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**Analysis of Participation of Small Farmers in Kentucky
Cost-Share Programs**

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Analysis of Participation of Small Farmers in Kentucky Cost-Share Programs

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ABSTRACT

This study evaluates factors affecting the participation of small socially disadvantaged producers in federal and state cost-share programs. Data were collected from a survey of 100 producers in 21 Kentucky counties. Results suggest education, age, and farm size had significant influence on their participation in cost-share programs in Kentucky.

PROBLEM STATEMENT AND IMPORTANCE OF WORK

The ubiquitous challenges are lack of sufficient information about USDA and other farm business programs and services, lack of or insufficient capital, labor, training and technical assistance, lack of information about innovative farming techniques, pricing methods for agricultural products, market information, and increasing cost of farm inputs and supplies. These hurdles have made small farmers difficult to sustain farming and participate in innovative agricultural practices. In Kentucky, small farmers and small farmer-owned or managed farms have increased in numbers since 2007. However, the average return from these farms has not increased at the same rate as the average gross sales of other groups over the period. Small farmers in rural counties have not been remarkably successful in utilizing USDA's technical assistance, subsidies, and other programs and services, and need special technical assistance.

In the last few decades, U.S. agriculture has been characterized by a shift toward fewer and larger farms. The farm decline rate has been much higher for minority-operated farms compared to all farms (U.S. Farm Bill 2007; Wear and Greis 2002). The majority of the minority-operated farms are small in size (Gyawali et al. 2009). There is a need for programs on survival strategies for small farmers to increase the safety net and profitability of farms. Sustainability of the agricultural food system depends on how we increase these small farmers' participation in government-sponsored cost-share and technical assistance programs (Onianwa et al. 2004). The objectives of this study were (1) to examine the attributes of small farmers and correlate them with levels of participation in cost-share programs, and (2) to evaluate the reasons for not participating in such programs in respect of their demographic, geographic, and farm characteristics.

DATA AND METHODS

The data for this study were collected through a mail survey. The survey was conducted among 100 small and socially disadvantaged farmers and producers in 21 counties of the Commonwealth of Kentucky. The surveys were conducted via mails and personal interviews. The survey questions included information about various types of cost-share programs available in Kentucky, duration of participation, benefits of participation, reasons for non-participation, and feedback for design of cost-share programs, and effective inclusion of small and minority farmers in such programs.

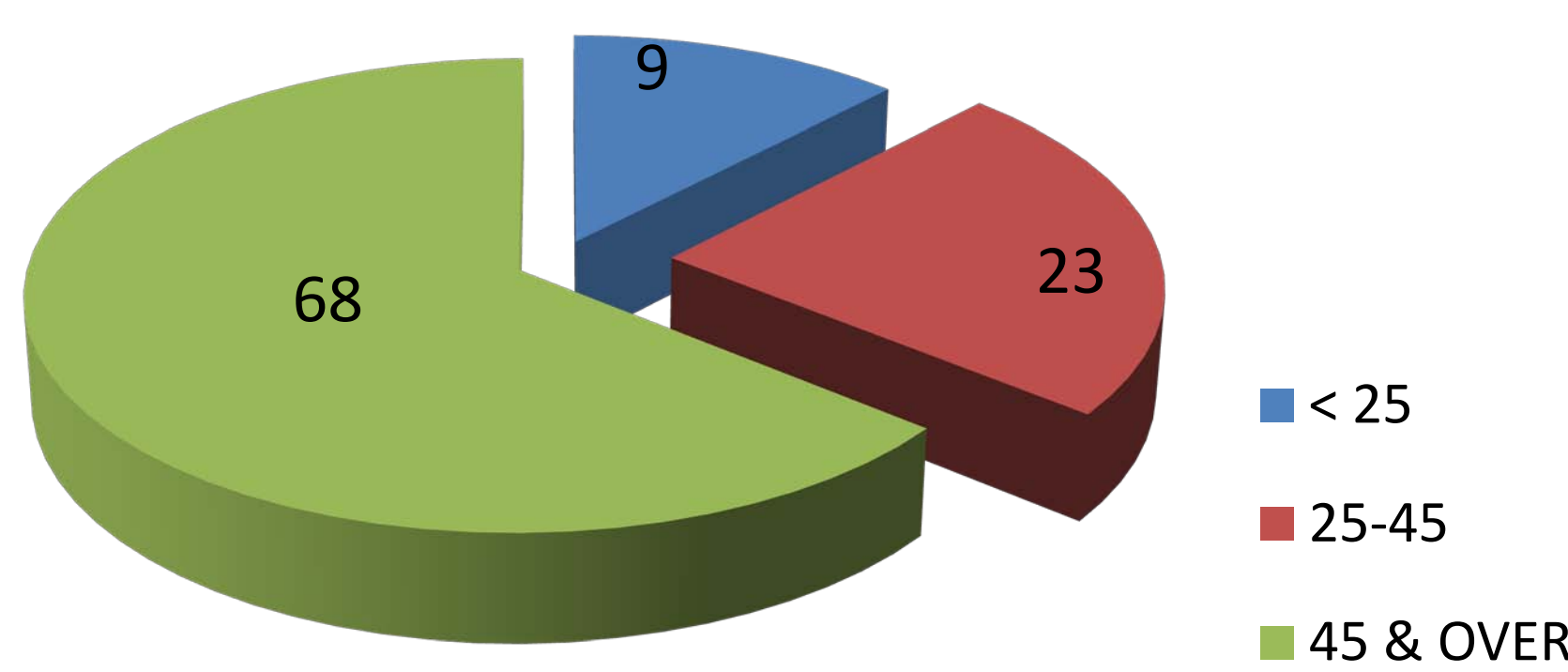
Binary logistic regression analysis was conducted to evaluate probability of participation in cost-share programs based on small farmers' demographic, geographic, and farm characteristics. The following logistic regression model was estimated (Berkson 1994):

$$L_i = \ln(P_i/1-P_i) = Z_i = \beta_0 + \sum \beta_j X_{ij}$$

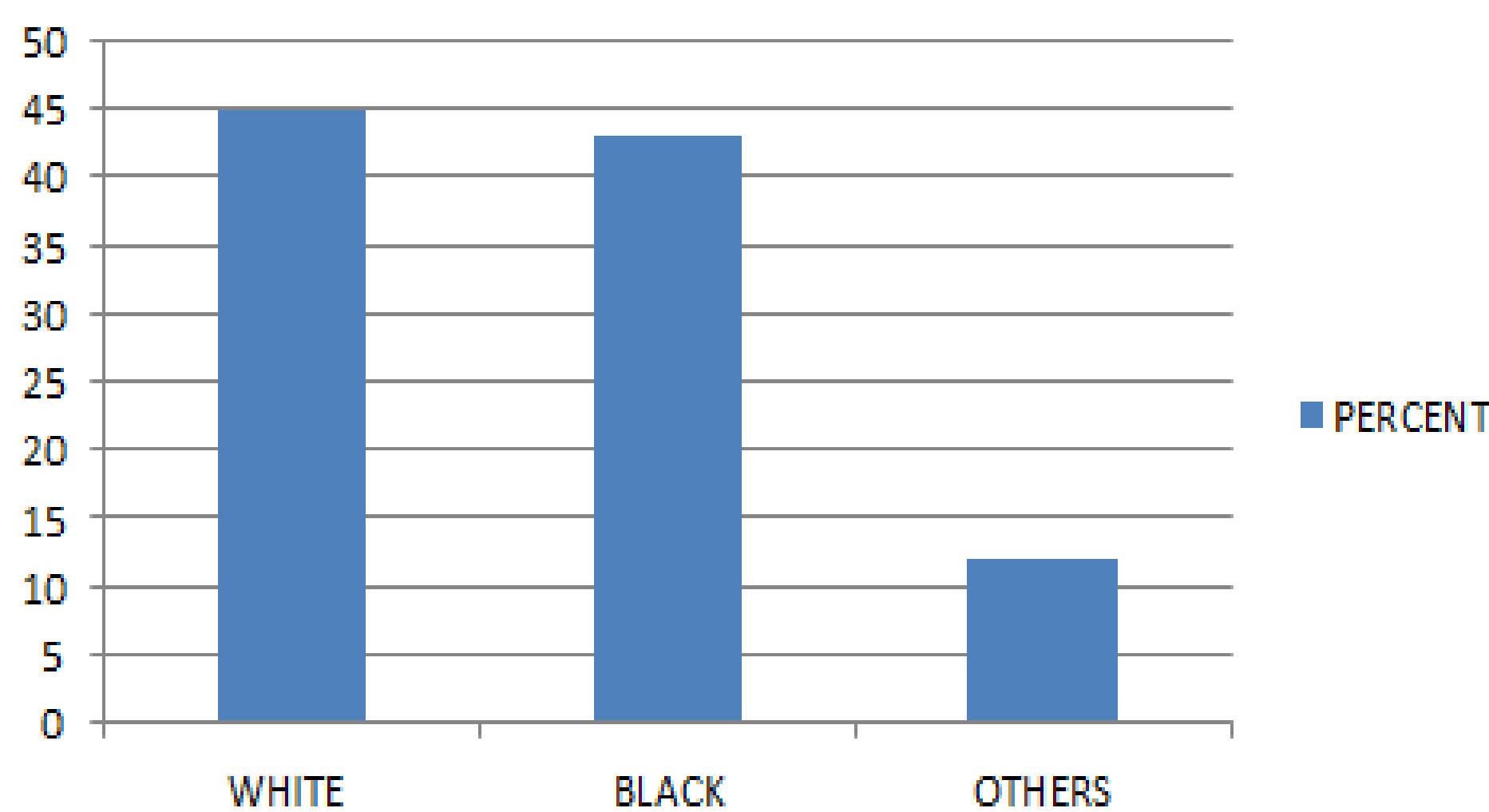
where L_i is the logarithm of the odds of participation in cost-share programs (called logit), X_i represents the independent variables (including race, gender, educational attainment, acres of land owned, ownership type, gross sales, soil type, distance to markets, and land use type), P_i is the conditional probability of a representative small farmer participating in a cost-share program given X_i , and β_i represents parameters to be estimated.

DEMOGRAPHICS OF RESPONDENTS

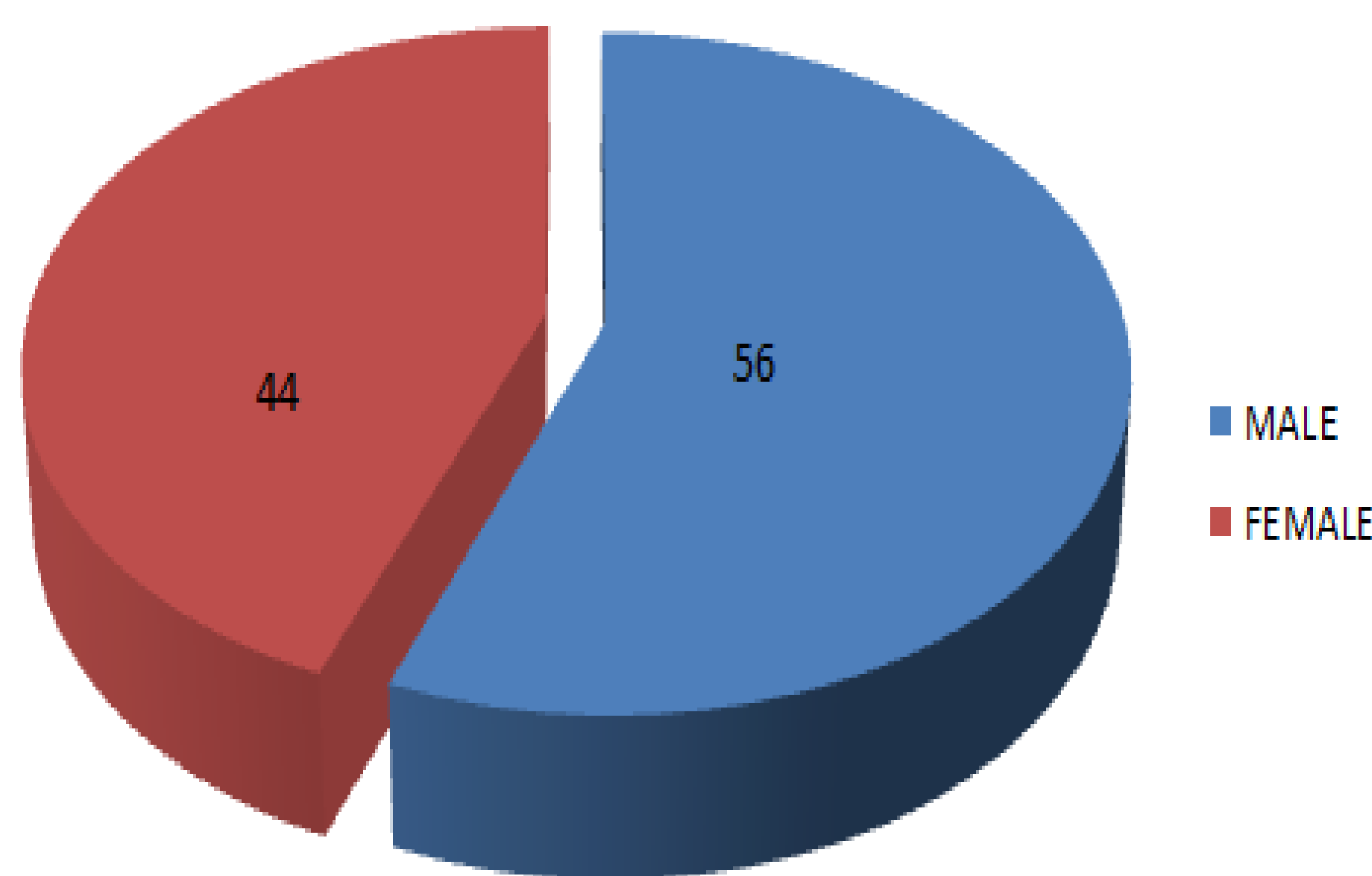
AGE



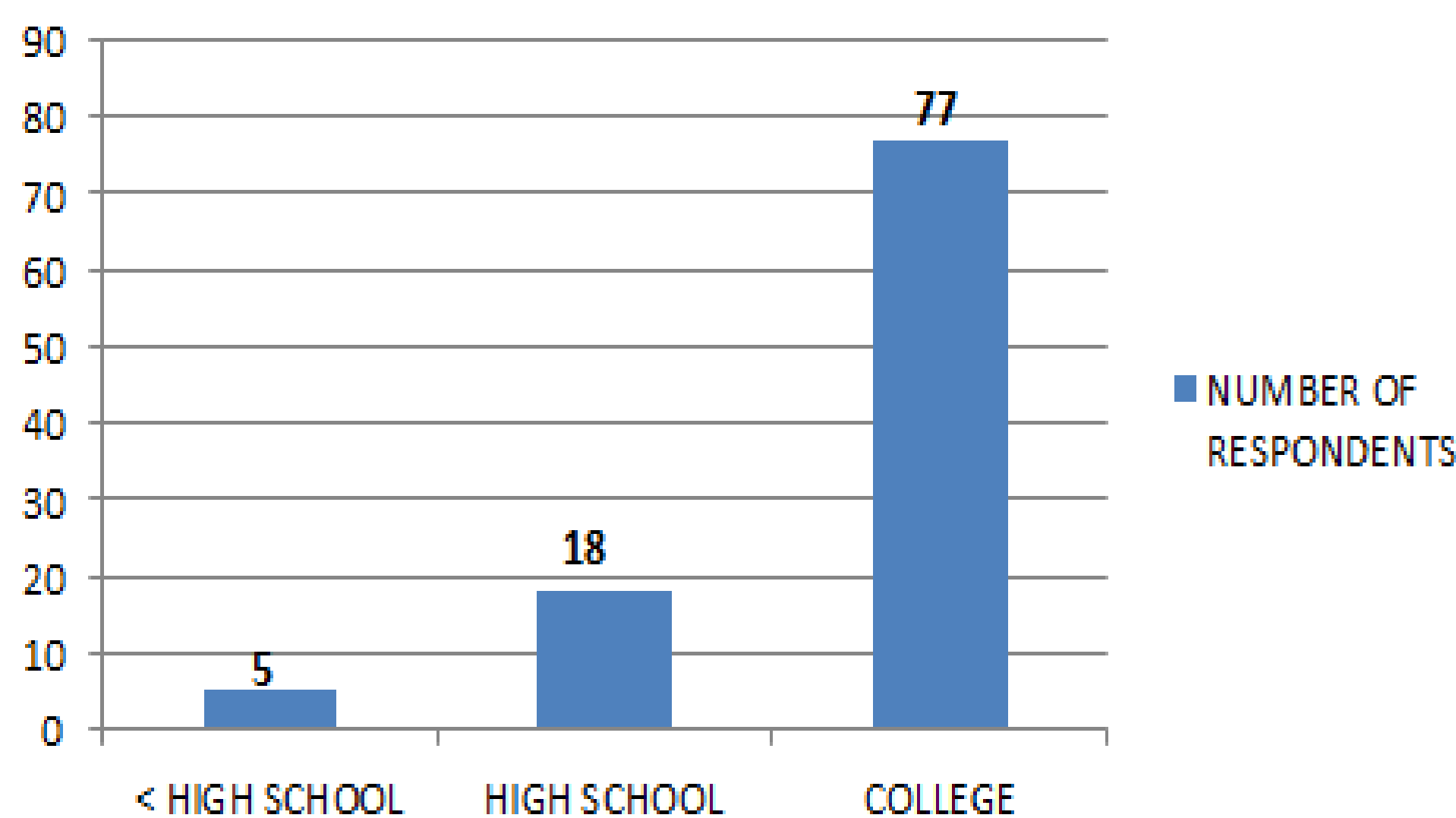
RACE



GENDER



EDUCATION



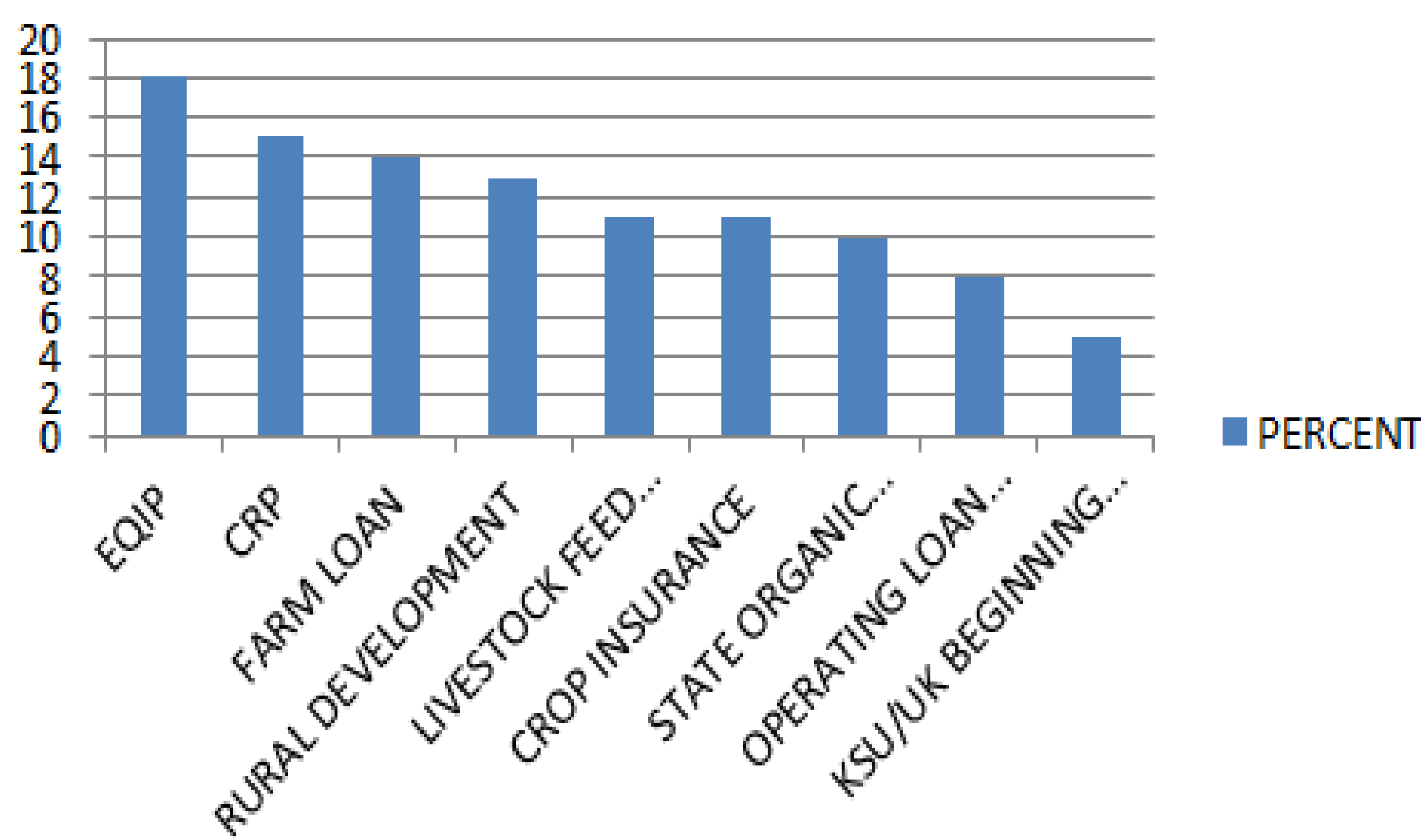
MAJOR RESULTS AND IMPLICATIONS

Results suggest a strong correlation between participation in cost-share programs and acres owned, college education, race, ownership type, and gross sales, and type of land use. Lack of information, difficulty in arranging cost-share funds, unnecessary requirement of paperwork for filling out applications, labor availability, farm location, lack of information, and variation in soil types were reasons for non-participation in cost-share programs. The small farmers have indicated higher level of satisfaction to the cost-share programs offered by land-grant universities' technical assistance. The results provide important insights for the assessment and implementation of cost-share programs in Kentucky.

REASONS FOR NON-PARTICIPATION

REASONS	PERCENTAGE
LACK OF CAPITAL	61
LACK OF SUFFICIENT INFO. OR KNOWLEDGE ABOUT THE PROGRAM	54
NO ENOUGH LAND	53
COST-SHARE REQUIREMENT	50
COSTS OF INPUTS & SUPPLIES	47
LACK OF LABOR	44
LACK OF MANAGEMENT PLAN	42

% PARTICIPATION



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