

Southern Region Small Fruit consortium

Enterprise Cost Analysis for Rabbit eye Blueberries, Southern High bush Blueberries in Soil and Southern High bush Blueberries in High-Density Pine-bark Beds

Esendugue Greg Fonsah
Asst. Professor & Ext. Economist
Department of Ag & Applied Economics
University of Georgia
P.O. Box 1209 – RDC
Tifton, Georgia 31793
gfonsah@uga.edu

Objectives

The overall objective of this study is to summarize the resources and estimate the costs associated with producing blueberries in the southeastern U.S. region. The specific objectives were: (1) to develop a new southern high bush blueberry in soil budget; (2) to develop an updated rabbit eye budget; and; (3) to develop a new southern high bush blueberries in high-density pine-bark bed budget.

Justification

Due to the high demand from farmers, county agents and some financial institutions, insurance companies etc., there is a strong demand for these budgets. Unfortunately, the existing Blueberry Enterprise Cost Analysis was published in 1995, almost a decade ago, and covers only rabbit eye blueberries. There have been significant changes in terms of input prices, agricultural practices and production technologies since then.

Methodologies

Total costs of cultivating either rabbit eye blueberries, southern high bush blueberry in soil and southern high bush blueberries high density pine-bark in beds include fixed costs (machinery, irrigation, recaptured establishment costs, land, overhead and management) and variable costs (i.e. pre-harvest, harvesting and marketing costs) respectively. To satisfy this need, several blueberry orchards will be visited to study blueberry operations and collect the necessary primary data for generating or updating the budget. Various blueberry specialists, Extension Agricultural Economists, Horticulturists, Biological and Ag-Engineers, and County Agents and farmers will be visited to gather agronomic, irrigation and equipment data required to develop and/or update the almost a decade-old publication. Furthermore, vendors of agricultural inputs (fertilizers, chemicals and equipment) will be contacted to obtain latest prices needed to generate variable and fixed costs of rabbit eye blueberry, southern high bush blueberry in soil and southern high bush high density in pine-bark beds production systems concomitantly. The data collected, both primary and secondary will be utilized to update the rabbit eye blueberry budget

(objective 1 above), generate a new southern high bush blueberry in soil budget and southern high bush blueberry high density pine-bark beds budget respectively (objective 2 and 3).

Results of objective 1: New Southern High bush Blueberry in Soil in Georgia Budget

The first year establishment and maintenance cost of growing southern high bush blueberry in soil in Georgia utilizing high organic matter (>3%) spodic-type or allied sand soil series was estimated at \$ 9,582.68 per acre. The second year establishment and maintenance cost of growing, harvesting and marketing was \$3,689.12 per acre less return from receipts of \$2,375 equal \$1,314.12 per acre. The third year establishment and maintenance costs were \$7,065.34 per acre. The total returns for the same year was \$9,500 per acre. Subtracting the cost of \$7,065.34 from \$9,500 gives a net return of \$2,434.66 per acre. The fourth year cost, which was considered to the first year of actual full production costs were estimated at \$13,543.57 per acre. The compounded and recaptured establishment annual cost was \$2,175.52 per acre. The risk rated expected returns over total costs 66% of the time was \$5,456 per acre. The chances of making profit were 92% and the base budgeted net revenue was \$6,456 per acre. Total budgeted cost per pound was \$3.39. The estimated annual total fixed machinery cost per acre was \$287.55. Total annual cost of solid set irrigation was \$657.81 per acre.

Results of objective 2: New Rabbit eye Budget in Georgia.

The first year establishment and maintenance cost of growing rabbit eye blueberry in Georgia was estimated at \$5,024.12 per acre. Total variable, harvesting, and marketing cost in the second year was \$2,225.26 per acre less return from receipts of \$725.00 equal \$1,500.26 per acre. In the third year, total variable, harvesting, marketing and fixed cost was \$3,489.57 per acre. The total returns for the same year was \$1,866.15 per acre. Deducting the cost of \$1,866.15 from \$3,489.57 give a net return of \$1,623.42 per acre. In the full production year (fourth year) the cost was estimated at \$4,673.24 per acre. The compounded and recaptured establishment annual costs were \$2,254.54 per acre. The risk rated expected returns over total costs 63% of the time were \$286 per acre. The chances of making profit were 79% and the base budgeted net revenue was \$457 per acre. Total budgeted cost per pound was \$0.94. The estimated annual total fixed machinery cost per acre was \$699.66. Total annual cost per acre of drip irrigation was \$161.15.

Results of objectives 3: New southern high bush blueberries in high density pine bark bed budget (Pending).

Unfortunately, we underestimated the amount of time required to successfully accomplish these three budgets. While the first two objectives and/or budgets have been developed, we are re-applying for funding to start and finish the third one. It is of crucial important to us, the growers, the county agents, the lending/financial institutions and the blueberry industry at large that the southern high bush blueberries in high density pine

bark bed budget be generated. We would be most appreciative if our request for funding to accomplish the third and important budget is approved.

Conclusions

The first objective of this study shows that the risk rated expected returns for Southern High bush Blueberries over total costs 66% of the time was \$5,456 per acre and the chances of making profit were 92% while the base budgeted net revenue was \$6,456 per acre. On the other hand, the chances of making profit for rabbit eye blueberries production were 79% and the base budgeted net revenue was \$457 per acre. If our request for funding is approved, we will equally be able to provide vital information on the profitability level of the southern high bush in high-density pine bark bed blueberries production.

Impact Statement

The newly developed budgets would definitely serve as a practical guide to Southeastern regions such as South Carolina, Tennessee and other neighboring states involved in blueberries production that do not have these budgets yet. They would also facilitate the initial development of neighboring states blueberries budgets and serve as guidelines to farmers, county agents, insurance companies, USDA and financial institutions of those states without blueberries budgets respectively. They would further be used for comparison purposes by Southeastern blueberry growers to contrast their costs with production costs in Michigan and other states.

Georgia blueberry has positioned itself as number two most important fruit after pecans, and generating \$48.6 million equivalent to 21.4% of Georgia 2004 Fruit and Nut Farm Gate Value compared with \$26.7 million generated in 2003, hence, 82% increase. Furthermore, there was 6% increase in planted acreage. The rapid growth in the Georgia blueberries industry has tremendous economic impact to the entire state of Georgia. The multiplier and spillover effect touches other industries and sectors of the aggregate economy, i.e. jobs, creation, fertilizer companies, equipment companies, financial/lending institutions (banks) etc.

Citation(s) for any publications arising from this project:

The following publications stemming from this project have either been accepted, in print, posted on the website or already published:

Fonsah, E.G., G. Krewer, K. Harrison and M. Bruorton (2005) "Risk-Rated Economic Return Analysis for Southern Highbush Blueberries in Soil in Georgia" Accepted Manuscript #HORTTECH-00333RRR Final Decision (pending publication).

Fonsah, E.G., G. Krewer, K. Harrison and M. Bruorton (August 2004). Economic Analysis of Producing Southern High bush Blueberries in Soil in Georgia. AGECON 04-93, Department of Ag & Applied Economics, University of Georgia. Also visit: <http://www.ces.uga.edu/agriculture/agecon/printedbudgets.htm>

Fonsah, E.G., G. Krewer, K. Harrison and M. Bruorton (August 2004). Economic Analysis of Producing Southern High bush Blueberries in Soil in Georgia. AGECON 04-93, Department of Agricultural & Applied Economics, University of Georgia. Also visit the Southern Region Small Fruit Consortium Web at: <http://www.smallfruits.org/blueberries/production.htm>

Fonsah, E.G., G. Krewer, K. Harrison and D. Stannaland (2005). Economic Analysis of Producing Rabbit eye Blueberries in Georgia. Department of Agricultural and Applied Economics, University of Georgia, Extension publication. (in print)