate and *level* or *degree* of participation within the family. We are simply trying to find a solid theoretical foundation for gendered differences in motivation to operate an agri-tourism business.

A six-page survey instrument that included a business reply envelope was mailed to the entire population in the marketing association mailing list. The survey instrument consisted of two parts: (1) general information about the respondents (time involved in agriculture, current type(s) of agriculture business, projected future type(s) of agri-tourism business, size of agriculture business, the number of employees and income) and (2) the eleven motivations of operating an agri-tourism business. Eleven possible choices were listed. Ten of those theoretically fit under one of each of the three elements taken from [Chiappe and Flora's \(1998\)](#) modification of [Beus and Dunlap's \(1990\)](#) alternative agriculture paradigm: independence, contribution to community, and diversity:

#### Independence

- Losing government agriculture programs
- Fluctuations in agriculture income
- Employment for family members
- Additional income

#### Contribution to community

- Observed agri-tourism successes of others
- To meet a need in the tourism market
- Companionship with guests/visitors
- To educate the consumer

#### Diversity

- To fully utilize our resources
- Tax incentives

Respondents rated each reason on a 5-point Likert-type scale with the level of importance ranging from “not at all relevant” (1) to “very relevant” (5).

Data analysis of the study consisted of three steps. The first step was to provide a descriptive profile of the general information of the agricultural business and agri-tourism based on gender. In the second step, the study employed Confirmatory Factor Analysis in order to confirm the *a priori* nature of the motivations for operating agri-tourism business using [Chiappe and Flora's \(1998\)](#) modified version of [Beus and Dunlap's \(1990\)](#) alternative agriculture paradigm. In the final step, MANOVA was performed in

order to investigate whether there were significant differences based on gender and agri-tourism motivations to confirm *a priori* factors. *T*-tests were also adopted to see if any differences occurred.

### 3. Results

Descriptive analysis of the study revealed the following about the sample population. Less than half (43%) of the respondents were women and 57% of the respondents were men ([Table 1](#)), with the majority of the respondents (66% for men and 56% for women) owning less than 100 acres. Among the respondents who leased land for farming, 59% of women and 62% of men leased less than 100 acres. Only 30% of men and 38% of women answered that they were full time farmers with all income from farming. A total of 59% of the respondents expressed that their primary income source was not farming. In general, the respondents had small agriculture operations. The majority of respondents (about 70% of both men and women) reported one or two full-time employees, and an average of 32% of employees were involved in the agri-tourism component of their business. Nearly half (40% of men and 46% of women) of the respondents answered that their household income ranged from \$50,000 to \$100,000, while 36% of men and 32% of women reported household incomes of less than \$50,000. The difference between men and women was not statistically significant in terms of the acres owned, acres leased, the number of full-time employees, and dependence on farming operation. Even though respondents averaged 37 years of involvement in agriculture, more women (65%) than men (58.9%) indicated being involved in agriculture for less than 30 years. Around 83% of respondents answered they would expand or start at least one additional type of agricultural business within the next 5 years, whereas 17% of the respondents indicated they would not be pursuing any type of agri-business. Of the respondents who specifically operated an agri-tourism business, the greatest percentage (around 49% for both men and women) had been in business less than 10 years. About 45% of the respondents operated an agri-tourism business at the time of the study. Once again, there was no statistically significant difference between men and women in term of respondents' profiles.

The most popular activities among respondents were pick-your-own produce, Christmas tree sales, hay rides, children's educational programs, petting zoos, and on-farm festivals. However, there was a significant difference between women and men in terms of pick-your-own produce and petting zoo/farm animals. About 56% of women reported the most popular agri-tourism activities as pick-your-own whereas only 37% of men answered that the most popular agri-tourism activity was pick-your-own. Also 35% of women responded that petting zoo/farm animals are the most popular agri-tourism activities whereas 17% of men indicated petting zoo/farm animal as one of the most popular agri-tourism activities.



Table 1  
Respondent characteristics

Variables, <i>n</i> = 383	Women (43%), <i>n</i> = 166 (%)	Men (57%), <i>n</i> = 217 (%)	$\chi^2$	Sig. level
Acres you own and operate			4.05	0.13
Less than 100 acres	56.0	66.0		
101–300 acres	25.0	21.0		
More than 300 acres	19.0	13.0		
Acres you lease			0.36	0.84
Less than 100 acres	59.0	62.0		
101–300 acres	19.0	21.0		
More than 300 acres	22.0	17.0		
The number of full time employees			0.1	1.0
1 person	37.0	38.0		
2 persons	33.0	33.0		
3 and over	30.0	29.0		
Dependence on farming operation			6.47	0.26
Full time with all income from farming	38.0	30.0		
Part time farm income primary and off-farm secondary	8.0	7.0		
Part time, off-farm income primary and on farm income secondary	31.0	27.5		
Part time, on and off-farm equal importance	6.0	8.5		
Hobby interest, farm income not critical	11.0	18.5		
Household income			1.05	0.60
Less than \$50,000	32.0	36.0		
\$50,001–\$100,000	46.0	40.0		
Over \$100,000	22.0	24.0		
How many years involved in agriculture?			2.17	0.34
1–20 years	44.5	36.7		
21–40 years	30.8	33.6		
Over 40 years	24.7	29.8		
How many years in involved in Agri-tourism?			0.00	1.00
1–10 years	48.7	48.6		
11–20 years	27.6	27.8		
More than 20 years	23.7	23.6		
Most popular agri-tourism activities				
Pick your own produce ( <i>n</i> = 74)	55.7	36.6	5.91*	0.02
Christmas trees ( <i>n</i> = 54)	33.8	34.5	0.01	0.92
Hay rides ( <i>n</i> = 48)	35.1	28.2	0.84	0.36
Children's program ( <i>n</i> = 46)	38.4	23.7	3.76*	0.05
Petting zoo/farm animal ( <i>n</i> = 39)	35.1	17.3	6.11*	0.01
On farm festivals ( <i>n</i> = 38)	30.3	19.7	2.25	0.13

Note: *n* = the number of respondents.

\*Significant at *p* = 0.05.

Table 2 displays the mean scores for the importance ratings of the motivation for participation in agri-tourism. The variable additional income had the highest mean score for women (4.00) and for men (3.76). The variable fully utilizing resources had the second highest mean score for women (3.75) and men (3.25). The third most common motivation variable for women was employment for family members (3.50), whereas for men this variable was the least common motivation variable (1.58). It should be noted that, in this study, women rated more highly on all variables than men did. It could be interpreted that, in general, women are more motivated to operate an agri-tourism business than men. In particular, women rated to

educate the consumer, employment for family members, and observed successes of others 1–2 points higher than the men who responded to the study. However, a lack of significance across all the variables, as well as the concern that in general, women tend to score items higher than men when completing questionnaires, tempers these results somewhat.

The next step in the study was to perform a confirmatory factor analysis of agri-tourism motivation variables to confirm the measurement scale properties. The correlation matrix was used as the input data for the confirmatory factor analysis. Before testing the overall properties of the proposed measurement model, a separate confirmatory

Table 2  
Motivations for operation of agri-tourism

Motivations	Women	Men	T-value	P
Additional income	4.00	3.76	1.111	0.269
To fully utilize our resources	3.75	3.25	1.832	0.069
Employment for family members	3.50	1.58	7.875	0.000*
To educate the consumer	3.46	2.47	3.611	0.000*
It's an interest/hobby	3.03	2.68	1.246	0.214
Response to fluctuation in agriculture income	2.86	2.33	1.678	0.096
Observed agri-tourism successes of others	3.08	2.04	3.899	0.000*
Companionship with guests	2.87	2.25	2.402	0.018*
To meet a need in the tourism market	2.76	2.09	2.385	0.019*
Tax incentive	2.44	1.85	2.279	0.024*
Losing government agriculture programs	2.10	1.60	1.993	0.049*

\*Significant at  $p = 0.05$ .

factor analysis was required to perform on each dimension of the three constructs. This tested the reliability and validity of the indicators (Sethi & King, 1994) as it was important to make sure that the measures that were theoretically argued to be indicators of each construct were acceptably uni-dimensional. In keeping with convention, uni-dimensionality of the constructs measured by four or more observed indicators were tested individually. Conversely, uni-dimensionality of constructs measured by fewer than four observed indicators were tested by pairing the construct with another construct that also had less than four observed indicators. Constructs with unacceptable fit (residuals  $> 2.56$ , Hair, Anderson, Tatham, & Black (1992)), and/or load on other constructs ( $> 3.89$ , Hair, Anderson, Tatham, & Black (1992)) were re-specified by deleting indicators. Next, an estimate of the composite reliability and variance-extracted measures for each construct were calculated to measure whether the specified indicators were sufficient in their representation of the constructs (Fornell & Larcker, 1981). At least 0.60 (but ideally 0.70) is considered the minimally acceptable level of reliability for instruments used in social science research. The variance extracted estimate assesses the amount of variance that is captured by an underlying factor in relation to amount of variance due to measurement error (Fornell & Larcker, 1981). It is desirable that constructs exhibit estimates of 0.50 or larger, because estimates less than 0.50 indicate that variance due to measurement error is larger than variance captured by the factor.

Using Chiappe and Flora's (1998) modification of Beus and Dunlap's (1990) construct, coupled with commonsense method, four observed variables were grouped into independence, four observed variables were grouped into contribution to community, and three observed variables were grouped into diversity. In addition, errors of measurement associated with each observed variable were uncorrelated.

Assessing each construct's unidimensionality individually, and deleting indicators that have not worked out as planned, resulted in a decrease in the number of indicators

in the construct. The number of indicators used to measure the independence construct decreased to three indicators from four after eliminating "additional income" (loading of 0.19). Table 3 presents the completely standardized coefficients, the indicator reliability ( $Li^2$ ), and the error variance ( $Ei$ ). The composite reliability and variance-extracted estimate were calculated by using the formula recommended by Fornell and Larcker (1981). As presented in Table 3, the composite reliabilities of independence and contribution to community were 0.71, and 0.81, respectively. The variance-extracted estimates for independence and contribution to community were at or very close to the acceptable limit of 0.5. The diversity construct did not fit as well. The reliability for diversity was 0.41, which was lower than recommended. Additionally, all variance-extracted estimates for diversity were below 0.5, falling short of the recommended 50%. These results beg for additional analysis of the diversity construct.

Next, the overall measurement model fit was tested (Anderson & Gerbing, 1988; Jöreskog, 1993; Sethi & King, 1994). The primary interest in this section was to test whether the measurement model has an acceptable fit (i.e., how well the model describes the sample data). The overall fit of this final measurement model of agri-tourism motivation construct was  $\chi^2_{(32)} = 285.32$  ( $p = 0.00$ ). The goodness-of-fit index (GFI) was 0.87, which is lower than recommended (0.90) but within range. The root-mean-square-residual (RMSR) indicated that the average residual correlation was 0.084, which is acceptable. The normed-fit-index (NFI) was 0.80, and adjusted-GFI (AGFI) was 0.79, which is, again, below the recommended level of 0.90. The normed chi-square was 1.4, which falls well within the recommended range of 1.0–2.0. The various measures of overall model goodness-of-fit lend mixed empirical support for confirmation of the proposed three-factor constructs. However, any definitive modification was postponed until further research determines whether an alternative model is justified.

With all three constructs kept (minus the additional income variable within the independence construct),

Table 3  
Composite reliability and validity of motivations for agri-tourism entrepreneurship

Constructs and indicators	Standardized loading (Li)	Reliability (Li) <sup>2</sup>	Error variance
Independence		0.71 <sup>a</sup>	0.45 <sup>b</sup>
Losing government agriculture programs	0.64	0.41	0.59
Fluctuation in agriculture income	0.64	0.41	0.59
Employment for family members	0.74	0.54	0.46
Additional income	0.19	0.03	0.97
Contribution to community		0.81 <sup>a</sup>	0.52 <sup>b</sup>
Observed agri-tourism successes of others	0.77	0.59	0.41
To meet a need in the tourism market	0.70	0.49	0.51
Companionship with guests/visitors	0.59	0.35	0.65
To educate the consumer	0.80	0.64	0.36
Diversity		0.41 <sup>a</sup>	0.27 <sup>b</sup>
To fully utilize our resources	0.63	0.40	0.60
Tax incentives	0.38	0.14	0.86

Composite reliability (CR) and variance-extracted estimates (VE) for independence was calculated without additional income. With additional income, CR is 0.65 and VE is 0.35. Because of its low measures of CR and VE, additional income was then dropped from the construct.

<sup>a</sup>Composite reliability.

<sup>b</sup>Variance extracted estimate.

Table 4  
MANOVA results and differences in motivation based on gender using Chiappe and Flora's (1998) modification of Beus and Dunlap's (1999) alternative agriculture paradigm

Multiple comparison (mean)	Gender		Sig.
	Women	Men	
Independence	3.07	2.26	0.00*
Losing government agriculture programs	2.10	1.60	0.05*
Fluctuation in agriculture income	2.86	2.33	0.07
Employment for family	3.50	1.58	0.00*
Contribution to community	3.04	2.09	0.00*
Observed agri-tourism successes	3.08	2.04	0.00*
To meet a need in the tourism market	2.76	2.09	0.02*
Companionship with guests	2.87	2.25	0.02*
To educate the consumer	3.46	2.47	0.00*
Diversity	3.03	2.41	0.00*
To fully utilize our resources	3.75	3.25	0.06
Tax incentives	2.44	1.85	0.02*
Wilks' Lambda ( <i>F</i> )		8.272	
Significance ( <i>P</i> )		0.0001	

\*Significant at  $\alpha = 0.05$  level between two groups.

MANOVA analysis was conducted to find out if there were differences between men and women in terms of the confirmed factors. The sample size for each group was seen as acceptable with a high statistical power, 0.993 and a medium effect size, 0.201. The result of MANOVA revealed that an independent variable (gender difference) had highly significant effects for multivariate test with  $p < 0.01$ , indicating there were significantly different motivations for agri-tourism between the two groups (Table 4). Given the significance of the multivariate test indicating group differences on collective dependent variables, the study examined the results to assess their logical consistency.

In addition, women respondents rated all three factors higher than their male counterparts. Finally, when the factors were examined individually, all three were significantly different between the two groups. For specific item differences, the results of the *t*-test are presented in Table 2. Interestingly, women reported higher numbers than men for all of the motivation variables. Statistically, differences in motivation based on gender were significant for all variables except fluctuations in agriculture income and to fully utilize our resources.

Results from the study look consistent with some, but not all, of the propositions set forth at the initiation of the

study. The first proposition argued that if women involved in agri-tourism are similarly motivated as women involved in alternative agriculture, then they will be more focused on the independence that comes from cost-reducing activities such as keeping existing employment opportunities within the family and becoming resistant to fluctuations in agriculture income than men. Findings from this study indicate that women had significantly greater interest in using agri-tourism as a way to preserve employment for family members than their male counterparts. They were also more interested than men in using agri-tourism to become more resistant to agriculture income fluctuations (not significant). For men, the independence proposition met with mixed results. Of the three variables kept in the model, men were most interested in agri-tourism out of concern with the unpredictable fluctuations in agriculture income (but not significantly) and because it could provide an alternative to disappearing agriculture subsidy programs (significant but only with a score of 1.6 out of 4). It is important to note that men ranked additional income highest of the independence variables (3.76, not significant), but, as indicated previously, this variable did not fit statistically with the model and was therefore deleted. In conclusion, the first research proposition was met with mixed support—somewhat strong for the women's component of the proposition, but not supported at all for the men's component.

Second, this study proposed that if women involved in agri-tourism are similarly motivated as women involved in alternative agriculture, then they will be more focused on the opportunity for companionship and to educate consumers than men as their contribution to community. Women ranked all of the contribution to community variables more highly than their male counterparts, and all four variables were significant. When women were involved in alternative agri-tourism, they focused most on educating the consumer, which is in keeping with the proposition. However, their second highest motivation came from the observed agri-tourism successes of others, which was predicted to be of greater import to the men in the study. Interestingly, it was the lowest-ranked variable for the men, which of course was in direct contrast with the predicted proposition. As a result, the women's component of the proposition was met with mixed support, and the men's component of the proposition was not supported.

Third, this paper proposed that if women involved in agri-tourism are similarly motivated as women involved in alternative agriculture, then they will be more focused on the idea of diversity. This component of the model was extremely weak and not statistically supported; therefore the proposition was not supported.

#### 4. Application of results

In spite of the mixed support for the use of Chiappe and Flora's (1998) modification of Beus and Dunlap's (1990) alternative agriculture paradigm, this study is valuable for

a number of reasons. Like successful agriculture, successful agri-tourism is partially dependent on the policy makers and government officials in agriculture programs at the local, state and federal levels (Beus & Dunlap, 1993). If women are, as the research indicates, heavily involved in agri-tourism development, and somewhat differently motivated from their male counterparts, information about their perspectives is invaluable to those shaping policy that will be impacting the success of their endeavors. Research in agriculture has consistently shown the connection between thoughtful and inclusive public policy and success factors for women in agriculture (Prugl, 2004). The same has been found to be the case for including all stakeholders in rural tourism development (Petrzelka, Krannich, Brehm, & Trentelman, 2005; Wilson, Fesenmaier, Fesenmaier, & Van Es, 2001).

In addition to gaining the perspectives of all stakeholders involved, results from this study teach us that the policy conversation should include topics like expense-reduction, opportunities to educate and care for the local community, and diversity in agri-tourism in a nature-based as well as fiscal conceptualization. Just as Slater (2001) found with urban agriculture, policymakers should extend their perception of agri-tourism's benefits beyond narrow economic notions to include the potential positive social and environmental effects.

#### 5. Conclusion

The purpose of this study was to explore potential differences in motivations for agri-tourism entrepreneurship between men and women farmers in Virginia using Chiappe and Flora's (1998) modification of Beus and Dunlap's (1990) alternative agriculture paradigm as a possible theoretical framework for agri-tourism entrepreneurship motivation. In particular, the authors argued that independence, contribution to community, and diversity have a shared importance between alternative agriculture and agri-tourism. While there were commonalities found to exist between the alternative agriculture participants of Chiappe and Flora's (1998) study and of the agri-tourism participants in this study in terms of gendered motivations, there were many differences as well. The greatest paradigmatic difference concerned the element of diversity. As indicated in the literature review, this is not particularly surprising, given the different ontological meanings of diversity that may exist between persons practicing alternative agriculture and persons involved in agri-tourism. This is not to say that the two are mutually exclusive, but they must not be considered one in the same. This is definitely an area that should be more thoroughly analyzed and examined, and as a result, the paradigm could be more substantively altered for a better fit to agri-tourism.

As for the gender analysis of the agri-tourism participants only, the men and women farmers in Virginia displayed some similar characteristics: both indicated a



desire for additional income, to fully utilize existing resources, and to educate the consumers as their primary motivators. In terms of differences, perhaps the most telling finding is the consistently higher ranking of all the possible motivations for agri-tourism by women than men. In particular, women rated to educate the consumer, employment for family members, and observed successes of others 1–2 points higher than the men who responded to the study. While a cautionary note must be made that (1) not all of the differences between men and women were significant, and (2) some survey research methodologists point to the tendency for women to rate variables higher than men, the margin in this case is quite wide. This further confirms what other studies have indicated as well: women in this study reported to be more highly motivated to develop agri-tourism as a source of entrepreneurial enterprise than their male counter-parts.

Just because the paradigm did not present a “perfect fit” in this case does not mean it should be eliminated altogether. Additional research should be undertaken that uses this paradigm as its foundation but with some modifications. For example, the independence element should include options that allow for those motivated by the potential for agri-tourism to be developed with a limited capital investment (allowing, of course, that not all agri-tourism is low-capital). Also, additional independence items that focus on the motivation to develop agri-tourism could be based more specifically on the notion that it could be “expense-reducing” compared to other, large-scale forms of agriculture. While the variable additional income did not statistically fit into the independence element, theoretically and intuitively this is a vital element of agri-tourism motivation and should not be eliminated. The contribution to community element is strong as it stands, both theoretically and empirically, so there are no changes recommended as a result of this study. As indicated above, the paradigmatic element of diversity has obvious problems. Perhaps, in future studies, if agri-tourism participants could be differentiated according to whether they use alternative or more mainstream agriculture practices, this element might provide a greater contribution. Another obvious direction for this research is to more closely replicate the research of Chiappe and Flora by using in-depth interviews as the method of discovery rather than survey research. The authors look forward to testing the alternative agriculture paradigm again in other agri-tourism research, particularly in their continued exploration of the gendered elements of agri-tourism.

## References

- Anderson, J. R., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423.
- Benjamin, C. (1994). The growing importance of diversification activities for French farm households. *Journal of Rural Studies*, 10(4), 331–341.
- Beus, C. E., & Dunlap, R. E. (1990). Conventional versus alternative agriculture: The paradigmatic roots of the debate. *Rural Sociology*, 55(4), 590–616.
- Beus, C. E., & Dunlap, R. E. (1993). Agriculture and policy debates: Examining the alternative and conventional perspectives. *American Journal of Alternative Agriculture*, 8(3), 98–106.
- Beus, C. E., & Dunlap, R. E. (1994). Agricultural paradigms and the practice of agriculture. *Rural Sociology*, 59(4), 620–635.
- Bowen, R. L., Cox, L. J., & Fox, M. (1991). The interface between tourism and agriculture. *Journal of Tourism Studies*, 2(2), 43–54.
- Bowler, I., Clarke, G., Crockett, A., Ilbery, B., & Shaw, A. (1996). The development of alternative farm enterprises: A study of family labour farms in the Northern Pennines of England. *Journal of Rural Studies*, 12(3), 285–295.
- Brandth, B. (2002). Gender identity in European family farming: A literature review. *Sociologia Ruralis*, 42(3), 181–200.
- Busby, G., & Rendle, S. (2000). The transition from tourism on farms to farm tourism. *Tourism Management*, 21, 635–642.
- Cawley, M., Gillmor, D. A., Leavy, A., & McDonagh, P. (1995). *Farm diversification: Studies relating to the west of Ireland*. Dublin: Teagasc.
- Chiappe, M. B., & Flora, C. B. (1998). Gendered elements of the alternative agriculture paradigm. *Rural Sociology*, 63(3), 372–393.
- Clarke, C. (1999). Marketing structures for farm tourism: Beyond the individual provider of rural tourism. *Journal of Sustainable Tourism*, 7(1), 26–47.
- Clarke, J. (1996). Farm accommodation and the communication matrix. *Tourism Management*, 17(8), 611–616.
- Colman, G., & Ebert, S. (1984). Farming families: The farm needs everyone. *Research in Rural Sociology and Development*, 1, 61–78.
- Davies, E. T., & Gilbert, D. C. (1992). A case study of the development of farm tourism in Wales. *Tourism Management*, 13(1), 56–63.
- Dillman, D. A. (1978). *Mail and telephone surveys*. New York: Wiley.
- Doyle, A. B., & McGehee, N. G. (2002). *Case statement for the development of agri-tourism in the Commonwealth of Virginia* Unpublished document. Blacksburg, VA: Virginia Tech.
- Embacher, H., Bramwell, B., & Lane, B. (1994). Marketing for agri-tourism in Austria: Strategy and realisation in a highly developed tourist destination. *Austrian Farm Holidays Association, Hardtgasse 19, A-1190*, Vol 2(1–2) (pp. 61–76). Vienna, Austria.
- Evans, N. J., & Ilbery, B. W. (1989). A conceptual framework for investigating farm-based accommodation and tourism in Britain. *Journal of Rural Studies*, 5(3), 257–266.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(February), 39–50.
- Getz, D., & Carlsen, J. (2000). Characteristics and goals of family and owner-operated business in the rural tourism industry and hospitality sectors. *Tourism Management*, 21(6), 547–560.
- Hair, J. F., Jr., Anderson, R. L., Tatham, A., & Black, W. C. (1992). *Multivariate data analysis*. New York: Macmillan.
- Hjalager, A-M. (1996). Agricultural diversification into tourism. *Tourism Management*, 17(2), 103–111.
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Jennings, G., & Stehlik, D. (1999). The innovators are women: The development of farm tourism in Central Queensland, Australia. *Conference proceedings of the 1999 annual ISTTE conference. One world, One community, one mission* (pp. 84–98). Vancouver, Canada.
- Jennings, G., & Stehlik, D. (2000). Agricultural women in Central Queensland and changing modes of production: a preliminary exploration of the issues. *Rural Society*, 10(1), 63–78.
- Jöreskog, K. G. (1993). Testing structural equation modeling. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 294–316). Newbury Park, CA: SAGE Publications.
- Keating, N. C., & Little, H. M. (1994). Getting into it: Farm roles and careers of New Zealand Women. *Rural Sociology*, 59(4 Winter), 720–736.

- Kinnaird, V., & Hall, C. M. (Eds.). (1994). *Tourism: A gender analysis*. Chichester, New York: Wiley.
- Kunwar, N. (2004). Decision-making pattern among rural families of western Uttar Pradesh. *Farm Science Journal*, 13(2), 138–139.
- Lobo, R. E., Goldman, G. E., Jolly, D. A., Wallace, B. D., Schrader, W. L., & Parker, S. A. (1999). Agritourism benefits agriculture in San Diego County. *California-Agriculture*, 53(6), 20–24.
- Maude, A. J. S., & van Rest, D. J. (1985). The Social and economic effects of farm tourism in the United Kingdom. *Agricultural Administration*, 20, 85–98.
- McGehee, N. G., & Kim, K. (2004). Motivation for agri-tourism entrepreneurship. *Journal of Travel Research*, 43(2), 161–170.
- McGehee, N. G., Loker-Murphy, L., & Uysal, M. (1997). The Australian international pleasure travel market: Motivations from a gendered perspective. *The Journal of Tourism Studies*, 7(1), 45–57.
- Meares, A. C. (1997). Making the Transition from conventional to sustainable agriculture: Gender, social movement participation, and quality of life on the family farm. *Rural Sociology*, 62(1), 21–47.
- Miller, B. (1993). Farm tourism—Sustaining employment in a rural area. *Agricultural Manpower*, 1(24), 8–11.
- Neate, S. (1987). The role of tourism in sustaining farm structure and communities on the Isles of Scilly. In M. Bouquet, & M. Winter (Eds.), *Who from their labors rest? Conflict and practice in rural tourism* (pp. 9–21). Aldershot: Avebury.
- Nickerson, N. P., Black, R. J., & McCool, S. F. (2001). Agritourism: Motivations behind farm/ranch business diversification. *Journal of Travel Research*, 40(1), 19–26.
- O'Connor, P. (1995). Tourism and development in Ballyhoura: Women's business? *Economic and Social Review*, 26(4), 369–401.
- Oppermann, M. (1995). Holidays on the farm: A case study of German hosts and guests. *Journal of Travel Research*, 34(1), 63–67.
- Oppermann, M. (1997). Rural tourism in Germany—Farm and rural tourism operators. In S. Page, & D. Getz (Eds.), *The business of rural tourism: International perspectives* (pp. 108–119). London: International Thomson Business Press.
- Perry, J. E., & Ahearn, M. C. (1994). Farm women blend farm and off-farm work. *Rural Development Perspectives*, 9(3), 24–31.
- Petrzelka, P., Krannich, R. S., Brehm, J., & Trentelman, C. K. (2005). Rural tourism and gendered nuances. *Annals of Tourism Research*, 32(4), 1121–1137.
- Pettersen, L.T. (1997). Women for agriculture—the empowerment of farm women. Paper presented at the *XVII Congress of the European Society for Rural Sociology*. Crete, August.
- Pizam, A., & Poleka, J. (1980). The vacation farm: A new form of tourism destination. In D. E. Hawkins, E. L. Shafer, & J. M. Rovelstad (Eds.), *Tourism marketing and management issues* (pp. 203–216). Washington, DC: George Washington University.
- Prugl, E. (2004). Gender orders in German agriculture: From the patriarchal welfare state to liberal environmentalism. *Sociologia Ruralis*, 44(4), 349–372.
- Putzel, S. (1984). Farm holidays: Combining agriculture and recreation. *Agrologist*(Fall), 20–21.
- Quisumbing, A. R. (2003). *Household decisions, gender, and development: A synthesis of recent research*. Washington, DC: International Food Policy Research Institute.
- Rogers, D. M., & Vandeman, A. M. (1993). Women as farm landlords: Does gender affect environmental decision-making on leased land? *Rural sociology*, 58(4), 560–568.
- Rosenfeld, R. A. (1985). *Farm women: Work, farm and family in the United States*. Chapel Hill, NC: University of North Carolina Press.
- Sachs, C. (1983). *The invisible farmers: Women in agricultural production*. Totawa, New Jersey: Rowan and Allanheld.
- Sethi, V., & King, W. (1994). Development of measure to assess the extent to which an information technology application provides competitive advantage. *Management Science*, 40(December), 1601–1624.
- Shortall, S. (1992). Power analysis and farm wives, an empirical study of the power relationships affecting women on Irish farms. *Sociologia Ruralis*, 32(4), 431–451.
- Sirakaya, E., & Somnez, S. (2000). Gender images in state tourism brochures: An over-looked area in socially responsible tourism marketing. *Journal of Travel Research*, 38(4), 353–362.
- Slater, R. J. (2001). Urban agriculture, gender, and empowerment: An alternative view. *Development Southern Africa*, 18(5), 635–650.
- Smith, M. (1989). *Beyond the glitter: The impact of tourism on rural women in the Southeast*. Lexington, KY: The Southeast Women's Employment Coalition.
- Verstad, B. (1997). Breaking the glass ceiling in the Norwegian Farmers Union—the process of electing a new president of the Norwegian Farmers Union'. Paper presented to the *XVII Congress of the European Society for Rural Sociology*. Crete, August.
- Vogeler, I. (1977). Farm and ranch vacationing. *Journal of Leisure Research*, 9, 291–300.
- Weaver, D. B., & Fennell, D. A. (1997). The vacation farm sector in Saskatchewan: A profile of operations. *Tourism Management*, 18(6), 357–365.
- Wilson, S., Fesenmaier, D. R., Fesenmaier, J., & Van Es, J. C. (2001). Factors for success in rural tourism development. *Journal of Travel Research*, 40(2), 132–138.
- Zuo, J. P. (2004). Feminization of agriculture, relational exchange, and perceived fairness in China: A case in Guangxi Province. *Rural Sociology*, 69(4), 510–531.

## Further reading

- Kousis, M. (1989). Tourism and the family in a rural Cretan community. *Annals of Tourism Research*, 16(3), 318–332.
- Lane, B. (1995). Creating niche markets in a growing sector: Rural tourism (pp. 81–109). Organization for Economic Cooperation and Development, University of Bristol, Bristol, UK.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed). New York: MacCraw Hill.
- Sharma, P., Chrisman, J., & Chua, J. (1996). *A review and annotated bibliography of family business studies*. Boston: Kluwer.