Agricultural Lenders' Survey on Organic Farms' Risk Measurement in Southeast Region

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INTRODUCTION

The booming organic farming sector registered an accelerated pace of growth in recent years; however, organic farmers have been unable to match the pace of market expansion with increases in their farm production (Dimitri and Oberholtzer, 2009). The expansion and growth of the industry hinge on the availability of borrowed capital, among other options, to supplement existing funds to finance larger operating infrastructure and working capital requirements.

The lenders' attitude in evaluating organic farmers' credit risks is crucial in acceptance of loan applications and overall access of these agricultural lending institutions. Generally, regular commercial lenders look at business profitability records, credit histories, collateral arrangements, historical financial conditions, repayment capability, and enterprise viability, among other considerations, in making loan approval decisions. Lenders often use credit risk assessment formulas that are developed using either (or both) experiential and statistical models (Splett et al., 1994). Small businesses, especially newly-established firms, often do not rate high with these credit risk models resulting in difficulty obtaining approval of loan applications.

The lending institutions' rigid credit risk assessment formulas sometimes do not completely understand the business potentials of innovative systems, like organic farms. For example, organic farm business plans may hinge on anticipated commodity prices higher than conventional prices, but some lenders may take a more conservative stance and insist on still using standard commodity prices. When the small farm sizes of organic farm borrowers are factored along with such prices, the borrowing farms' repayment potentials and business viability are grossly understated that lenders could deny the loan applications.

METHODOLOGY

A research project, funded by a grant from the Southern Sustainable Agriculture and Research Education (SARE), was developed to determine the recent credit access of organic farmers in the Southeast region. The survey was conducted among commercial banks, community banks, Farm Credit System associations and Farm Service Agency branches in the Southeast (Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Louisiana, Kentucky, Arkansas, and Tennessee). The survey questionnaire gathered structural and operating characteristics of lending institutions as well as the factors being used in lenders' assessment of organic farms' credit risks.

This survey was conducted in the latter half of 2012. The survey instrument was mailed to 2000 agricultural lending institutions in Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Louisiana, Kentucky, Arkansas, and Tennessee and Alabama. Of these lending institutions, 68 responses were received, representing a response rate of 3.4%.

The following sections summarize the major findings of this survey according to the respondent's structural characteristics, as well as their assessment of credit risks of both conventional and organic farmers on their institutions. Please be cautioned that certain response categories might contain missing observations as certain respondents could have skipped some questions.

A. RESPONDENTS' GENERAL PROFILE: STRUCTURAL CHARACTERISTICS

A.1 Respondents' Type of Agricultural Lender

Question: *"What type of agricultural lender is your institution?"*		
Type of Institution	**Number**	**Percentage**
Commercial Bank	37	56.9%
Farm Credit Association	5	7.7%
Farm Service Agency	23	35.4%
Total	**65**	**100%**

A.2 Total Size of the Agricultural Lender

Question: *"During the last fiscal/calendar year, what was the estimated size (total assets) of your institution?"*		
Amount	**Number**	**Percentage**
Less than $100 million	15	25.4%
$100 million to $200 million	19	32.2%
$201 million to $500 million	11	18.6%
$501 million to $1 billion	5	8.5%
$1 billion to $2 billion	4	6.8%
$2 billion to $5 billion	0	0.0%
$5 billion to $10 billion	1	1.7%
Over $10 billion	4	6.8%
Total	**59**	**100%**

A.3 Time Institutions Have Been Part of the Lending Business

Question: *"How long has your institution been in the lending business?"*		
	Number	**Percentage**
Less than 5 years	0	0.0%
5 to 10 years	4	6.2%
10 to 15 years	2	3.1%
15 to 20 years	2	3.1%
More than 20 years	57	87.7%
Total	**65**	**100%**

A.4 Percent of Loans to Agricultural or Farm Sector

Question: *"On the average, how much did you lend to agricultural or farm borrowers (percent of total loans) during the last two years?"*		
	Number	**Percentage**
Less than 10%	18	29.0%
10% to 15%	9	14.5%
16% to 20%	3	4.8%
21% to 25%	2	3.2%
26% to 30%	3	4.8%
31% to 35%	2	3.2%
36% to 40%	3	4.8%
41% to 45%	1	1.6%
46% to 50%	0	0.0%
Over 50%	21	33.9%
Total	**62**	**100%**

The summary in table A.1 indicates that the majority of study's sample lending institutions are commercial banks (56.9%). Farm Service Agency comprised a large percentage (35.4%) in the data set while the Farm Credit Agency supplied (7.7%) of the participating lending institutions in this study.

Lending institutions participated in the study are quite huge in term of assets. From table A.2, about one-third of the lending institutions that participated in the study had $100 million to $200 million estimated total asset during the last fiscal year. On the other hand, 25.4% of the respondents had less than $100 million estimated asset. This is followed by institutions that had $200-$500 million assets which comprise 18.6% of the participants in this study.

The summary in table A.3 shows that the majority of the participating institutions in the survey (87.7%) have been in the lending business for more than 20 years. Institutions that have been in the lending business for 15-20 years comprise 3.1% of the data set. Meanwhile, institutions that have been part of the lending business for 10 to 15 years and 15 to 20 years comprise 6.2% and 3.1% of the sample, respectively.

Table A.4 presents that agricultural borrowers account for a significant portion of the lenders' loan portfolios. 33.9% of the lending institutions stated that over 50% of the total loans they disbursed during the last two years were to agricultural borrowers. On the other hand, 29% of the lending institutions said that less than 10% of their total loans given were given to agricultural or farm borrowers.

B. ORGANIC FARMS' CREDIT RISK ASSESSMENT

B.1 Treatments of Different Types of Borrowers

Question: *"Do you use different credit scoring (or credit risk assessment) models for different types of borrowers?"*

Differences in Credit Risk Assessment Models	Small versus Large Borrowers	Short- versus Long-Term Loans	Organic versus Conventional Farms	Response Count
Yes	11	11	1	13
No	39	39	18	45

The summary in table B.1 indicates the credit scoring (or credit risk assessment) models for different types of borrowers are the same regardless of the size of business, loan terms, and farm type. Survey results show that 78% of the respondents don't use different credit risk assessment models for different borrower sizes and loan types. Using same credit models has become more apparent for organic and conventional farms as 94.74% of lending institutions use same assessment models for both.

B.2 Financial Variables and Credit Risk Factors

1. Conventional farms

Question: *"How much weight (in percent) would the following financial variables and credit risk factors have in evaluating loan applications from conventional farms?"*

Credit Risk Factor	Borrower Size		Loan Type	
	Small (Average weight %)	Large (Average weight %)	Short Term (Average weight %)	Long Term (Average weight %)
Liquidity	22.40741	24.42308	25.76923	23.26923
Solvency	22.70833	25.86957	24.78261	26.08696
Profitability	26.60714	27.77778	28.65385	28.7037
Repayment Capacity	44.72973	46.71429	47.14286	45.14286
Financial Efficiency	23.57143	25.25	25	25.75
Product Diversification	20.2381	20.95238	22.75	21.75
Collateral Coverage Ratio	32.71429	33.63636	33.33333	34.55882
Credit Score (FICO, Beacon, etc.)	28.51852	26.95652	27.82609	27.95455
Others: Please specify	75	75	75	75

2. Organic farms

Question: *"How much weight (in percent) would the following financial variables and credit risk factors have in evaluating loan applications from organic farms?"*				
Credit Risk Factor	**Borrower Size**		**Loan Type**	
	Small (Average weight %)	**Large (Average weight %)**	**Short Term (Average weight %)**	**Long Term (Average weight %)**
Liquidity	19.79167	21.08696	22.91667	20.43478
Solvency	20.95238	22.04545	20.95238	22.27273
Profitability	24.4	23.65385	25	25
Repayment Capacity	45	45.45455	45.60606	43.63636
Financial Efficiency	20	20.52632	21.05263	21.05263
Product Diversification	21.31579	21	23.15789	21.84211
Collateral Coverage Ratio	33.59375	33.70968	32.90323	34.0625
Credit Score (FICO, Beacon, etc.)	27.2	25.45455	24.56522	25.45455
Others: Please specify	100	100	100	100

From table (1), it appears that there is not much variation in weights of financial variables and credit risk factors use by respondents in evaluating loan applications from conventional farms. Based on the summary, repayment capacity is the main risk factor lending institutions regardless of the borrower size and loan type of conventional farm. This is followed by collateral coverage ratio which accounts 32.71% to 34.56% average weight among different types of conventional farms.

The summary in table (2) also shows that for organic farms, there is also not much variation in weights of financial variables and credit risk factors. Like the treatment of lending institutions to conventional farms, repayment capacity is also the main risk factor lending institutions look at in evaluating organic farm's loan application. This is followed by collateral coverage ratio which accounts 32.90% to 34.06% average weight among different types of organic farms.

Overall, the weights of financial variables and credit risk factors in evaluating loan applications for both conventional and organic farms are pretty much the same.

B.3 Risk Factors and the Determinants of the Lenders' Risk Assessment

1. Diversification and credit risk rating

Question: *"Organic farms are highly diversified operations (producing a wider array of crops and farm products) than conventional farms. Does diversification affect their credit risk rating and the usual commodity insurance requirement tied up to a loan transaction?"*				
Affecting Lender's Decisions	**Credit Risk Rating**		**Commodity Insurance Requirement**	
Yes, significantly	3	7.14%	8	20.51%
Yes, to some extent	13	30.95%	10	25.64%
Yes, slightly	6	14.29%	5	12.82%
Not at all	20	47.62%	16	41.03%

Diversification of organic farms has no effect on their credit risk ratings as well on the usual commodity insurance requirement tied up to their loan transaction. As shown in table (1), 47.62 % of the respondents say that highly diversified operation does not have an effect in their credit risk rating. On the other hand, 30.95% of the lending institutions say that it has an effect to some extent. This pattern is also observed in the commodity insurance requirements of lenders as 41.03% of the respondents indicate that diversification has no effect at all. 25.64% on the other hand state that the highly diversified operation of organic farmer has an effect to some extent.

2. Organic farms' intangible assets

Question: *"Organic farms spend more on intangible assets or investments than conventional farms. For example, their farmlands have richer soils because of soil enhancement inputs applied over quite a period of time. How do these intangibles affect the following?"*				
Affecting Lender's Decisions	**Farmland Appraisal for Loan Collateralization**		**Calculation of Equity-Asset Ratio and other related ratios**	
Yes, significantly	2	4.55%	2	4.88%
Yes, to some extent	7	15.91%	7	17.07%
Yes, slightly	7	15.91%	2	4.88%
Not at all	28	63.64%	30	73.17%

Majority of the survey participants stated that intangible assets have no effect on farmland appraisal and calculation of equity-asset ratio. Existing lenders' credit scoring models include measures on solvency (Equity-Asset Ratio) and profitability (Return on Equity). The summary in table (2) shows 63.64% of the respondents indicate that intangible assets have no effects in their farmland appraisal decision. As for the calculation of equity-asset ratio, 73.17% indicate that this characteristic has no affect in their decision.