ENTERPRISE BUDGETS FOR ORNAMENTAL CROPS IN PLANT HARDINESS ZONES 8 AND 9

Roger A. Hinson, LSU AgCenter, Department of Agricultural Economics and Agribusiness (contact rhinson@agctr.lsu.edu; 225-578-2753)

Allen Owings, LSU AgCenter, Hammond Research Station John Black, Mississippi State University, Department of Agricultural Economics Richard Harkess, Mississippi State University, Plant and Soil Sciences

Working Paper Series # 2008-14
Department of Agricultural Economics and Agribusiness
Louisiana State University AgCenter
Baton Rouge, LA 70803





Index Words: production costs; enterprise budgets; product diversification; enterprise diversification; marketing strategies

This document and these budgets result from cooperative effort between the LSU AgCenter Experiment Station, Experiment Stations at Auburn University, the University of Arkansas, the University of Georgia, Mississippi State University and the University of Tennessee, and the Southern Region Risk Management Education Center. SRRME is administered by Texas Cooperative Extension of the Texas A&M University System with funds provided by USDA Cooperative State Research, Education and Extension Service's Agricultural Risk Management Education Competitive Grants Program.

These budgets were prepared in 2007. Their components - prices for inputs in particular - were based on surveys and on collection of some individual product prices from websites and other sources. Particularly for fuel and fertilizers, economic change over the past year has made these prices outdated. However, the data collection process will be repeated late in 2008 and early in 2009, and at that point the budgets will be updated with the new price information.

As an interim solution for updates, users can substitute prices they feel are appropriate, multiply by the quantities provided in the tables, and change the totals. For fuel, recently collected prices for fuel (by Mississippi State University) generated estimated prices of leaded and unleaded regular gasoline of \$3.51, and for diesel of \$3.68. These were for bulk purchases and did not include road use taxes.

ENTERPRISE BUDGETS FOR ORNAMENTAL CROPS IN PLANT HARDINESS ZONES 8 AND 9

Roger Hinson, Allen Owings, John Black and Richard Harkess

INTRODUCTION

Production and marketing of ornamental plants often is called the 'Green Industry'. Farm level sales from this industry have increased faster than most other segments of agriculture over the past 20 years. The economy has a strong impact on ornamental plant sales, but even in difficult economic periods consumers seem to view these products as affordable luxuries and the industry is seen as less vulnerable to economic factors. A national economic impact study for 2004 shows the 'green industry' provided about \$147.8 billion in output, nearly 2 million jobs, about \$26 billion in sales and \$18.1 billion in value added (Hall et al. 2005).

The specific objective of this research was to estimate cost of production for selected container grown ornamental plants. In the document, we focus on production costs of selected woody ornamentals and perennials in Plant Hardiness Zones 8 and 9, on and close to the Gulf of Mexico and the lower Atlantic, from southern Texas and stretching across the southern halves of Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina and into North Carolina. The warm weather and short winters in these hardiness zones provide a long growing season that has encouraged growers to move to and expand plant production.

Woody ornamental plants (shrubs and trees) are produced on farms referred to as nurseries, while flowering and foliage plants usually are produced in greenhouses. The Cost of Production (COP) budgets developed here are for outdoor plant production in above-ground plastic containers. Procedures and underlying assumptions used in generating production cost budgets for container-grown ornamental plants are documented and explained. Enterprise

budgets are an important component of a grower's information base at several levels, including choices involving risk, crop mix, expansion, and pricing and price negotiations.

Plants selected for budget creation are chosen to represent groups of plants where similar production practices, inputs and labor rates are appropriate. The budgets are based on common cultivars, and the plants are:

- Indica azalea (*Rhododendron indicum*; example cultivars 'Formosa', 'G.G. Gerbing')
- Crape myrtle (*Lagerstroemia indica* x *fauriei*; example cultivars 'Natchez', 'Tuscarora')
- Liriope (*Liriope muscari*; example cultivar 'Big Blue')
- Southern live oak (*Quercus virginiana*)
- Lantana (*Lantana camara*; example cultivar 'New Gold')
- Fig (*Ficus carica*; example cultivars 'Celeste', 'LSU Purple').

PREVIOUS WORK

Perry et al. (1990) estimated COP budgets for field-grown woody ornamentals for climatic zone 9. Results were presented as capital requirements, production activities and inputs, and costs, for 20 acre and 40 acre production nurseries. Budgets were created for individual plants as representatives of a group of similarly managed plants. Budgets for azalea, narrowleaf evergreen (Juniper), broadleaved evergreen (Euonymus), deciduous shrub (Forsythia), and deciduous tree (red maple and pecan) were included. For each plant, the (i) the sequence of operations required for production of the plant, (ii) machinery and equipment requirements for the activities, (iii) operating inputs along with rates and costs, and (iv) labor required were estimated. The overall COP process was placed in the context of a complete nursery operation, and these plant groups were the basis for analysis. More recently, McNeil (University of

Kentucky) incorporated a similar approach but used a spreadsheet to calculate production costs and produce reports, similar to Perry's, to for woody ornamentals in containers in hardiness zones 5 and 6.

COP budgets were estimated for field-grown woody ornamentals for hardiness zones 5 and 6 for slow- and rapid-growing evergreens, deciduous shrubs, shade trees and ornamental trees produced on 50 and 200 acre nurseries (Taylor et al. 1986). As with Perry's work, plants were grouped by similarity of production activities and management practices on the nursery. Generally, the research above followed a general procedure that can be traced to work by Badenhop (1979) and Badenhop and Phillips (1983).

METHODS

Due to the detailed nature of cost computations for enterprise budgets, the Mississippi State Budget Generator (MSBG, version 6.0) was utilized. MSBG provides a standard format for crop and livestock budgets. Its computational procedures are widely accepted, and the procedure can be updated easily for budgeting or for considering alternative farm situations. MSBG consists of a computer program which specifies a system of computational procedures for calculating costs and returns. A copy of MSBG can be downloaded from the website of the Department of Agricultural Economics at Mississippi State University (http://www.agecon.msstate.edu/laughlin/msbg.php). Files required to run these budgets are available from the website.

MSBG has multiple functions, but in this application individual enterprise budgets were generated. As a base for analysis, we assumed a nursery operation of 10 acres in plant production and 10 acres of service area such as buildings, roads and loading area. Growers are assumed to be landowners, managers and laborers. They are also assumed to be experienced producers and to generally follow University/Extension recommended production practices.

To prepare a budget, the user must specify what activities occur, when they occur, the machinery or equipment used, and the operating inputs included. Economic engineering was chosen to approach this problem, based on the idea that a planning budget can be prepared with acceptable precision through consultation with knowledgeable individuals and experts in the industry. These budgets were prepared based on the knowledge and experience of Extension horticulturalists and agricultural economists from participating states. Through this process, a set of activities and associated inputs that represent a general production situation in hardiness zones 8 and 9 was identified. Specifically, production practices, inputs, input rates, machines used and machinery performance rates were specified by Extension Specialist Allen Owings (LSU AgCenter) and Richard Harkess (MSU horticulturalist). These were verified for correspondence to real production situations by presenting the budgets and their supporting assumptions to a panel of growers from the central gulf coast region at a meeting in Mobile, AL. The panel provided feedback on production activities and inputs. As a result, modifications modifications were made that ensured the applicability of the work. At a later stage, preliminary copies of the budgets were distributed in the winter of 2008 to project participants for use in extension meetings with growers. No suggestions for revisions were received from growers' review of the budgets. The activities and crop protection product rates specified below tended to look like those that would typify zone 9. These would be slightly different in zone 8. The prices included in these files are appropriate to commercial production, and were collected from specialized suppliers serving the industry in 2007.

These budgets represent a logical system of production currently in use by producers. However, many other combinations of activities, products and performance rates are possible and would result in different estimates of cost. Once the basic budget has been created, these

budgets can be altered to represent other general situations or to tailor the budget to a specific farming operation.

Data Files. Several data files, including powered equipment, implements, other durable equipment, and operating inputs, are created. The user specifies and is responsible for selection and appropriateness of data used to prepare a budget, such as interest rates, performance rates and input prices. A conservative approach in making decisions about values in the data files is appropriate. An example of this conservativeness is that we used new machinery and equipment prices. Fixed costs are higher because interest charges and depreciation are calculated from the purchase price. Some growers may feel that their costs are lower because they purchased 'used' rather than new machinery, or they might be using older, depreciated machinery. These arguments are reasonable, but the assumption of new machinery is appropriate for planning or for establishing benchmark costs.

The 12-month Budgeting Period. The budget period in MSBG is limited to a 12 month period that can begin and/or end in any month. Production cycles that last more than one year must be constructed as a series of single year budgets. For this reason, the 1 and 3 gallon Azalea, the 3 gallon Crape Myrtle, and the 7 gallon Live Oak were calculated as a 'production' phase budget that included planting and growing activities, and a 'harvest' budget that usually included a fall harvest, winter maintenance, and spring harvest. The crop cycles budgeted here were about 18 months long, beginning with planting in October, continuing to a small harvest in the following fall season, and continuing with winter maintenance activities and major harvest through the next March. As an example, Azalea budgets might begin in October, 2007 and finish with harvest activities in 2009. Other budgets had different budget periods depending on the production cycle.

Assumptions

Capital. While most growers use their own capital to fund long term investment and operating expenses, we include interest charges for working capital and for investment in machinery and equipment. Allocated costs and interest charges for investment in land and improvements are not included.

Labor. Growers and their family members provide some of the labor force. Additional labor is assumed to be hired by the hour as required to get activities completed in a timely manner. Hired employees usually are a combination of full time and part time. All hours required for production activities are charged to the enterprise. Labor for general work is charged at \$9.60 per hour for all labor, which includes a \$7.50 per hour basic wage rate plus additional costs (27.65%) for social security, Medicare, and workman's compensation (6.2%, 1.45%, 20%). Manager labor was charged at \$15.30 per hour, which includes a basic wage rate of \$12.00 per hour plus additional costs (27.65%) for social security, Medicare, and workman's compensation (6.2%, 1.45%, 20%). The higher wage rate was charged for managers because of the relatively higher skills required (Salassi and Dileberto 2008).

Machinery. Machinery size affects operating and overhead costs. We assume that the 10 acres of production space comprises the bulk of agricultural activities and guides the choice of machinery items and their size. Generally, nursery activities do not involve heavy agricultural work such as soil tilling. Some combination of diesel tractors in the 20 and 35 horsepower range, and one tractor of about 50 hp, would be found on the nursery. Specialized pieces of equipment include wagons, machines to assist in potting, an air-blast sprayer unit, and irrigation. These machines are purchased and used through their productive life, with salvage values and 'repair and maintenance' percentages reflecting this assumption. We assumed that each enterprise budgeted was part of an ongoing production facility and machinery and equipment costs are

spread across other enterprises. Machine costs on a per hour and per acre basis are in the appendix of this report.

Irrigation. Overhead irrigation is the standard water delivery system for small containers (7 gallons or less) in commercial ornamental production. The water source was assumed to be a well of about 200 feet (this would vary according to location). Power was supplied by a 5 hp electric pump, with backup from a tractor power take-off. Water was pumped directly onto the crop or into a pond, depending on need and well production capability. Custom installation of the irrigation system, including service to the field and layout in the field, was assumed. Appropriate filters and underground piping from the well to the head of the field were included. The costs for installation and materials, including lateral lines, risers, heads, other miscellaneous expenses, totaled about \$51,500, or about \$5,150 per acre. The system was specified and priced by a commercial firm with extensive experience in selling and installing irrigation systems for a variety of agricultural applications, including nurseries.

The irrigation system was designed to serve the nursery at the seasonal rates specified in Table 1. Pumping costs were included in the budget by season. As an example, in the 1 gallon Azalea budget, an operation in October represents irrigation for the fall season, with a total of 29 acre inches of water applied over a 60 day period. Cost per acre inch was \$3.92 (Table 2).

Table 1. Water requirements and Calculation of Pumping Hours* in USDA Hardiness Zones 8 and 9, for Eight Ornamental Plant Budgets, 2008.

		Seasons	
	Summer (June 1	Spring (March 1 to May 31), and	Winter (Dec 1
	to Sept 30)	Fall (Oct 1 to Nov 30)	to Feb 28)
Total days in			
the season	120	150	90
Irrigation days	110	120	60
Gallons per			
day per acre	20,000	15,000	7,500
Total gallons	2,200,000	1,800,000	450,000
Pumping rate			
per hour	25,000	25,000	25,000
Hours per acre	88	72	18

^{*} Source: LSU Ornamental Plants Specialist

Table 2. Calculation of Irrigation Costs per Acre Inch in USDA Hardiness Zones 8 and 9, for Eight Ornamental Plant Budgets, 2008*.

Item		Annual costs
Production area irrigation materials and installation	\$4,272.00	_
Depreciation, straight line over 10 years	\$427.22	
Repair and maintenance, 50% annually	\$213.61	
subtotal		\$640.83
Providing water to the field	\$754.00	
Depreciation, straight line method over 20 years	\$37.70	
Repair and maintenance, 10% annually	\$7.54	
subtotal		\$45.23
Well, 6", total drilling costs estimated \$6,000	\$600.00	
Depreciation, straight line method over 10 years	\$20.00	
Repair and maintenance, 10% annually	\$4.00	
subtotal		\$24.00
Pump, 5 hp electric, total cost \$1,240	\$124.00	
Depreciation, straight line method over 20 years	\$6.00	
Repair and maintenance, 10% annually	\$1.20	
Electricity, 5 kilowatts/hour	\$0.40	
subtotal		\$7.44
ANNUAL REPAIR AND MAINTENANCE COSTS		\$226.39
ANNUAL DEPRECIATION		\$491.12
TOTAL IRRIGATION SYSTEM COSTS/ YEAR		\$686.77
IRRIGATION SYSTEM COSTS PER ACRE INCH		
(188 inches)		\$3.92

^{*} Source: University engineers and commercial irrigation firm

The irrigation system and costs used here were specified by an experienced provider of agricultural systems. Other irrigation designs also could be appropriate for a container nursery.

Planting. We assumed that liners were purchased rather than grown on the nursery. Azalea liners in rose pots at a cost of \$0.50 each are an example. In some cases, 2 liners per pot were used, and a gallon-sized liner was used for the 7-gallon container product. We assumed planting would happen in a central facility, not in the field. Transplanting was assisted by a 2 cubic yard capacity mixing machine and a potting machine with operating capacity of 3,000 containers per hour. However, we assumed that growers achieved a rate of 2,250 containers per hour for the one gallon container size. A team of approximately 8 persons served the machine. The production rate was slower for 3 gallon containers, and the 7 gallon container was hand-potted.

Liners were delivered to the nursery and placed in greenhouse or other storage areas, and were moved again to the potting area. After potting, cans were moved to the growing area by a utility vehicle towing 3 wagons, with a capacity of about 400 cans per trip for the 1 gallon size. A round trip was assumed to take 15 minutes. The team at the potting machine loaded cans onto the wagons. A crew in the field, assisted by a conveyor, unloaded the wagons into a 'can-tight' arrangement on the bed. These rates changed with container size, as specified in the budgets.

Weed Control. Weed control was established with a ground cover, and supplemented with complete-cover application of glyphosate before the production cycle started. Regular applications of herbicide were applied to growing plants, either with a cyclone-style spreader or a spreader mounted on a UV. Applications of branded products at the recommended dosage per acre and number of applications per year were intended to control expected problems. Inclusion of these specific products does not imply their endorsement.

Disease and Insect Control. Appropriately labeled fungicides and insecticides, intended to protect against a typical set of pests and diseases, were included in the budget. Inclusion of these specific products does not imply their endorsement.

Fertilization. Controlled-release fertilizers that provided typical nutrient requirements were included at two points. Fertilizer, micronutrients and lime were added to pine bark to create the growing medium. In the field, fertilizer was applied directly to pots on a schedule determined by the expected slow-release specifications of the product. Inclusion of these specific products does not imply their endorsement.

Frost protection. Frost protection is needed for some crops and areas, in some years. Twelve rolls are required to cover an acre. This product is expected to last 3 years, so an expense of 4 rolls each year was included. In the budget, we include a frost protection activity as Frost ON/off to indicate moving the blanket to the field, covering the crop, and removing when appropriate. We include Frost on/OFF to indicate uncovering the crop and moving the blankets back to storage. Weather conditions could make more coverings/uncoverings of the crop necessary.

Harvest. Harvest was in large part a reversal of taking plants to the field. Plants were picked up, placed on the conveyor, and loaded onto the 'wagon train' described above. Each load consisted of about 300 plants and each round trip was about 15 minutes. Plants were stationed to be accessible to the loading dock. We assumed that transportation would be by standard 40 foot trailer unit. Loading would be assisted by a conveyor, and a crew of 9 would load the trailer in 5 hours.

Land. Because this is an enterprise budget, some expense items that are part of general farm operations were not included. Land is an expense that might be based on ownership, lease, or other arrangement. Because there is extensive variation in land value across the

production region, a land cost was not included. A user of this information should determine and include an appropriate cost for land, even if only to highlight the opportunity cost of the resource.

Selling or marketing costs. Selling, delivery expenses, and office and administrative costs were not included. We assume the grower handles sales and general administrative activities outside the production activities specified here.

RESULTS AND CONCLUSIONS

A summary of results by crop and container size is presented in Table 3. Summary tables for each budgeted situation, in terms of prices, input costs and resource use, are presented in tables 4 through 10. Differences were in the pace of work and length of the production period. Lantana and Liriope had lowest cost because production was in a single growing season, and somewhat less intensive use of crop protection products was needed. The specific activities of the production cycle are documented in Appendix Tables 1 through 7, which contain estimated resource use and costs for field operations and present detail about when these operations and input use happen, machinery and performance rates, direct and fixed costs for power units and equipment, and total costs of the activity. When summed, these tables provide an estimate of total cost of the crop. The 1 gallon Azalea's production period was longer – the plant was in the production process for approximately 18 months, so more management activities were required. The 3 gallon container sizes – Azalea, Crape Myrtle and Fig – had production periods similar to the 1 gallon azalea, but multiple liners per container usually were planted to produce a fuller final product. In addition, the activities of planting, moving to production beds, and harvest were slower. These factors led to higher costs. And finally, the 7 gallon Live Oak tree had highest cost among these budgets. This result was from the liner size (1 gallon) and the hand-planting process.

These budgets can assist in risk analysis, and two brief illustrations follow. First, these cost estimates *provide a reference point*. Growers can compare their operational efficiency to this standard. This might be done by hand calculations, or by modifying MSBG's files to reflect the situation on a specific farm then running a budget based on those parameters. If those costs exceed the standard budget, then the entire operation and/or its individual activities might be evaluated to identify where processes and costs might be improved.

As a pricing application, suppose this series of operations, machinery, and inputs for the 1 gallon azalea seems appropriate for a grower, but that grower calculates his cost at \$1.50. If a typical wholesale price for the plant is \$1.60, this grower might think the crop is profitable. However, the \$1.83 cost estimate here suggests further analysis. The grower might be 'living off depreciation' of machinery and other investments, and not generating an income stream that enables replacement. Or, the grower's estimate of labor cost might not account for all labor contributed by grower (family), while this budget charges an opportunity cost to all labor.

Budgets are one component of risk management, and should be used in conjunction with other management tools to handle risk.

Table 1. Summary of Estimated Costs per Acre for Selected Container-grown Ornamental Plants, 2008.

_	Cost by		_		
Crop	Production season	Harvest season	Total cost	Cost /plant (\$)	Cost @ 5% loss (\$/plant)
Azalea, 1 gallon	44,695	7,178	52,264	1.74	1.83
Azalea, 3 gallon	56,569	5,683	62,252	4.61	4.84
Crape Myrtle, 3 gallon	47,717	5,721	53,438	3.96	4.16
Live Oak, 7 gallon	39,918	5,318	45,236	6.46	6.79
Fig, 3 gallon	na	na	41,333	3.06	3.21
Lantana, 1 gallon	na	na	41,793	1.38	1.45
Liriope, 1 gallon	na	na	37,103	1.24	1.30

Table 4A. Estimated resource use and costs for field operations, per acre, 1 gallon Azalea in container, 30,000 plants per acre, production season budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR	FARM
-		dollars		dollars		
DIRECT EXPENSES						
LABOR	_					
Labor	hour	9.60	482.5000	4632.00		
HERBICIDES						
Ronstar	50 lb	90.00	8.0000	720.00		
FUNGICIDES						
Mancozeb	pt	8.66	25.0000	216.50		
thiophanate methyl	OZ	0.60	48.0000	28.80		
FERTILIZERS						
Dolomitic lime	lb	0.14	600.0000	84.00		
Micronutrients	lb	1.33	225.0000	299.25		
Osmocote 14-14-14	50 lb	65.00	18.0000	1170.00		
Osmocote 19-5-11	50 lb	60.00	36.0000	2160.00		
INSECTICIDES						
Horticultural oil	gal.	30.00	5.2500	157.50		
Acephate 75 WP	lb.	7.83	7.0000	54.81		
OTHER						
Pumping Cost/ac/inch	inch	3.92	164.0000	642.88		
PRODUCTION						
Ground Cover Cloth	roll	215.00	12.0000	2580.00		
Tractor per hour	hour	28.14	3.0000	84.42		
Frost prot. blanket	roll	277.00	4.0000	1108.00		
PLANTING						
Pine bark	cu yd	15.00	150.0000	2250.00		
1 gal containers	1000	250.00	30.0000	7500.00		
Liner Azalea	1000	500.00	30.0000	15000.00		
OPERATOR LABOR	1000	300.00	30.000	13000.00		
Tractors	hour	15.30	15.2500	233.34		
Labor	110 011	10.00		200,01		
Implements	hour	9.60	3.0000	28.80		
Tractors	hour	9.60	23.0000	220.80		
Self-Propelled	hour	9.60	95.4000	915.84		
DIESEL FUEL	mour	2.00	23.1000	213.01		
Tractors	gal	2.93	84.2474	246.86		
Self-Propelled	gal	2.93	38.5906	113.07		
ELECTRICITY	gai	2.75	30.3700	113.07		
Self-Propelled	kWh	0.15	238.0000	35.70		
GASOLINE	VMII	0.13	230.0000	33.70		
Self-Propelled	gal	2.33	4.8000	11.20		
REPAIR & MAINTENANCE	gai	4.33	4.0000	11.20		
Implements	aaro	38.89	1.0000	38.89		
Tractors	acre					
	acre	34.27	1.0000			
Self-Propelled	acre	188.33	1.0000	188.33		
INTEREST ON OP. CAP.	acre	3120.29	1.0000	3120.29		
MOMAL DIDDOM SUBSTICES				42075 57		
TOTAL DIRECT EXPENSES				43875.57		
FIXED EXPENSES		112 22	1 0000	110 00		
Implements	acre	113.30	1.0000			
Tractors	acre	103.53	1.0000	103.53		
Self-Propelled	acre	602.75	1.0000	602.75		
TOTAL FIXED EXPENSES				819.58		
TOTAL SPECIFIED EXPENSES				44,695.15		

Table 4B. Estimated resource use and costs for field operations, per acre, 1 gallon Azalea in container, 30,000 plants per acre, harvest season budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	314.0000	3014.40	
HERBICIDES					
Ronstar	50 lb	90.00	2.0000	180.00	
FUNGICIDES					
thiophanate methyl INSECTICIDES	OZ	0.60	32.0000	19.20	
Horticultural oil	gal.	30.00	1.5000	45.00	
Acephate 75 WP OTHER	lb.	7.83	2.0000	15.66	
Pumping Cost/ac/inch PRODUCTION	inch	3.92	62.0000	243.04	
Frost prot. blanket HARVEST	roll	277.00	4.0000	1108.00	
Product Tag OPERATOR LABOR	1000	49.95	30.0000	1498.50	
Tractors Labor	hour	15.30	2.5000	38.26	
Tractors	hour	9.60	38.0000	364.80	
Self-Propelled DIESEL FUEL	hour	9.60	21.2000	203.52	
Tractors	gal	2.93	80.6472	236.32	
Self-Propelled ELECTRICITY	gal	2.93	12.4000	36.33	
Self-Propelled GASOLINE	kWh	0.15	240.0000	36.00	
Self-Propelled REPAIR & MAINTENANCE	gal	2.33	1.8000	4.20	
Implements	acre	24.67	1.0000	24.67	
Tractors	acre	43.20	1.0000	43.20	
Self-Propelled	acre	41.69	1.0000	41.69	
INTEREST ON OP. CAP.	acre	153.02	1.0000	153.02	
TOTAL DIRECT EXPENSES FIXED EXPENSES				7305.82	
Implements	acre	76.25	1.0000	76.25	
Tractors	acre	73.45	1.0000	73.45	·
Self-Propelled	acre	113.35	1.0000	113.35	
TOTAL FIXED EXPENSES				263.05	
TOTAL SPECIFIED EXPENSES				7568.87	

Table 5A. Estimated resource use and costs for field operations, per acre, 3 gallon Azalea in container, 13,500 plants per acre, production season budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	452.0000	4339.20	
HERBICIDES					
Ronstar	50 lb	90.00	8.0000	720.00	
FUNGICIDES					
Mancozeb	pt	8.66	25.0000	216.50	
thiophanate methyl	OZ	0.60	48.0000	28.80	
FERTILIZERS	-				
Dolomitic lime	lb	0.14	772.0000	108.08	
Micronutrients	lb	1.33	290.0000	385.70	
Osmocote 14-14-14	50 lb	65.00	23.0000	1495.00	
Osmocote 19-5-11	50 lb	60.00	36.0000	2160.00	
INSECTICIDES	30 10	00.00	30.000	2100.00	
Horticultural oil	gal.	30.00	5.2500	157.50	
Acephate 75 WP	lb.	7.83	7.0000	54.81	
OTHER	ID.	7.03	7.0000	34.01	
-	d so selo	2 02	164 0000	640.00	
Pumping Cost/ac/inch	THCH	3.92	164.0000	642.88	
PRODUCTION	11	015 00	10 0000	2502 22	
Ground Cover Cloth	roll	215.00	12.0000	2580.00	
Tractor per hour	hour	28.14	3.0000	84.42	
Frost prot. blanket	roll	277.00	44.0000	12188.00	
PLANTING					
Pine bark	cu yd	15.00	193.0000	2895.00	
3 gal containers	1000	650.00	13.5000	8775.00	
Liner Azalea	1000	500.00	27.0000	13500.00	
OPERATOR LABOR					
Tractors	hour	15.30	3.2500	49.74	
Self-Propelled	hour	15.30	8.5000	130.05	
Labor					
Implements	hour	9.60	3.0000	28.80	
Tractors	hour	9.60	44.7000	429.12	
Self-Propelled	hour	9.60	28.9000	277.44	
DIESEL FUEL					
Tractors	gal	2.93	91.7642	268.89	
Self-Propelled	gal	2.93	38.5906	113.07	
ELECTRICITY	gar	2.75	30.3700	113.07	
Self-Propelled	kWh	0.15	190.0000	28.50	
GASOLINE	VAII	0.13	190.0000	20.50	
Self-Propelled	an l	2.33	4.8000	11.20	
	gal	4.33	4.0000	11.20	
REPAIR & MAINTENANCE		20 52	1 0000	20 52	
Implements	acre	39.52	1.0000	39.52	
Tractors	acre	51.00	1.0000	51.00	
Self-Propelled	acre	156.33	1.0000	156.33	
INTEREST ON OP. CAP.	acre	3944.18	1.0000	3944.18	
TOTAL DIRECT EXPENSES				55858.75	
FIXED EXPENSES					
Implements	acre	115.53	1.0000	115.53	
Tractors	acre	87.74	1.0000	87.74	
Self-Propelled	acre	497.67	1.0000	497.67	
TOTAL FIXED EXPENSES				700.94	
TOTAL SPECIFIED EXPENSES				56559.69	
				20000.00	

Table 5B. Estimated resource use and costs for field operations, per acre, 3 gallon Azalea in container, 13,500 plants per acre, harvest season budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	208.0000	1996.80	
HERBICIDES					
Ronstar	50 lb	90.00	2.0000	180.00	
FUNGICIDES					
thiophanate methyl INSECTICIDES	OZ	0.60	32.0000	19.20	
Horticultural oil	gal.	30.00	1.5000	45.00	·
Acephate 75 WP	lb.	7.83	2.0000	15.66	·
OTHER					
Pumping Cost/ac/inch PRODUCTION	inch	3.92	62.0000	243.04	
Frost prot. blanket	roll	277.00	4.0000	1108.00	
HARVEST					
Product Tag	1000	49.95	13.5750	678.07	
OPERATOR LABOR					
Tractors	hour	15.30	2.5000	38.26	
Labor					
Tractors	hour	9.60	37.4000	359.04	
Self-Propelled	hour	9.60	21.2000	203.52	·
DIESEL FUEL					
Tractors	gal	2.93	79.4472	232.80	
Self-Propelled	gal	2.93	12.4000	36.33	
ELECTRICITY					
Self-Propelled	kWh	0.15	240.0000	36.00	
GASOLINE					
Self-Propelled	gal	2.33	1.8000	4.20	
REPAIR & MAINTENANCE					
Implements	acre	24.55	1.0000	24.55	
Tractors	acre	42.54	1.0000	42.54	
Self-Propelled	acre	41.69	1.0000	41.69	
INTEREST ON OP. CAP.	acre	117.09	1.0000	117.09	
TOTAL DIRECT EXPENSES				5421.79	
FIXED EXPENSES					
Implements	acre	75.81	1.0000	75.81	
Tractors	acre	72.47	1.0000	72.47	
Self-Propelled	acre	113.35	1.0000	113.35	
TOTAL FIXED EXPENSES				261.63	
TOTAL SPECIFIED EXPENSES				5683.42	

Table 6A. Estimated resource use and costs for field operations, per acre, 3 gallon Crape Myrtle in container, 13,500 plants per acre, production season budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT_EXPENSES					
LABOR	1.	0 60	606 5000	F000 40	
Labor HERBICIDES	hour	9.60	606.5000	5822.40	
Ronstar	50 lb	90.00	8.0000	720.00	
FUNGICIDES	30 10	20.00	0.0000	720.00	
Mancozeb	pt	8.66	25.0000	216.50	
thiophanate methyl	ΟZ	0.60	48.0000	28.80	-
FERTILIZERS					
Dolomitic lime	lb	0.14	772.0000	108.08	
Micronutrients Osmocote 14-14-14	1b 50 1b	1.33 65.00	290.0000 23.0000	385.70 1495.00	
Osmocote 19-5-11	50 lb	60.00	36.0000	2160.00	
INSECTICIDES	JU 1D	00.00	30.0000	2100.00	
Horticultural oil	gal.	30.00	5.2500	157.50	
Acephate 75 WP	lb.	7.83	7.0000	54.81	
OTHER					
Pumping Cost/ac/inch PRODUCTION	inch	3.92	164.0000	642.88	
Ground Cover Cloth	roll	215.00	12.0000	2580.00	
Tractor per hour	hour	28.14	3.0000	84.42	
Frost prot. blanket Stakes, rebar	roll 100	277.00 50.00	4.0000 27.0000	1108.00 1350.00	
Tie ribbon/string	roll	10.00	30.0000	300.00	
PLANTING	1011	10.00	30.0000	300.00	
Pine bark	cu yd	15.00	193.0000	2895.00	
3 gal containers	1000	650.00	13.5000	8775.00	
Liner Crape Myrtle	1000	500.00	27.0000	13500.00	
OPERATOR LABOR	_				
Tractors	hour	15.30	3.2500	49.74	
Self-Propelled	hour	15.30	8.5000	130.05	
Labor Implements	hour	9.60	3.0000	28.80	
Tractors	hour	9.60	34.7000	333.12	
Self-Propelled	hour	9.60	30.9000	296.64	-
DIESEL FUEL					
Tractors	gal	2.93	76.7642	224.94	
Self-Propelled	gal	2.93	38.5906	113.07	
ELECTRICITY	1	0 15	100 0000	00 50	
Self-Propelled GASOLINE	kWh	0.15	190.0000	28.50	
Self-Propelled	gal	2.33	6.0000	14.00	
REPAIR & MAINTENANCE	gai	2.33	0.0000	14.00	
Implements	acre	38.83	1.0000	38.83	
Tractors	acre	40.02	1.0000	40.02	
Self-Propelled	acre	157.83	1.0000	157.83	
INTEREST ON OP. CAP.	acre	3184.41	1.0000	3184.41	
TOTAL DIRECT EXPENSES				47024.06	
FIXED EXPENSES Implements	aara	113.08	1.0000	113.08	
Tractors	acre acre	71.24	1.0000		
Self-Propelled	acre			508.85	
TOTAL FIXED EXPENSES	2020	200.00		693.17	
TOTAL SPECIFIED EXPENSES				47717.23	

Table 6B. Estimated resource use and costs for field operations, per acre, 3 gallon Crape Myrtle in container, 13,500 plants per acre, harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	208.0000	1996.80	
HERBICIDES					
Ronstar	50 lb	90.00	2.0000	180.00	
FUNGICIDES				10.00	
thiophanate methyl INSECTICIDES	OZ	0.60	32.0000	19.20	
Horticultural oil	gal.	30.00	1.5000	45.00	
Acephate 75 WP	lb.	7.83	2.0000	15.66	
OTHER					
Pumping Cost/ac/inch	inch	3.92	62.0000	243.04	
PRODUCTION					
Frost prot. blanket	roll	277.00	4.0000	1108.00	
HARVEST					
Product Tag	1000	49.95	13.5000	674.33	
OPERATOR LABOR					
Tractors	hour	15.30	2.5000	38.26	
Labor					
Tractors	hour	9.60	37.4000	359.04	
Self-Propelled	hour	9.60	21.2000	203.52	
DIESEL FUEL	_				
Tractors	gal	2.93	79.4472	232.80	
Self-Propelled	gal	2.93	12.4000	36.33	
ELECTRICITY					
Self-Propelled	kWh	0.15	240.0000	36.00	
GASOLINE	_				
Self-Propelled	gal	2.33	1.8000	4.20	
REPAIR & MAINTENANCE		0.4 ==		04	
Implements	acre	24.55	1.0000	24.55	
Tractors	acre	42.54	1.0000	42.54	
Self-Propelled	acre	41.69	1.0000	41.69	
INTEREST ON OP. CAP.	acre	158.99	1.0000	158.99	
TOTAL DIRECT EXPENSES				5459.94	
FIXED EXPENSES		F.F. 0.1	1 0000	EE 01	
Implements	acre	75.81	1.0000	75.81	
Tractors	acre	72.47	1.0000	72.47	
Self-Propelled	acre	113.35	1.0000	113.35	
TOTAL FIXED EXPENSES				261.63	
MOMNI ODEGLETED EXPERIES					
TOTAL SPECIFIED EXPENSES				5721.57	

Table 7A. Estimated resource use and costs for field operations, per acre, 7 gallon Live Oak in container, 7,000 plants per acre, production season budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	233.5000	2241.60	
HERBICIDES					
Ronstar	50 lb	90.00	8.0000	720.00	
FUNGICIDES					
Mancozeb	pt	8.66	12.5000	108.25	
thiophanate methyl	OZ	0.60	16.0000	9.60	
FERTILIZERS					
Dolomitic lime	lb	0.14	800.0000	112.00	
Micronutrients	lb	1.33	300.0000	399.00	
Osmocote 19-5-11	50 lb	60.00	36.0000	2160.00	
Osmocote 14-14-14	50 lb	65.00	30.0000	1950.00	
INSECTICIDES	_				
Horticultural oil	gal.	30.00	2.2500	67.50	
Acephate 75 WP	lb.	7.83	3.0000	23.49	
OTHER					
Pumping Cost/ac/inch	inch	3.92	164.0000	642.88	
PRODUCTION					
Ground Cover Cloth	roll	215.00	12.0000	2580.00	
7 gal containers	1000	700.00	7.0000	4900.00	
Tractor per hour	hour	28.14	12.0000	337.68	
Stakes, rebar	100	50.00	35.0000	1750.00	
PLANTING					
Pine bark	cu yd	15.00	200.0000	3000.00	
Live Oak liner	each	2.00	7000.0000	14000.00	
OPERATOR LABOR					
Tractors	hour	15.30	8.7500	133.88	
Labor	_				
Implements	hour	9.60	1.5000	14.40	
Tractors	hour	9.60	54.5000	523.20	
Self-Propelled	hour	9.60	29.9000	287.04	
DIESEL FUEL	_				
Tractors	gal	2.93	131.5190	385.35	
Self-Propelled	gal	2.93	38.5906	113.07	
ELECTRICITY					
Self-Propelled	kWh	0.15	105.0000	15.75	
GASOLINE	_				
Self-Propelled	gal	2.33	5.4000	12.60	
REPAIR & MAINTENANCE		06.00		0.6	
Implements	acre	26.37	1.0000	26.37	
Tractors	acre	65.01	1.0000	65.01	
Self-Propelled	acre	100.41	1.0000	100.41	
INTEREST ON OP. CAP.	acre	2712.65	1.0000	2712.65	
TOTAL DIRECT EXPENSES				39391.74	
FIXED EXPENSES		01 05	1 0000	01 0-	
Implements	acre	81.97	1.0000	81.97	
Tractors	acre	127.54	1.0000	127.54	
Self-Propelled	acre	317.17	1.0000	317.17	
TOTAL FIXED EXPENSES				526.68	
momal oppositions are a second				20010 40	
TOTAL SPECIFIED EXPENSES				39918.42	

Table 7B. Estimated resource use and costs for field operations, per acre, 7 gallon Live Oak in container, 7,000plants per acre, harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	262.0000	2515.20	
HERBICIDES				100 00	
Ronstar	50 lb	90.00	2.0000	180.00	
FUNGICIDES		0.60	16 0000	0 60	
thiophanate methyl	OZ	0.60	16.0000	9.60	
INSECTICIDES	7	20.00	0 7500	22 50	
Horticultural oil	gal.	30.00	0.7500	22.50	
Acephate 75 WP	lb.	7.83	1.0000	7.83	
OTHER	inah	3.92	62 0000	243.04	
Pumping Cost/ac/inch HARVEST	THCH	3.94	62.0000	243.04	
Product Tag	1000	49.95	8.0000	399.60	
OPERATOR LABOR	1000	49.93	0.0000	399.00	
Tractors	hour	15.30	0.2500	3.83	
Labor	HOUL	13.30	0.2500	3.03	
Tractors	hour	9.60	71.0000	681.60	
Self-Propelled	hour	9.60	21.2000	203.52	
DIESEL FUEL	110 0.1	J. 00			
Tractors	gal	2.93	142.1434	416.49	
Self-Propelled	gal	2.93	12.4000	36.33	
ELECTRICITY	5				
Self-Propelled	kWh	0.15	240.0000	36.00	
GASOLINE					
Self-Propelled	gal	2.33	1.8000	4.20	
REPAIR & MAINTENANCE					
Implements	acre	22.97	1.0000	22.97	
Tractors	acre	78.11	1.0000	78.11	
Self-Propelled	acre	41.69	1.0000	41.69	
INTEREST ON OP. CAP.	acre	108.10	1.0000	108.10	
TOTAL DIRECT EXPENSES				5010.61	
FIXED EXPENSES		EE 0.4	1 0000	55 04	
Implements	acre	75.94	1.0000	75.94	
Tractors	acre	118.21	1.0000	118.21	
Self-Propelled	acre	113.35	1.0000	113.35	
TOTAL EIVED EVDENCEC				307.50	
TOTAL FIXED EXPENSES				307.30	
TOTAL SPECIFIED EXPENSES				5318.11	
TOTAL DEECTETED EVERNORS				2210.11	

Table 8. Estimated resource use and costs for field operations, per acre, 3 gallon Fig in container, 13,500 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	742.5000	7128.00	
HERBICIDES					
Ronstar	50 lb	90.00	3.0000	270.00	
FUNGICIDES Mancozeb	pt	8.66	12.5000	108.25	
thiophanate methyl	ΟZ	0.60	16.0000	9.60	
FERTILIZERS	02	0.00	10.0000	2.00	
Dolomitic lime	lb	0.14	772.0000	108.08	
Micronutrients	lb	1.33	290.0000	385.70	
Osmocote 19-5-11	50 lb	60.00	36.0000	2160.00	
INSECTICIDES					
Horticultural oil	gal.	30.00	2.2500	67.50	
Acephate 75 WP	lb.	7.83	3.0000	23.49	
OTHER					
Pumping Cost/ac/inch	inch	3.92	127.0000	497.84	
PRODUCTION		015 00	10 0000	0500 00	
Ground Cover Cloth	roll	215.00	12.0000	2580.00	
Stakes, rebar	100	50.00	27.0000	1350.00	
PLANTING		15 00	102 0000	2005 00	
Pine bark	cu yd 1000	15.00 650.00	193.0000 13.5000	2895.00 8775.00	
3 gal containers Liner Fig	1000	750.00	13.5000	10125.00	
HARVEST	1000	750.00	13.5000	10125.00	
Product Tag	1000	49.95	13.5000	674.33	
OPERATOR LABOR	1000	10.00	13.3000	071.33	
Tractors	hour	15.30	2.5000	38.25	
Self-Propelled	hour	15.30	8.5000	130.05	
Labor					
Implements	hour	9.60	2.2500	21.60	
Tractors	hour	9.60	48.9000	469.44	
Self-Propelled	hour	9.60	30.2000	289.92	
DIESEL FUEL					
Tractors	gal	2.93	103.7340	303.94	
Self-Propelled	gal	2.93	31.1906	91.39	
ELECTRICITY	11	0 15	210 0000	46 50	
Self-Propelled	kWh	0.15	310.0000	46.50	
GASOLINE	a.a. 1	2 22	4.2000	0 00	
Self-Propelled REPAIR & MAINTENANCE	gal	2.33	4.2000	9.80	
Implements	acre	16.13	1.0000	16.13	
Tractors	acre	55.16	1.0000	55.16	
Self-Propelled	acre	156.17	1.0000	156.17	
INTEREST ON OP. CAP.	acre	1914.37	1.0000	1914.37	
111111111111111111111111111111111111111	0.010		1.0000		
TOTAL DIRECT EXPENSES FIXED EXPENSES				40700.52	
Implements	acre	50.43	1.0000	50.43	
Tractors	acre	91.43	1.0000	91.43	
Self-Propelled	acre	490.77	1.0000	490.77	
-					
TOTAL FIXED EXPENSES				632.63	
TOTAL SPECIFIED EXPENSES				41333.15	

Table 9. Estimated resource use and costs for field operations, per acre, 1 gallon Lantana in container, 30,000 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	685.5000	6580.80	
HERBICIDES					
Ronstar	50 lb	90.00	1.5000	135.00	
FUNGICIDES					
Kocide DF	lb	5.20	6.2500	32.50	
thiophanate methyl	OZ	0.60	16.0000	9.60	
FERTILIZERS					
Dolomitic lime	lb	0.14	600.0000	84.00	
Micronutrients	lb	1.33	225.0000	299.25	
Osmocote 14-14-14	50 lb	65.00	30.0000	1950.00	
INSECTICIDES					
Horticultural oil	gal.	30.00	1.5000	45.00	
Acephate 75 WP	lb.	7.83	2.0000	15.66	
OTHER					
Pumping Cost/ac/inch	inch	3.92	39.0000	152.88	
PRODUCTION					
Ground Cover Cloth	roll	215.00	12.0000	2580.00	
PLANTING					
Pine bark	cu yd	15.00	150.0000	2250.00	
1 gal containers	1000	250.00	30.0000	7500.00	
Liner Lantana	1000	500.00	30.0000	15000.00	
HARVEST					
Product Tag	1000	49.95	30.0000	1498.50	
OPERATOR LABOR					
Tractors	hour	15.30	8.5000	130.05	
Labor					
Implements	hour	9.60	1.5000	14.40	
Tractors	hour	9.60	40.5000	388.80	
Self-Propelled	hour	9.60	84.9000	815.04	
DIESEL FUEL					
Tractors	gal	2.93	86.9340	254.72	
Self-Propelled	gal	2.93	13.5906	39.82	
ELECTRICITY	30.2	2.75	20.000	37.02	
Self-Propelled	kWh	0.15	358.0000	53.70	
GASOLINE		0.15		001,0	
Tractors	gal	2.33	3.6000	8.38	
Self-Propelled	gal	2.33	2.4000	5.60	
REPAIR & MAINTENANCE	941	2.33	2.1000	3.00	
Implements	acre	15.05	1.0000	15.05	
Tractors	acre	51.79	1.0000	51.79	
Self-Propelled	acre	161.17	1.0000	161.17	
INTEREST ON OP. CAP.	acre	1042.49	1.0000	1042.49	
	0.020	2012117			
TOTAL DIRECT EXPENSES				41114.20	
FIXED EXPENSES					-
Implements	acre	47.46	1.0000	47.46	
Tractors	acre	116.00	1.0000	116.00	
Self-Propelled	acre	514.89	1.0000	514.89	
SCII IIOPCIICA	3010	J = 1.0 <i>J</i>	1.0000		
TOTAL FIXED EXPENSES				678.35	
TOTAL SPECIFIED EXPENSES				41792.55	

Table 10. Estimated resource use and costs for field operations, per acre, 1 gallon Liriope in container, 30,000 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
LABOR					
Labor	hour	9.60	504.5000	4843.20	
HERBICIDES					
Ronstar	50 lb	90.00	3.0000	270.00	
FUNGICIDES					
Mancozeb	pt	8.66	12.5000	108.25	
thiophanate methyl FERTILIZERS	OZ	0.60	16.0000	9.60	
Dolomitic lime	lb	0.14	600.0000	84.00	
Micronutrients	lb	1.33	225.0000	299.25	
Osmocote 14-14-14	50 lb	65.00	30.0000	1950.00	
INSECTICIDES					
Horticultural oil	gal.	30.00	2.2500	67.50	
Acephate 75 WP	lb.	7.83	3.0000	23.49	
OTHER					
Pumping Cost/ac/inch PRODUCTION	inch	3.92	127.0000	497.84	
Ground Cover Cloth	roll	215.00	12.0000	2580.00	
PLANTING	,	15.00	150 0000	0050 00	
Pine bark	cu yd	15.00	150.0000	2250.00	
1 gal containers	1000	250.00	30.0000	7500.00	
Liner Liriope HARVEST	1000	350.00	30.0000	10500.00	
	1000	40 OF	30.0000	1498.50	
Product Tag OPERATOR LABOR	1000	49.95	30.0000	1490.50	
Tractors	hour	15.30	2.5000	38.25	
Labor	mour	13.30	2.3000	30.23	
Implements	hour	9.60	2.2500	21.60	
Tractors	hour	9.60	49.5000	475.20	
Self-Propelled	hour	9.60	94.7000	909.12	
DIESEL FUEL	110 41	J.00	31.7000	303.12	
Tractors	gal	2.93	104.9340	307.46	
Self-Propelled	gal	2.93	31.1906	91.39	
ELECTRICITY	J				
Self-Propelled	kWh	0.15	358.0000	53.70	
GASOLINE					
Self-Propelled	gal	2.33	3.0000	7.00	
REPAIR & MAINTENANCE	_				
Implements	acre	16.25	1.0000	16.25	
Tractors	acre	55.82	1.0000	55.82	
Self-Propelled	acre	186.67	1.0000	186.67	
INTEREST ON OP. CAP.	acre	1731.78	1.0000	1731.78	
TOTAL DIRECT EXPENSES				36375.88	
FIXED EXPENSES				20212.00	
Implements	acre	50.87	1.0000	50.87	
Tractors		92.41	1.0000	92.41	
Self-Propelled	acre acre	584.67	1.0000	584.67	·
bell flopefied	acr c	301.07	1.0000		
TOTAL FIXED EXPENSES				727.95	
TOTAL SPECIFIED EXPENSES				37103.83	
				,	

Literature Cited:

- Badenhop, M. 1979. Factors Affecting Southern Regional Production Advantages for Kurume Azaleas. Southern Regional Cooperative Series Bulletin 241, Tn. Agricultural Experiment Station, Knoxville, TN.
- Badenhop, M. and T. Phillips. 1983. Costs of Producing and Marketing Container-Grown Woody Landscape Plants: Pfitzer Juniper. Southern Regional Cooperative Series Bulletin 299, Tenn. Agricultural Experiment Station, Knoxville.
- Hall, C., A. Hodges and J. Haydu. 2005. Economic Impact of the Green Industry in the United States. University of Tennessee Agricultural Extension Service, Knoxville. www.utextension.utk.edu/hbin/greenimpact.html.
- Hinson, R., A. Owings, J. Black and R. Harkess. 2008. Enterprise Budgets for Ornamental Crops in Plant Hardiness Zones 8 and 9. Working Paper 2008-14, Dept. of Agricultural Economics and Agribusiness, LSU AgCenter, Baton Rouge.
- Perry, F., T. Phillips, L. Wilson and J. Adrian. 1990. Establishment and Operation of 20 and 40-Acre Container Nurseries in Climatic Zone 9. Southern Regional Cooperative Series Bulletin 341, Alabama Agricultural Experiment Station, Auburn, AL.
- Salassi, M. and M. Deliberto. 2008. Projected Costs And Returns Rice, Louisiana, Soybeans, Wheat, Sorghum, Southwest Louisiana, 2008. LSU AgCenter, Department of Agricultural Economics and Agribusiness, A.E.A. Information Series No. 252, 2008.
- Taylor, R., H. Kneen, E. Smith, D. Hahn and S. Uchida. 1986. Costs of Establishing and Operating Field Nurseries by Size of Firm and Species of Plant in USDA Hardiness Zones 5 and 6. Ohio Agricultural Research and Development Center, Research Bulletin 1177, Wooster.

Appendix Tables

Appendix Table 1. Estimated resource use and costs for field operations, per acre, 1 gallon Azalea in container, 30,000 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

		and narvest				POWER UN		EQUIPME			LABOR	OPERATING		ייינומואד ש	
OPERATION/	SIZE/	POWER UNIT		TIMES											TOTAL
OPERATING INPUT	UNIT	SIZE	RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	COST
Prep. container beds				1.00	Oct		dol	lars			dollars			dollars	
Blade Labor	6' hour	2WD50	2.500			20.33	10.75	4.40	11.31	2.50	38.25	16.0000	0.60	153.60	85.04 153.60
Ground Cover Cloth												12.0000			2580.00
Serve mixer bin Tractor w/loader	35hp		1.500	1.00	Oct	19.00	3.04			1.50	14.40				36.44
Prepare media	_			1.00	Oct					1.50	11.10				
Media Mixer Pine bark	3 hp cu yd		15.000			46.75	131.36					150.0000	15.00	2250.00	178.11 2250.00
Dolomitic lime	lb											600.0000	0.14	84.00	84.00
Micronutrients Osmocote 14-14-14	1b 50 1b											225.0000 18.0000		299.25 1170.00	299.25 1170.00
Labor	hour			1 00	0 1							13.5000		129.60	129.60
Move liners Wagons (3) liners	5'x12'	35 hp	2.500	1.00	OCT	17.40	4.12	0.52	1.84	2.50	24.00				47.88
Labor Plant liners	hour			1.00	Oat							15.0000	9.60	144.00	144.00
Potting machine 10	hp 2250/hr		13.300	1.00	OCL	108.62	291.17			66.50	638.40				1038.19
1 gal containers Labor	1000 hour											30.0000 70.0000	250.00 9.60	7500.00 672.00	7500.00 672.00
Tractor per hour	hour											3.0000			84.42
Liner Azalea Move cans	1000			1.00	Oct							30.0000	500.001	15000.00	15000.00
Wagons (3) 1 gal ca		35 hp	18.500	1.00	000	128.72	30.52	3.83	13.62	18.50	177.60				354.29
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	120.0000	9.60	1152.00	56.14 1152.00
Irrigate 10/1-11/30				29.00	Oct										
PU truck for irrig Pumping Cost/ac/in	1/2 ton ch inch		0.100			25.15	21.15			2.90	27.84	29.0000	3.92	113.68	74.14 113.68
Spread herbicide				1.00	Nov	0.45									
Utility vehicle Ronstar	20 hp 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00
Labor	hour				_							1.0000	9.60	9.60	9.60
Frost protect ON/off Wagon, 4 wheel	5' x 12'	35 hp	1.000	1.00	Dec	5.50	1.65	0.07	0.25	1.00	9.60				17.07
Frost prot. blanke	t roll	-												1108.00	1108.00
Labor Irrigate 12/1 - 2/28	hour			18.00	Jan							10.0000	9.60	96.00	96.00
PU truck for irrig			0.100			15.61	13.13			1.80	17.28	10 0000	2 02	70 56	46.02
Pumping Cost/ac/in Spread herbicide	ch inch			1.00	Feb							18.0000	3.92	70.56	70.56
Utility vehicle	20 hp 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00
Ronstar Labor	hour											1.0000	90.00	9.60	9.60
Hand weeding Utility vehicle	20 hp		1.000	1.00	Feb	2.15	5.59			1.00	9.60				17.34
Labor	hour		1.000			2.15	5.59			1.00	9.00	4.0000	9.60	38.40	38.40
Frost protect on/OFF Wagon, 4 wheel	5' x 12'	35 hp	1.000	1.00	Feb	5.50	1.65	0.07	0.25	1.00	9.60				17.07
Labor	hour	33 HP	1.000			3.30	1.05	0.07	0.23	1.00	3.00	8.0000	9.60	76.80	76.80
Topdress fertilizer Utility vehicle	20 hp		1.000	1.00	Mar	2.15	5.59			1.00	9.60				17.34
Osmocote 19-5-11	50 lb		1.000			2.13	3.35			1.00	3.00	36.0000		2160.00	2160.00
Labor Apply pesticides	hour			1.00	Mar							25.0000	9.60	240.00	240.00
Sprayer on util vel		2WD50	3.000			24.39	12.90	1.20	3.41	3.75	53.10				95.00
Horticultural oil Acephate 75 WP	gal. lb.											0.7500 1.0000	30.00 7.83	22.50 7.83	22.50 7.83
Mancozeb	pt			1 00								6.2500	8.66	54.13	54.13
Apply pesticides Sprayer on util vel	h 100 gal	2WD50	3.000	1.00	Apr	24.39	12.90	1.20	3.41	3.75	53.10				95.00
Horticultural oil Acephate 75 WP	gal. lb.											0.7500 1.0000	30.00 7.83	22.50 7.83	22.50 7.83
thiophanate methyl												16.0000	0.60	9.60	9.60
Irrigate 3/1 - 5/31 PU truck for irrig	1/2 ton		0.100	29.00	Apr	25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/in			0.100			25.15	21.15			2.90	27.04	29.0000	3.92	113.68	113.68
Apply pesticides Sprayer on util vel	h 100 gal	2WD50	3.000	1.00	May	24.39	12.90	1.20	3.41	3.75	53.10				95.00
Acephate 75 WP	lb.	ZWD30	3.000			24.33	12.90	1.20	3.41	3.75	33.10	1.0000	7.83	7.83	7.83
Horticultural oil Mancozeb	gal. pt											0.7500 6.2500	30.00 8.66	22.50 54.13	22.50 54.13
Spread herbicide	_			1.00	May							0.2500	0.00	31.13	
Utility vehicle Ronstar	20 hp 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00
Labor	hour											1.0000	9.60	9.60	9.60
Hand weeding Utility vehicle	20 hp		1.000	1.00	May	2.15	5.59			1.00	9.60				17.34
Labor	hour		1.000			2.13	5.59			1.00	2.00	10.0000	9.60	96.00	96.00
Apply pesticides Sprayer on util vel	h 100 gal	2WD50	3.000	1.00	Jun	24.39	12.90	1.20	3.41	3.75	53.10				95.00
Acephate 75 WP	lb.	**										1.0000	7.83	7.83	7.83
Horticultural oil thiophanate methyl	gal. oz											0.7500 16.0000	30.00	22.50 9.60	22.50 9.60
Prune			1 000	1.00	Jul	0 15	F 50			1 00	0.50				
Utility vehicle Labor	20 hp hour		1.000			2.15	5.59			1.00	9.60	2.0000	9.60	19.20	17.34 19.20

One gallon Azalea in container, continued.

		POWER UNIT				POWER UN	IIT COST	EQUIPME	ENT COST	ALLO	LABOR	OPERATING	/DURABI	LE INPUT	
OPERATION/ OPERATING INPUT	SIZE/ UNIT	SIZE	RATE	TIMES	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	TOTAL
							dol	lars			dollars	-		dollars	
Apply pesticides				1.00	Jul										
Sprayer airblast to Horticultural oil	w 300 gal gal.	2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500	30.00	22.50	39.48 22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
Mancozeb	pt											6.2500	8.66	54.13	54.13
Space cans on beds Labor	hour			1.00	Jul							100 0000	0 60	1720 00	1728.00
Irrigate 6/1 - 9/30	nour			88.00	Jul							180.0000	9.00	1728.00	1/20.00
PU truck for irrig	1/2 ton		0.100			76.32	64.19			8.80	84.48				224.99
Pumping Cost/ac/inc	h inch											88.0000	3.92	344.96	344.96
Spread herbicide Utility vehicle	20 hp		1.000	1.00	Aug	2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb		1.000			2.13	3.39			1.00	9.00	2.0000	90.00	180.00	180.00
Labor	hour											2.0000	9.60	19.20	19.20
Apply pesticides		0 5.0		1.00	Aug										
Sprayer airblast to Horticultural oil	w 300 gal gal.	2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500	30.00	22.50	39.48 22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
thiophanate methyl	oz											16.0000	0.60	9.60	9.60
Hand weeding	_			1.00	Aug										
Labor Apply pesticides	hour			1.00	Sep							4.0000	9.60	38.40	38.40
Sprayer airblast to	w 300 gal	2WD50	0.250	1.00	sep	2.04	1.08	8.40	24.13	0.25	3.83				39.48
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
Mancozeb	pt			1.00	Oct							6.2500	8.66	54.13	54.13
Move to holding area Wagons (3) 1 gal ca:	n 5'X12'	35 hp	18.500	1.00	UCL	128.72	30.52	3.83	13.62	18.50	177.60				354.29
Conveyor	16"		30.000			14.50	12.84			3.00	28.80				56.14
Labor	hour											45.0000	9.60		432.00
Product Tag Load onto truck	1000			1.00	Oct							7.5000	49.95	374.63	374.63
Conveyor	16"		30.000	1.00	OCL	14.50	12.84			3.00	28.80				56.14
Labor	hour											45.0000	9.60	432.00	432.00
Apply pesticides				1.00	Oct										
Sprayer airblast to		2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500	30.00	22.50	39.48 22.50
Horticultural oil Acephate 75 WP	gal. lb.											1.0000	7.83	7.83	7.83
thiophanate methyl	oz											16.0000	0.60	9.60	9.60
Irrigate 10/1-11/30				29.00	Oct										
PU truck for irrig	1/2 ton		0.100			25.15	21.15			2.90	27.84	20 0000	2 02	112 60	74.14
Pumping Cost/ac/inc Hand weeding	n inch			1.00	Nov							29.0000	3.92	113.68	113.68
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Labor	hour											4.0000	9.60	38.40	38.40
Spread herbicide Utility vehicle	20 hp		1.000	1.00	Nov	2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb		1.000			2.13	3.39			1.00	9.00	2.0000	90.00	180.00	180.00
Labor	hour											1.0000	9.60	9.60	9.60
Apply pesticides				1.00	Dec										
Sprayer airblast to Horticultural oil	w 300 gal gal.	2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500	30.00	22.50	39.48 22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
thiophanate methyl	oz											16.0000	0.60	9.60	9.60
Frost protect ON/off	F. 10.	0	1 000	1.00	Dec	6.05	4 20	0 07	0.05	1 00	15 20				06.15
Wagon, 4 wheel Frost prot. blanket	5' x 12' roll	2WD50	1.000			6.25	4.30	0.07	0.25	1.00	15.30	4 0000	277 00	1108.00	26.17 1108.00
Labor	hour											10.0000	9.60	96.00	96.00
Irrigate 12/1 - 2/28				18.00	Jan										
PU truck for irrig	1/2 ton		0.100			15.61	13.13			1.80	17.28	10 0000	2 00	E0 E6	46.02
Pumping Cost/ac/inc Hand weeding	n incn			1.00	Feb							18.0000	3.92	70.56	70.56
Utility vehicle	20 hp		1.000	1.00	I CD	2.15	5.59			1.00	9.60				17.34
Labor	hour											4.0000	9.60	38.40	38.40
Frost protect on/OFF	F. 40.	0 5.0		1.00	Feb						45.00				06.45
Wagon, 4 wheel Labor	5' x 12' hour	2WD50	1.000			6.25	4.30	0.07	0.25	1.00	15.30	8.0000	9.60	76.80	26.17 76.80
Move to holding area	11041			1.00	Mar							0.0000	3.00	70.00	70.00
Wagons (3) 1 gal ca		35 hp	18.500			128.72	30.52	3.83	13.62		177.60				354.29
Conveyor	16"		30.000			14.50	12.84			3.00	28.80	60 0000	0.60	F.T.C. 0.0	56.14
Labor Product Tag	hour 1000											60.0000 22.5000		576.00 1123.88	576.00 1123.88
Load onto truck	1000			1.00	Mar							22.5000	17.75	1123.00	1123.00
Conveyor	16"		30.000			14.50	12.84			3.00	28.80				56.14
Labor	hour			15 00	14							135.0000	9.60	1296.00	1296.00
Irrigate 3/1 - 5/31 PU truck for irrig	1/2 ton		0.100	15.00	Mar	13.01	10.94			1.50	14.40				38.35
Pumping Cost/ac/inc			0.100			13.01	-0.71			1.50	11.10	15.0000	3.92	58.80	58.80
Cleanup of beds			_	1.00	Apr										
Wagon, 4 wheel	5' x 12'	35 hp	1.000			5.50	1.65	0.07	0.25	1.00	9.60	2 0000	0.00	10 00	17.07
Labor	hour											2.0000	9.60	19.20	19.20
TOTALS						1027.17	893.08	63.56	189.55	198.35	2005.36		4	44811.81	48990.71
INTEREST ON OPERATING	CAPITAL														3273.31
TOTAL SPECIFIED COST															52264.02

Appendix Table 2. Estimated resource use and costs for field operations, per acre, 3 gallon Azalea in container, 13,500 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

OPERATION/	SIZE/	POWER UNIT	PERF	TIMES			NIT COST	EQUIPME:			LABOR	OPERATING			TOTAL
OPERATING INPUT	UNIT	SIZE	RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	COST
							dol	llars			dollars			dollars	
Prep. container beds				1.00	Oct										
Blade	6 '	2WD50	2.500			20.33	10.75	4.40	11.31	2.50	38.25				85.04
Labor	hour											16.0000 12.0000		153.60	153.60
Ground Cover Cloth Serve mixer bin	roll			1.00	Oct							12.0000	215.00	2580.00	2580.00
Tractor w/loader	35hp		1.500	1.00	000	19.00	3.04			1.50	14.40				36.44
Prepare media				1.00	Oct										
Media Mixer	3 hp		15.000			46.75	131.36					102 0000	15.00	0005 00	178.11
Pine bark Dolomitic lime	cu yd lb											193.0000 772.0000		108.08	2895.00 108.08
Micronutrients	lb											290.0000	1.33		385.70
Osmocote 14-14-14	50 lb											23.0000	65.00	1495.00	1495.00
Labor	hour											13.5000	9.60	129.60	129.60
Move liners Wagons (3) liners	5'x12'	35 hp	2.500	1.00	Oct	17.40	4.12	0.52	1.84	2.50	24.00				47.88
Labor	hour	33 Hp	2.500			17.10	1.12	0.52	1.01	2.50	21.00	13.0000	9.60	124.80	124.80
Plant liners				1.00	Oct										
Potting machine 10h			8.500			69.42	186.09			8.50	130.05				385.56
3 gal containers Labor	1000 hour											13.5000		480.00	8775.00 480.00
Tractor per hour	hour											3.0000		84.42	84.42
Liner Azalea	1000													13500.00	13500.00
Move cans				1.00	Oct										
Wagons (3) 3 gal ca		35 hp	18.200			126.63	30.03	3.77	13.40		174.72				348.55
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	90.0000	9.60	964 00	56.14 864.00
Irrigate 10/1-11/30	nour			29.00	Oct							30.0000	9.00	864.00	864.00
PU truck for irrig	1/2 ton		0.100			25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/inc	h inch											29.0000	3.92	113.68	113.68
Spread herbicide	0.0 1		1 000	1.00	Nov	0.15	F F0			1 00	0.60				15.24
Utility vehicle Ronstar	20 hp 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00
Labor	hour											1.0000	9.60	9.60	9.60
Irrigate 12/1 - 2/28				18.00	Jan										
PU truck for irrig	1/2 ton		0.100			15.61	13.13			1.80	17.28				46.02
Pumping Cost/ac/inc	h inch			1 00	I							18.0000	3.92	70.56	70.56
Spread herbicide Utility vehicle	20 hp		1.000	1.00	Feb	2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb		1.000			2.13	3.33			1.00	9.00	2.0000	90.00	180.00	180.00
Labor	hour											1.0000	9.60	9.60	9.60
Hand weeding				1.00	Feb										
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60	2 0000	0.60	00.00	17.34
Labor Topdress fertilizer	hour			1.00	Mar							3.0000	9.60	28.80	28.80
Utility vehicle	20 hp		1.000	1.00	ricel	2.15	5.59			1.00	9.60				17.34
Osmocote 19-5-11	50 lb											36.0000	60.00	2160.00	2160.00
Labor	hour											15.0000	9.60	144.00	144.00
Apply pesticides	100 1	25	2 000	1.00	Mar	20 07	4 05	1 00	2 41	2 75	26.00				CC 12
Sprayer on util veh Horticultural oil	gal.	35 hp	3.000			20.87	4.95	1.20	3.41	3.75	36.00	0.7500	30.00	22.50	66.43 22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
Mancozeb	pt											6.2500	8.66	54.13	54.13
Apply pesticides				1.00	Apr										
Sprayer on util veh		35 hp	3.000			20.87	4.95	1.20	3.41	3.75	36.00	0.7500	20 00	22.50	66.43 22.50
Horticultural oil Acephate 75 WP	gal. lb.											1.0000	30.00 7.83	7.83	7.83
thiophanate methyl	oz											16.0000	0.60	9.60	9.60
Irrigate 3/1 - 5/31				29.00	Apr										
PU truck for irrig			0.100			25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/inc	h inch			1 00	Morr							29.0000	3.92	113.68	113.68
Apply pesticides Sprayer on util veh	100 gal	35 hp	3.000	1.00	мау	20.87	4.95	1.20	3.41	3.75	36.00				66.43
Acephate 75 WP	lb.	33 Hp	3.000			20.07	1.75	1.20	5.11	3.75	50.00	1.0000	7.83	7.83	7.83
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Mancozeb	pt											6.2500	8.66	54.13	54.13
Spread herbicide Utility vehicle	20 hp		1.000	1.00	May	2.15	5.59			1.00	9.60				17.34
Ronstar	20 np 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	180.00
Labor	hour											1.0000	9.60	9.60	9.60
Hand weeding				1.00	May										
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60	4 0000	0.60	20 40	17.34
Labor Apply pesticides	hour			1.00	Jun							4.0000	9.60	38.40	38.40
Sprayer on util veh	100 gal	35 hp	3.000	1.00	oun	20.87	4.95	1.20	3.41	3.75	36.00				66.43
Acephate 75 WP	lb.	<u>-</u> E										1.0000	7.83	7.83	7.83
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
thiophanate methyl	OZ			1 00	T. 3							16.0000	0.60	9.60	9.60
Prune Utility vehicle	20 hp		1.000	1.00	Jul	2.15	5.59			1.00	9.60				17.34
Labor	hour		1.000			2.13	5.59			1.00	5.00	1.5000	9.60	14.40	14.40

	**************************************	DOMED TIME	nppp	ттмго		POWER UN	IIT COST	EQUIPME	NT COST	ALLOC	LABOR	OPERATING			mom -
OPERATION/ S OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	RATE	TIMES	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT		COST	TOTAL
							dol	lars			dollars	-		dollars	
Apply pesticides				1.00	Jul										
Sprayer airblast tow		2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83				39.48
Horticultural oil Acephate 75 WP	gal. lb.											0.7500 1.0000	30.00 7.83	22.50 7.83	22.50 7.83
Mancozeb	pt.											6.2500	8.66	54.13	54.13
Space cans on beds Labor	hour			1.00	Jul							120.0000	0.60	1152.00	1152.00
Irrigate 6/1 - 9/30	nour			88.00	Jul							120.0000	9.60	1152.00	1152.00
PU truck for irrig	1/2 ton		0.100			76.32	64.19			8.80	84.48				224.99
Pumping Cost/ac/inch Spread herbicide	inch			1.00	Aug							88.0000	3.92	344.96	344.96
Utility vehicle	20 hp		1.000	1.00	Aug	2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb											2.0000	90.00	180.00	180.00
Labor Apply pesticides	hour			1.00	Aug							1.0000	9.60	9.60	9.60
Sprayer airblast tow		2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83				39.48
Horticultural oil Acephate 75 WP	gal. lb.											0.7500 1.0000	30.00 7.83	22.50 7.83	22.50 7.83
thiophanate methyl	OZ											16.0000	0.60	9.60	9.60
Hand weeding				1.00	Aug										
Labor Apply pesticides	hour			1.00	Sep							4.0000	9.60	38.40	38.40
Sprayer airblast tow		2WD50	0.250	1.00	оср	2.04	1.08	8.40	24.13	0.25	3.83				39.48
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Acephate 75 WP Mancozeb	lb. pt											1.0000 6.2500	7.83	7.83 54.13	7.83 54.13
Move to holding area	_			1.00	Oct							0.2300	0.00	31.13	
Wagons (3) 3 gal car		35 hp	18.200			126.63	30.03	3.77	13.40		174.72				348.55
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	15.0000	9.60	144.00	56.14 144.00
Product Tag	1000											3.3750	49.95	168.58	168.58
Load onto truck	16"		30.000	1.00	Oct	14.50	12.84			3.00	28.80				56.14
Conveyor Labor	hour		30.000			14.50	12.84			3.00	20.00	30.0000	9.60	288.00	288.00
Apply pesticides				1.00	Oct										
Sprayer airblast tow Horticultural oil	300 gal gal.	2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500	30.00	22.50	39.48 22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
thiophanate methyl	oz			00.00	0							16.0000	0.60	9.60	9.60
Irrigate 10/1-11/30 PU truck for irrig	1/2 ton		0.100	29.00	0ct	25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/inch												29.0000	3.92	113.68	113.68
Hand weeding Utility vehicle	20 hp		1.000	1.00	Nov	2.15	5.59			1.00	9.60				17.34
Labor	hour		1.000			2.13	3.39			1.00	9.00	4.0000	9.60	38.40	38.40
Spread herbicide				1.00	Nov										
Utility vehicle Ronstar	20 hp 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00
Labor	hour											1.0000	9.60	9.60	9.60
Apply pesticides Sprayer airblast tow	700 mal	2WD50	0.250	1.00	Dec	2.04	1.08	8.40	24.13	0.25	3.83				39.48
Horticultural oil	gal.	ZWD30	0.230			2.04	1.00	0.40	24.13	0.23	3.03	0.7500	30.00	22.50	22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
thiophanate methyl Frost protect ON/off	OZ			1.00	Dec							16.0000	0.60	9.60	9.60
Wagon, 4 wheel	5' x 12'	2WD50	1.000			6.25	4.30	0.07	0.25	1.00	15.30				26.17
Frost prot. blanket	roll											4.0000		1108.00	1108.00 96.00
Labor Irrigate 12/1 - 2/28	hour			18.00	Jan							10.0000	9.60	96.00	96.00
PU truck for irrig	1/2 ton		0.100			15.61	13.13			1.80	17.28				46.02
Pumping Cost/ac/inch Hand weeding	inch			1.00	Feh							18.0000	3.92	70.56	70.56
Utility vehicle	20 hp		1.000	1.00	reb	2.15	5.59			1.00	9.60				17.34
Labor	hour											3.0000	9.60	28.80	28.80
Frost protect on/OFF Wagon, 4 wheel	5' x 12'	2WD50	1.000	1.00	Feb	6.25	4.30	0.07	0.25	1.00	15.30				26.17
Labor	hour	211230	1.000			0.23	1.50	0.07	0.25	1.00	13.30	8.0000	9.60	76.80	76.80
Move to holding area	F13/101	25 1	18.200	1.00	Mar	106 62	20.02	3.77	12 40	10 00	174.72				348.55
Wagons (3) 3 gal car Conveyor	16"	35 hp	30.000			126.63 14.50	30.03 12.84	3.//	13.40	3.00	28.80				56.14
Labor	hour											45.0000	9.60		432.00
Product Tag Load onto truck	1000			1.00	Moss							10.2000	49.95	509.49	509.49
Conveyor	16"		30.000	1.00	Ind.L	14.50	12.84			3.00	28.80				56.14
Labor	hour											90.0000	9.60	864.00	864.00
Irrigate 3/1 - 5/31 PU truck for irrig	1/2 ton		0.100	15.00	Mar	13.01	10.94			1.50	14.40				38.35
Pumping Cost/ac/inch							-2.21					15.0000	3.92	58.80	58.80
Cleanup of beds	E1 10:	2E b	1 000	1.00	Apr	E	1 (5	0.05	0.25	1 00	0.00				17 07
Wagon, 4 wheel Labor	5' x 12' hour	on up	1.000			5.50	1.65	0.07	0.25	1.00	9.60	2.0000	9.60	19.20	17.07 19.20
TOTALS INTEREST ON OPERATING	СУБТТУТ					1022.55	771.23	64.07	191.34	149.45	1515.97				58181.84 4061.27
TOTAL SPECIFIED COST	CULTIN														62243.11

Appendix Table 3. Estimated resource use and costs for field operations, per acre, 3 gallon Crape Myrtle in container, production and harvest budget, 13,500 plants per acre, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

OPERATION/	CT7P/	DOMED INTO	DEDE	TIME		POWER UN	IT COST	EQUIPME	NT COST	ALLOC	LABOR	OPERATING	J/DURABI	E INPUT	TOTAL
OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	RATE	TIMES	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	COST
							dol	llars			dollars			-dollars	
Prep. container beds Blade Labor Ground Cover Cloth	6' hour	2WD50	2.500	1.00		20.33	10.75	4.40	11.31	2.50	38.25	16.0000 12.0000		153.60 2580.00	85.04 153.60 2580.00
Serve mixer bin Tractor w/loader	35hp		1.500	1.00	Oct	19.00	3.04			1.50	14.40				36.44
Prepare media Media Mixer Pine bark Dolomitic lime Micronutrients Osmocote 14-14-14 Labor Move liners	3 hp cu yd 1b 1b 50 1b hour		15.000	1.00		46.75	131.36					193.0000 772.0000 290.0000 23.0000 13.5000	0.14 1.33 65.00	2895.00 108.08 385.70 1495.00 129.60	178.11 2895.00 108.08 385.70 1495.00 129.60
Wagons (3) liners Labor Plant liners	5'x12' hour	35 hp	2.500	1.00		17.40	4.12	0.52	1.84	2.50	24.00	13.0000	9.60	124.80	47.88 124.80
Potting machine 10 3 gal containers Labor Tractor per hour Liner Crape Myrtle Move cans	1000 hour hour		8.500	1.00		69.42	186.09			8.50	130.05	13.5000 50.0000 3.0000 27.0000	9.60 28.14	8775.00 480.00 84.42	385.56 8775.00 480.00 84.42 13500.00
Wagons (3) 3 gal c Conveyor Labor	an 5'X12' 16" hour	35 hp	18.200 30.000			126.63 14.50	30.03 12.84	3.77	13.40	18.20 3.00	174.72 28.80	90.0000	9.60	864.00	348.55 56.14 864.00
Irrigate 10/1-11/30 PU truck for irrig Pumping Cost/ac/in			0.100	29.00	Oct	25.15	21.15			2.90	27.84	29.0000	3.92	113.68	74.14 113.68
Spread herbicide Utility vehicle Ronstar Labor	20 hp 50 lb hour		1.000	1.00	Nov	2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00 9.60
PU truck for irrig Pumping Cost/ac/in	1/2 ton		0.100	18.00	Jan	15.61	13.13			1.80	17.28	18.0000	3.92	70.56	46.02 70.56
Spread herbicide Utility vehicle Ronstar Labor	20 hp 50 lb hour		1.000	1.00	reb	2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00 9.60
Hand weeding Utility vehicle Labor	20 hp hour		1.000	1.00	Feb	2.15	5.59			1.00	9.60	3.0000	9.60	28.80	17.34 28.80
Topdress fertilizer Utility vehicle Osmocote 19-5-11 Labor Apply pesticides	20 hp 50 lb hour		1.000	1.00	Mar Mar	2.15	5.59			1.00	9.60	36.0000 15.0000	60.00	2160.00 144.00	17.34 2160.00 144.00
Sprayer on util ve Horticultural oil Acephate 75 WP Mancozeb	th 100 gal gal. lb. pt	35 hp	3.000			20.87	4.95	1.20	3.41	3.75	36.00	0.7500 1.0000 6.2500	30.00 7.83 8.66	22.50 7.83 54.13	66.43 22.50 7.83 54.13
Apply pesticides Sprayer on util ve Horticultural oil Acephate 75 WP thiophanate methyl	gal. lb.	35 hp	3.000	1.00		20.87	4.95	1.20	3.41	3.75	36.00	0.7500 1.0000 16.0000	30.00 7.83 0.60	22.50 7.83 9.60	66.43 22.50 7.83 9.60
Irrigate 3/1 - 5/31 PU truck for irrig Pumping Cost/ac/in			0.100	29.00	_	25.15	21.15			2.90	27.84	29.0000	3.92	113.68	74.14 113.68
Apply pesticides Sprayer on util ve Acephate 75 WP Horticultural oil Mancozeb	h 100 gal lb. gal. pt	35 hp	3.000	1.00		20.87	4.95	1.20	3.41	3.75	36.00	1.0000 0.7500 6.2500	7.83 30.00 8.66	7.83 22.50 54.13	66.43 7.83 22.50 54.13
Spread herbicide Utility vehicle Ronstar Labor	20 hp 50 lb hour		1.000	1.00	May	2.15	5.59			1.00	9.60	2.0000	90.00	180.00 9.60	17.34 180.00 9.60
Space cans on beds Labor Hand weeding	hour			1.00								120.0000		1152.00	1152.00
Utility vehicle Labor	20 hp hour		1.000			2.15	5.59			1.00	9.60	4.0000	9.60	38.40	17.34 38.40
Prune Utility vehicle Labor	20 hp hour		1.000	1.00		2.15	5.59			1.00	9.60	3.0000	9.60	28.80	17.34 28.80
Apply pesticides Sprayer on util ve Acephate 75 WP Horticultural oil thiophanate methyl	lb. gal.	35 hp	3.000	1.00	Jun	20.87	4.95	1.20	3.41	3.75	36.00	1.0000 0.7500 16.0000	7.83 30.00 0.60	7.83 22.50 9.60	66.43 7.83 22.50 9.60

3 gallon Crape Myrtle in container, continued.

PERATION/	SIZE/	POWER UNIT	DERF	TIMES	F	OWER UNI	r cost	EQUIPMEN	T COST	ALLOC	LABOR	OPERATING,	DURABLE	INPUT	TOTAL
OPERATING INPUT	UNIT	SIZE	RATE		MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	COST
take and tie cans				1.00	Jul		dol	lars			dollars	-		dollars	
Utility vehicle Stakes, rebar Tie ribbon/string	20 hp 100 roll		1.000			2.15	5.59			1.00	9.60	27.0000 30.0000	10.00	1350.00	17.34 1350.00 300.00
Labor pply pesticides	hour			1.00	Jul							250.0000	9.60	2400.00	2400.0
Sprayer airblast to Horticultural oil Acephate 75 WP Mancozeb	w 300 gal gal. lb. pt	2WD50	0.250	00.00	71	2.04	1.08	8.40	24.13	0.25	3.83	0.7500 1.0000 6.2500	30.00 7.83 8.66	22.50 7.83 54.13	39.48 22.50 7.83 54.13
<pre>rrigate 6/1 - 9/30 PU truck for irrig Pumping Cost/ac/inc pread herbicide</pre>	1/2 ton h inch		0.100	1.00	Jul	76.32	64.19			8.80	84.48	88.0000	3.92	344.96	224.99 344.96
Utility vehicle Ronstar Labor	20 hp 50 lb hour		1.000	1.00	Aug	2.15	5.59			1.00	9.60	2.0000	90.00	180.00	17.34 180.00 9.60
pply pesticides Sprayer airblast to	w 300 gal	2WD50	0.250	1.00	Aug	2.04	1.08	8.40	24.13	0.25	3.83				39.48
Horticultural oil Acephate 75 WP thiophanate methyl	gal. lb. oz			1 00								0.7500 1.0000 16.0000	30.00 7.83 0.60	22.50 7.83 9.60	22.50 7.83 9.60
land weeding Labor	hour			1.00	Aug							4.0000	9.60	38.40	38.40
rune Utility vehicle Labor	20 hp hour		1.000	1.00	Aug	2.15	5.59			1.00	9.60	3.0000	9.60	28.80	17.34 28.80
pply pesticides Sprayer airblast to Horticultural oil Acephate 75 WP Mancozeb	w 300 gal gal. lb. pt	2WD50	0.250	1.00	Sep	2.04	1.08	8.40	24.13	0.25	3.83	0.7500 1.0000 6.2500	30.00 7.83 8.66	22.50 7.83 54.13	39.48 22.50 7.83 54.13
Nove to holding area Wagons (3) 3 gal ca Conveyor	_	35 hp	18.200 30.000	1.00	Oct	126.63 14.50	30.03 12.84	3.77	13.40	18.20	174.72 28.80				348.55 56.14
Labor Product Tag oad onto truck	hour 1000		30.000	1.00	Oct	14.50	12.04			3.00	20.00	45.0000 10.1250	9.60 49.95	432.00 505.74	432.00
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	90.0000	9.60	864.00	56.14 864.00
pply pesticides Sprayer airblast to Horticultural oil Acephate 75 WP	gal. lb.	2WD50	0.250	1.00	Oct	2.04	1.08	8.40	24.13	0.25	3.83	0.7500 1.0000	30.00 7.83	22.50 7.83	39.48 22.50 7.83
thiophanate methyl rrigate 10/1-11/30 PU truck for irrig	oz 1/2 ton		0.100	29.00	Oct	25.15	21.15			2.90	27.84	16.0000	0.60	9.60	74.14
Pumping Cost/ac/inc and weeding Utility vehicle	20 hp		1.000	1.00	Nov	2.15	5.59			1.00	9.60	29.0000	3.92		17.34
Labor pread herbicide Utility vehicle	hour 20 hp		1.000	1.00	Nov	2.15	5.59			1.00	9.60	4.0000	9.60	38.40	38.40 17.34
Ronstar Labor pply pesticides	50 lb hour			1.00	Dec							2.0000 1.0000	90.00	180.00 9.60	180.00 9.60
Sprayer airblast to Horticultural oil Acephate 75 WP thiophanate methyl	w 300 gal gal. lb. oz	2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500 1.0000 16.0000	30.00 7.83 0.60	22.50 7.83 9.60	39.48 22.50 7.83 9.60
rost protect ON/off Wagon, 4 wheel Frost prot. blanket		2WD50	1.000	1.00	Dec	6.25	4.30	0.07	0.25	1.00	15.30	4.0000		1108.00	26.17 1108.00
Labor rrigate 12/1 - 2/28 PU truck for irrig Pumping Cost/ac/inc	hour 1/2 ton		0.100	18.00	Jan	15.61	13.13			1.80	17.28	18.0000	9.60	96.00 70.56	96.00 46.02 70.56
Iand weeding Utility vehicle Labor	20 hp hour		1.000	1.00	Feb	2.15	5.59			1.00	9.60	3.0000	9.60	28.80	17.34 28.80
rost protect on/OFF Wagon, 4 wheel	5' x 12'	2WD50	1.000	1.00	Feb	6.25	4.30	0.07	0.25	1.00	15.30				26.17
Labor Nove to holding area Wagons (3) 3 gal ca		35 hp	18.200	1.00	Mar	126.63	30.03	3.77	13.40	18.20	174.72	8.0000	9.60	76.80	76.80 348.55
Conveyor Labor Product Tag	16" hour 1000		30.000			14.50	12.84			3.00	28.80	15.0000 3.3750		144.00 168.58	56.14 144.00 168.58
oad onto truck Conveyor Labor	16" hour		30.000	1.00		14.50	12.84			3.00	28.80	30.0000	9.60	288.00	56.14 288.00
rrigate 3/1 - 5/31 PU truck for irrig Pumping Cost/ac/inc	1/2 ton h inch		0.100	15.00		13.01	10.94			1.50	14.40	15.0000	3.92	58.80	38.35 58.80
leanup of beds Wagon, 4 wheel Labor	5' x 12' hour	35 hp	1.000	1.00	Apr	5.50	1.65	0.07	0.25	1.00	9.60	2.0000	9.60	19.20	17.07 19.20
OTALS	CAPITAL					971.92	765.91	63.38	188.89	141.45	1439.17		4	16666.13	50095.40

Appendix Table 4. Estimated resource use and costs for field operations, per acre, 7 gallon Live Oak in container, 7,000 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

PERATION/ OPERATING INPUT	SIZE/	POWER UNIT	PERF	TIMES		POWER UN		EQUIPMEN			LABOR	OPERATING			TOTAL
	UNIT	SIZE	RATE		MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	COST
							dol	lars			dollars			dollars	
rep. container beds				1.00	Oct										
Blade	6'	2WD50	2.500	1.00	000	20.33	10.75	4.40	11.31	2.50	38.25				85.04
Labor	hour											16.0000		153.60	153.60
Ground Cover Cloth	n roll			1 00								12.0000	215.00	2580.00	2580.00
Gerve mixer bin Tractor w/loader	35hp		1.500	1.00	Oct	19.00	3.04			1.50	14.40				36.44
repare media	331Ip		1.500	1.00	Oct	19.00	3.04			1.50	14.40				30.44
Media Mixer	3 hp		15.000	1.00	000	46.75	131.36								178.11
Pine bark	cu yd											200.0000	15.00	3000.00	3000.00
Dolomitic lime	lb											800.0000		112.00	112.00
Micronutrients	1b											300.0000		399.00	399.00
Osmocote 19-5-11 Labor	50 lb hour											36.0000 13.5000		2160.00 129.60	2160.00 129.60
Nove liners	nour			1.00	Oct							13.3000	3.00	125.00	125.00
Wagons (3) 1 gal o	an 5'X12'	35 hp	18.500			128.72	30.52	3.83	13.62	18.50	177.60				354.29
Labor	hour											7.0000	9.60	67.20	67.20
lant liners				1.00	Oct										
7 gal containers Labor	1000 hour													4900.00 576.00	4900.00 576.00
Tractor per hour	hour											60.0000 12.0000		337.68	337.68
Live Oak liner	each											7000.0000			14000.00
fove cans				1.00	Oct										
Wagon (3) 7 gal ca		35 hp	35.000			243.53	57.74	7.25	25.78	35.00	336.00				670.30
Conveyor	16"		30.000			14.50	12.84			3.00	28.80	25 0000	0.60	226 00	56.14
Labor	hour			29.00	Oct							35.0000	9.60	336.00	336.00
Trrigate 10/1-11/30 PU truck for irrig	1/2 ton		0.100	29.00	OCL	25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/in			0.100			20.10	22.25			2.50	27.01	29.0000	3.92	113.68	113.68
Spread herbicide				1.00	Nov										
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb											2.0000		180.00	180.00
Labor Errigate 12/1 - 2/28	hour			18.00	Jan							1.0000	9.60	9.60	9.60
PU truck for irrig			0.100	10.00	Uali	15.61	13.13			1.80	17.28				46.02
Pumping Cost/ac/in			0.100			15.01	13.13			1.00	17.20	18.0000	3.92	70.56	70.56
Spread herbicide				1.00	Feb										
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb											2.0000		180.00	180.00
Labor Apply pesticides	hour			1.00	Feh							1.0000	9.60	9.60	9.60
Sprayer on util ve	h 100 gal	2WD50	3.000	1.00	1 020	24.39	12.90	1.20	3.41	3.75	53.10				95.00
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
Mancozeb	pt											6.2500	8.66	54.13	54.13
Mand weeding	20 1		1.000	1.00	Feb	2 15	F F0			1 00	0.00				17 24
Utility vehicle Labor	20 hp hour		1.000			2.15	5.59			1.00	9.60	4.0000	9.60	38.40	17.34 38.40
Errigate 3/1 - 5/31	11041			29.00	Apr							1.0000	3.00	50.10	30.10
PU truck for irrig	1/2 ton		0.100		-	25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/in	ich inch											29.0000	3.92	113.68	113.68
apply pesticides		0 5.0		1.00	May						F0 40				05.00
Sprayer on util ve	en 100 gal lb.	2WD50	3.000			24.39	12.90	1.20	3.41	3.75	53.10	1.0000	7.83	7.83	95.00 7.83
Acephate 75 WP Horticultural oil	gal.											0.7500		22.50	22.50
thiophanate methyl												16.0000		9.60	9.60
Spread herbicide				1.00	May										
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb													180.00	180.00
Labor Land weeding	hour			1.00	Marr							1.0000	9.60	9.60	9.60
Utility vehicle	20 hp		1.000	1.00	nay	2.15	5.59			1.00	9.60				17.34
Labor	hour											6.0000	9.60	57.60	57.60
rune				1.00	Jun										
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Labor	hour											20.0000	9.60	192.00	192.00
Stake cans Waqons, 4 wheel	8'X14'	35 hp	0.500	1.00	Jun	3.48	0.82	0.04	0.16	0.50	4.80				9.30
Stakes, rebar	100	35 Hp	0.500			3.40	0.82	0.04	0.16	0.50	4.80	35.0000	50 00	1750.00	1750.00
Labor	hour											30.0000		288.00	288.00
:rrigate 6/1 - 9/30				88.00	Jul										
PU truck for irrig			0.100			76.32	64.19			8.80	84.48				224.99
Pumping Cost/ac/in	ch inch			1 00	_							88.0000	3.92	344.96	344.96
Spread herbicide Utility vehicle	20 hp		1.000	1.00	Aug	2.15	5.59			1.00	9.60				17.34
Ronstar	20 np 50 lb		1.000			2.15	5.59			1.00	9.60	2.0000	90.00	180.00	180.00
	hour											2.0000		19.20	19.20
Konstar Labor				1.00	Aug										
					-										38.40
Labor Mand weeding Labor	hour											4.0000	9.60	38.40	50.10
Labor Mand weeding Labor Apply pesticides		Orm F C	0.055	1.00	Aug		1 00	0.10	04 **	0.05	2 22	4.0000	9.60	38.40	
Labor Hand weeding Labor Apply pesticides Sprayer airblast t	ow 300 gal	2WD50	0.250	1.00	Aug	2.04	1.08	8.40	24.13	0.25	3.83				39.48
Labor Mand weeding Labor Apply pesticides		2WD50	0.250	1.00	Aug	2.04	1.08	8.40	24.13	0.25	3.83	0.7500 1.0000	30.00	22.50 7.83	

7 gallon Live Oak in container, continued.

OPERATION/	SIZE/	POWER UNIT	DEDE	TIMES		POWER UN	IT COST	EQUIPME	INT COST	ALLOC	LABOR	OPERATING	/DURABI	LE INPUT	TOTA
OPERATION/ OPERATING INPUT	UNIT	SIZE	RATE		MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	COS
							dol	lars			dollars	-		dollars	
Topdress fertilizer				1.00	Sep										
Utility vehicle Osmocote 14-14-14 Labor	20 hp 50 lb hour		1.000			2.15	5.59			1.00	9.60	30.0000 23.0000	65.00 9.60	1950.00 220.80	17.3 1950.0 220.8
Prune Utility vehicle	20 hp		1.000	1.00	Sep	2.15	5.59			1.00	9.60				17.3
Labor Load onto truck	hour			1.00	0ct							10.0000	9.60	96.00	96.0
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	45.0000	9.60	432.00	56.1 432.0
Move to holding area Wagon (3) 7 gal can Labor Product Tag	5'X12' hour 1000	35 hp	35.000	1.00	Oct	243.53	57.74	7.25	25.78	35.00	336.00	9.0000 1.7500	9.60 49.95	86.40 87.41	670.3 86.4 87.4
Load onto truck Conveyor	16"		30.000	1.00	Oct	14.50	12.84			3.00	28.80				56.1
Labor Irrigate 10/1-11/30 PU truck for irrig	hour 1/2 ton		0.100	29.00	Oct	25.15	21.15			2.90	27.84	35.0000	9.60	336.00	336.0 74.1
Pumping Cost/ac/inc Apply pesticides				1.00	Nov							29.0000	3.92	113.68	113.6
Sprayer airblast to Horticultural oil Acephate 75 WP thiophanate methyl	w 300 gal gal. lb. oz	2WD50	0.250			2.04	1.08	8.40	24.13	0.25	3.83	0.7500 1.0000 16.0000	30.00 7.83 0.60	22.50 7.83 9.60	39.4 22.5 7.8 9.6
Hand weeding Utility vehicle Labor	20 hp		1.000	1.00	Nov	2.15	5.59			1.00	9.60	4.0000	9.60	38.40	17.3
Spread herbicide Utility vehicle	20 hp		1.000	1.00	Nov	2.15	5.59			1.00	9.60	4.0000	9.60	38.40	17.3
Ronstar Labor	50 lb hour		1.000			2.15	5.59			1.00	9.60	2.0000 1.0000	90.00	180.00 9.60	180.0 9.6
<pre>Irrigate 12/1 - 2/28 PU truck for irrig Pumping Cost/ac/inc Hand weeding</pre>	1/2 ton h inch		0.100	18.00	Jan Feb	15.61	13.13			1.80	17.28	18.0000	3.92	70.56	46.0 70.5
Utility vehicle Labor	20 hp hour		1.000			2.15	5.59			1.00	9.60	4.0000	9.60	38.40	17.3 38.4
Move to holding area Wagon (3) 7 gal can Conveyor Labor	5'X12' 16" hour	35 hp	35.000 30.000	1.00	Mar	243.53 14.50	57.74 12.84	7.25	25.78	35.00 3.00	336.00 28.80	27.0000	9.60	259.20	670.3 56.1 259.2
Product Tag Load onto truck	1000			1.00	Mar							6.2500	49.95	312.19	312.1
Conveyor Labor Irrigate 3/1 - 5/31	16" hour		30.000	15.00	Mar	14.50	12.84			3.00	28.80	135.0000	9.60	1296.00	56.1 1296.0
PU truck for irrig Pumping Cost/ac/inc	1/2 ton h inch		0.100	13.00	Mar	13.01	10.94			1.50	14.40	15.0000	3.92	58.80	38.3 58.8
Cleanup of beds Wagon, 4 wheel Labor	5' x 12' hour	35 hp	1.000	1.00	Apr	5.50	1.65	0.07	0.25	1.00	9.60	2.0000	9.60	19.20	17.0 19.2
TOTALS INTEREST ON OPERATING TOTAL SPECIFIED COST	CAPITAL					1301.53	675.44	49.29	157.76	186.69	1842.67		3	38379.78	42406.4 2820.3 45236.7

Appendix Table 5. Estimated resource use and costs for field operations, per acre, 3 gallon Fig in container, 13,500 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

OPERATION/	SIZE/	POWER UNIT	चवचव	TIMES		POWER UN	IIT COST	EQUIPME:			LABOR	OPERATING			TOTAL
OPERATION/ OPERATING INPUT	UNIT	SIZE	RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST		PRICE	COST	COST
							dol	lars			dollars			dollars	
Prep. container beds				1.00	Feb										
Blade	6'	2WD50	2.500			20.33	10.75	4.40	11.31	2.50	38.25				85.04
Labor Ground Cover Cloth	hour roll											16.0000 12.0000		153.60	153.60 2580.00
Serve mixer bin	1011			1.00	Mar							12.0000	213.00	2500.00	2500.00
Tractor w/loader Move liners	35hp		1.500	1.00	Mar	19.00	3.04			1.50	14.40				36.44
Wagons (3) liners	5'x12'	35 hp	2.500	1.00	riai	17.40	4.12	0.52	1.84	2.50	24.00				47.88
Labor	hour			1 00								13.0000	9.60	124.80	124.80
Prepare media Media Mixer	3 hp		15.000	1.00	Mar	46.75	131.36								178.11
Pine bark	cu yd											193.0000		2895.00	2895.00
Dolomitic lime Micronutrients	lb lb											772.0000	1.33	108.08 385.70	108.08 385.70
Osmocote 19-5-11	50 lb											36.0000		2160.00	2160.00
Labor Plant liners	hour			1.00	Mar							13.5000	9.60	129.60	129.60
Potting machine 10h			8.500			69.42	186.09			8.50	130.05				385.56
3 gal containers Labor	1000 hour											13.5000 50.0000		8775.00 480.00	8775.00 480.00
Liner Fig	1000													100.00	10125.00
Move cans Wagons (3) 3 gal ca	m EIV101	35 hp	18.200	1.00	Mar	126.63	30.03	3.77	12 40	18.20	174.72				348.55
Conveyor	16"	35 Hp	30.000			14.50	12.84	3.77	13.40	3.00	28.80				56.14
Labor	hour											90.0000	9.60	864.00	864.00
Spread herbicide Utility vehicle	20 hp		1.000	1.00	Mar	2.15	5.59			1.00	9.60				17.34
Ronstar	50 lb											1.5000	90.00	135.00	135.00
Labor Irrigate 3/1 - 5/31	hour			29.00	Apr							1.0000	9.60	9.60	9.60
PU truck for irrig	1/2 ton		0.100	25.00	npı	25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/inc	h inch			1 00	_							29.0000	3.92	113.68	113.68
Hand weeding Utility vehicle	20 hp		1.000	1.00	Apr	2.15	5.59			1.00	9.60				17.34
Labor	hour											2.0000	9.60	19.20	19.20
Apply pesticides Sprayer on util veh	100 gal	35 hp	3.000	1.00	Apr	20.87	4.95	1.20	3.41	3.75	36.00				66.43
Horticultural oil	gal.	33 Hp	3.000			20.07	1.75	1.20	3.11	3.73	30.00	0.7500	30.00	22.50	22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83 54.13
Mancozeb Spread herbicide	pt			1.00	Jun							6.2500	8.66	54.13	34.13
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Ronstar Labor	50 lb hour											1.5000	90.00	135.00 9.60	135.00 9.60
Apply pesticides				1.00	Jun										
Sprayer on util veh Horticultural oil	100 gal gal.	35 hp	3.000			20.87	4.95	1.20	3.41	3.75	36.00	0.7500	30.00	22.50	66.43 22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
thiophanate methyl	OZ			1.00	T							16.0000	0.60	9.60	9.60
Hand weeding Utility vehicle	20 hp		1.000	1.00	Jun	2.15	5.59			1.00	9.60				17.34
Labor	hour				_							2.0000	9.60	19.20	19.20
Space cans on beds Utility vehicle	20 hp		1.000	1.00	Jun	2.15	5.59			1.00	9.60				17.34
Labor	hour											120.0000	9.60	1152.00	1152.00
Stake cans Utility vehicle	20 hp		1.000	1.00	Jul	2.15	5.59			1.00	9.60				17.34
Stakes, rebar	100		1.000			2.13	3.33			1.00	3.00	27.0000		1350.00	1350.00
Labor Irrigate 6/1 - 9/30	hour			88.00	.Tu 1							250.0000	9.60	2400.00	2400.00
PU truck for irrig	1/2 ton		0.100	00.00	our	76.32	64.19			8.80	84.48				224.99
Pumping Cost/ac/inc	h inch			1 00	3							88.0000	3.92	344.96	344.96
Hand weeding Utility vehicle	20 hp		1.000	1.00	Aug	2.15	5.59			1.00	9.60				17.34
Labor	hour											2.0000	9.60	19.20	19.20
Apply pesticides Sprayer on util veh	100 gal	35 hp	3.000	1.00	Aug	20.87	4.95	1.20	3.41	3.75	36.00				66.43
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Acephate 75 WP Mancozeb	lb. pt											1.0000 6.2500	7.83 8.66	7.83 54.13	7.83 54.13
Irrigate 10/1-11/30	Pc			10.00	Oct							0.2500	0.00	31.13	31.13
PU truck for irrig	1/2 ton		0.100			8.67	7.29			1.00	9.60	10 0000	2 00	20.00	25.56
Pumping Cost/ac/inc Move to holding area	ii incn			1.00	Oct							10.0000	3.92	39.20	39.20
Wagons (3) 3 gal ca		35 hp	18.200			126.63	30.03	3.77	13.40		174.72				348.55
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	60.0000	9 60	576.00	56.14 576.00
Product Tag	1000											13.5000		674.33	674.33
Load onto truck Conveyor	16"		30.000	1.00	Oct	14.50	12.84			3.00	28.80				56.14
Labor	hour		30.000			14.50	14.04			3.00	20.00	120.0000	9.60	1152.00	1152.00
Cleanup of beds		25.3	1 000	1.00	Oct	F 55	1	0.05	0.05	1 00	0 50				
Wagon, 4 wheel Labor	5' x 12' hour	35 hp	1.000			5.50	1.65	0.07	0.25	1.00	9.60	2.0000	9.60	19.20	17.07 19.20
TOTALS INTEREST ON OPERATING	CAPITAL					662.96	582.20	16.13	50.43	92.35	949.26		3	3/157.80	39418.78 1914.37
TOTAL SPECIFIED COST															41333.15

Appendix Table 6. Estimated resource use and costs for field operations, per acre, 1 gallon Lantana in containers, production and harvest budget, 30,000 plants per acre, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

ODED A RELOW /	OTER!	DOMED INTE	DEDE	mTME()		POWER UN	IT COST	EQUIPME	NT COST	ALLO	C LABOR	OPERATING	G/DURAB	LE INPUT	moma i
OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT	RATE	TIMES OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	TOTAL COS
							dol	lars			dollars			dollars	;
Prep. container beds				1.00	Feb										
Blade	6'	2WD50	2.500	1.00	I CD	20.33	10.75	4.40	11.31	2.50	38.25				85.0
Labor	hour											16.0000		153.60	153.6
Ground Cover Cloth Serve mixer bin	roll			1.00	Mar							12.0000	215.00	2580.00	2580.0
Tractor w/loader	35hp		1.500	1.00	Mai	19.00	3.04			1.50	14.40				36.4
Move liners	_			1.00	Mar										
Wagons (3) liners Labor	5'x12' hour	35 hp	2.500			17.40	4.12	0.52	1.84	2.50	24.00	15.0000	9 60	144.00	47.8 144.0
Prepare media	nour			1.00	Mar							15.0000	9.00	144.00	144.0
Media Mixer	3 hp		15.000			46.75	131.36								178.1
Pine bark	cu yd											150.0000		2250.00	2250.0
Dolomitic lime Micronutrients	lb lb											600.0000 225.0000	0.14		84.0 299.2
Osmocote 14-14-14	50 lb											30.0000		1950.00	1950.0
Labor	hour											13.5000	9.60	129.60	129.60
Plant liners	0050 0			1.00	Mar										
Potting machine 101 1 gal containers	1000		13.300			108.62	291.17			66.50	638.40	30 0000	250 00	7500.00	1038.19 7500.00
Labor	hour											70.0000		672.00	672.00
Liner Lantana	1000											30.0000	500.00	15000.00	15000.00
Move cans	FIX101	25 -	10 500	1.00	Mar	128.72	30.52	2 02	12 62	18.50	177 60				354.29
Wagons (3) 1 gal ca Conveyor	16"	35 hp	18.500			14.50	12.84	3.83	13.02	3.00	177.60 28.80				56.14
Labor	hour											120.0000	9.60	1152.00	1152.00
Spread herbicide				1.00	Mar										
Utility vehicle Ronstar	20 hp 50 lb		1.000			2.15	5.59			1.00	9.60	1.5000	90.00	135.00	17.34 135.00
Labor	hour											1.0000	9.60	9.60	9.60
Space cans on beds				1.00	Apr										
Labor	hour			00 00	_							180.0000	9.60	1728.00	1728.00
Irrigate 3/1 - 5/31 PU truck for irrig	1/2 ton		0.100	29.00	Apr	25.15	21.15			2.90	27.84				74.14
Pumping Cost/ac/ind			0.100			23.13	21.13			2.50	27.01	29.0000	3.92	113.68	113.68
Hand weeding				1.00	Apr										
Utility vehicle Labor	20 hp		1.000			2.15	5.59			1.00	9.60	2.0000	9.60	10 20	17.34 19.20
Apply pesticides	hour			1.00	Apr							2.0000	9.00	19.20	19.20
Sprayer on util vel	n 100 gal	20	3.000		-	7.11	19.22	1.20	3.41	3.75	53.10				84.04
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Acephate 75 WP Kocide DF	lb. lb											1.0000 6.2500	7.83 5.20	7.83 32.50	7.83
Prune	12			1.00	May							0.2300	3.20	32.30	32.30
Utility vehicle	20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Labor	hour			1 00	May							2.0000	9.60	19.20	19.20
Apply pesticides Sprayer on util vel	100 gal	20	3.000	1.00	nay	7.11	19.22	1.20	3.41	3.75	53.10				84.04
Horticultural oil	gal.											0.7500	30.00	22.50	22.50
Acephate 75 WP	lb.											1.0000	7.83	7.83	7.83
thiophanate methyl Irrigate 6/1 - 9/30	OZ			10.00	Jun							16.0000	0.60	9.60	9.60
PU truck for irrig	1/2 ton		0.100	10.00	oun	8.67	7.29			1.00	9.60				25.56
Pumping Cost/ac/ind												10.0000	3.92	39.20	39.20
Hand weeding	00.1		1 000	1.00	Jun	0.15	F F0			1 00	0.60				17.34
Utility vehicle Labor	20 hp hour		1.000			2.15	5.59			1.00	9.60	4.0000	9.60	38.40	38.40
Move to holding area				1.00	Jun										
Wagons (3) 1 gal ca		35 hp	18.500			128.72	30.52	3.83	13.62		177.60				354.29
Conveyor Labor	16" hour		30.000			14.50	12.84			3.00	28.80	80 0000	0 60	769 00	56.14 768.00
Product Tag	1000														1498.50
Load onto truck				1.00											
Conveyor	16"		30.000			14.50	12.84			3.00	28.80	100 0000	0 50	1500 00	56.14
Labor Cleanup of beds	hour			1.00	Jun							T80.0000	9.60	1728.00	1728.00
	5' x 12'	35 hp	1.000		Juil		1.65	0.07	0.25	1.00	9.60				17.07
Labor	hour	-										2.0000	9.60		19.20
TOTALS						E7E 10	620 00	15 05	47.46	125 42	1240 20				40750 04
TOTALS INTEREST ON OPERATING	CAPITAL,					5/5.18	030.89	15.05	4/.46	135.40	1340.29			30133.19	40750.06 1042.49
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															41792.55

Appendix Table 7. Estimated resource use and costs for field operations, per acre, 1 gallon Liriope in container, 30,000 plants per acre, production and harvest budget, overhead irrigation, purchased liner, USDA Plant Hardiness Zones 8 and 9.

Prop. Section Bods	ODEDATION /	CT70/	חרואוו משוארת	DEDE	птмпс		POWER UN					LABOR	OPERATING			TOTAL
Second proper proper 100	OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT			MTH			DIRECT	FIXED						COST
Magne C 2000 2,500 2,500 2,500 12,70 1								dol	lars			dollars			dollars	;
March Marc	Dren container hede				1 00	Feb										
Action A		6'	2WD50	2.500	1.00	reb	20.33	10.75	4.40	11.31	2.50	38.25				85.04
Serve in 1.00 Nat	Labor															153.60
Transfer by Januar 1.500		roll			1 00								12.0000	215.00	2580.00	2580.00
Nove Income		25hn		1 500	1.00	Mar	10 00	3 04			1 50	14 40				36.44
Tell Property in		3311p		1.500	1.00	Mar	19.00	3.04			1.50	17.70				30.11
Proper media	Wagons (3) liners	5'x12'	35 hp	2.500			17.40	4.12	0.52	1.84	2.50	24.00				47.88
Media shizer Shape Shape 15.000 46.75 111.36		hour											15.0000	9.60	144.00	144.00
Pick pick		3 hn		15 000	1.00	Mar	46 75	131 36								178.11
Micromutrients 10 10 10 10 10 10 10 1				15.000			10.75	131.30					150.0000	15.00	2250.00	2250.00
Description	Dolomitic lime												600.0000	0.14	84.00	84.00
Labor Decision D																299.25
Plant Linears 1.00 Mar																1950.00
Section Sect		nour			1.00	Mar							13.3000	9.00	129.00	129.00
Table Date		np 2250/hr		13.300			108.62	291.17			66.50	638.40				1038.19
Map																7500.00
Move cane 1.00 Mar Magane (3) Jal can 5'X12' 35 hp 1.00 18.5																672.00
Magnong (3) gal can 5'X12' 35 hp 18.500 14.50 12.64 30.52 3.88 19.62 18.50 17.60 28.50 28.		1000			1.00	Mar							30.0000	330.00.	10300.00	10300.00
Sepress New Sepress		an 5'X12'	35 hp	18.500			128.72	30.52	3.83	13.62	18.50	177.60				354.29
Spread herbicide				30.000			14.50	12.84			3.00	28.80				56.14
Strict S		hour			1 00								120.0000	9.60	1152.00	1152.00
Romatar		20 hn		1 000	1.00	Mar	2 15	5 59			1 00	9 60				17.34
				1.000			2.15	3.33			1.00	3.00	1.5000	90.00	135.00	135.00
PU truck for irrig		hour											1.0000	9.60		9.60
Pumping Cost/acy/inch inch Hand weeking 1.00 2.00					29.00	Apr										
Hand weeding 1.00 2.05 5.50 1.00 9.00 9.00 19.20 19.				0.100			25.15	21.15			2.90	27.84	20 0000	2 02	112 60	74.14
Unity which which with which with with with with with with with wit		en inch			1 00	Apr							29.0000	3.92	113.00	113.00
Labor Apply pesticides Sprayer on util veh 100 gal 35 hp 3.000 8.00 8.00 8.00 8.00 8.00 8.00 8.0		20 hp		1.000	1.00	npi	2.15	5.59			1.00	9.60				17.34
Sprayer on util veh 100 gal 35 hp 3.000 20.87 4.95 1.20 3.41 3.75 36.00 7.80 30.00 22.50 66.													2.0000	9.60	19.20	19.20
Horiciultural oil gal. Acephate 75 WP 1b. Acephate 75 WP 1c. Acephate 75 WP 1c. Acephate 75 WP 1c. Acephate 75 WP 1c. Acephate 75 WP					1.00	Apr										
Accephate 75 MP			35 hp	3.000			20.87	4.95	1.20	3.41	3.75	36.00	0.7500	20.00	22 50	66.43
Manozee																7.83
Sprayer on util veh 100 gal 35 hp 3.000 20.87 4.95 1.20 3.41 3.75 36.00 0.7500 30.00 22.50																54.13
Horticultural oil Sal. Acephate 75 MP 1b. 1b					1.00	Jun										
Acceptate 75 MP 10.			35 hp	3.000			20.87	4.95	1.20	3.41	3.75	36.00	0 7500	20.00	00 50	66.43
This content of the																22.50 7.83
Hand weeding 1.00																9.60
Labor April Apri	Hand weeding				1.00	Jun										
Spread herbicide				1.000			2.15	5.59			1.00	9.60				17.34
Trigate 1		nour			1 00	Jun							2.0000	9.60	19.20	19.20
Ronstar So 16		20 hp		1.000	1.00	oun	2.15	5.59			1.00	9.60				17.34
PU truck for irrig 1/2 ton													1.5000	90.00	135.00	135.00
Full truck for irrig		hour											1.0000	9.60	9.60	9.60
Pumping Cost / ac / inch I		1 /2 +		0 100	88.00	Jul	76 22	C4 10			0 00	04.40				224 00
Hand weeding Utility vehicle 20 hp 1,000 Apply pesticides Sprayer on util veh 100 gal 35 hp 3,000 Accephate 75 WP Accephate 75 WP Irrigate 10/1-11/30 PU truck for irrig 1/2 ton Puturek for irrig				0.100			/0.32	64.19			8.80	04.40	88 0000	3 92	344 96	344.96
Labor hour Apply pesticides					1.00	Aug							00.000	3.72	311.70	311.70
Apply pesticides Sprayer on util veh 100 gal 35 hp 3.000 20.87 4.95 1.20 3.41 3.75 36.00 66. Horticultural oil gal. Acephate 75 WP 1b. Mancozeb pt Irrigate 10/1-11/30 6.2500 8.66 54.13 54. PU truck for irrig 1/2 ton pumping Cost/ac/inch inch Move to holding area Wagons (3) 1 gal can 5'X12' 35 hp 18.500 128.42 30.52 3.83 13.62 18.50 177.60 30.000 9.60 768.00 768. Labor hour Product Tag 1000 Load onto truck 16" 1000 Conveyor 16" 30.000 14.50 12.84 3.00 28.80 80.0000 9.60 768.00 768. Labor hour Conveyor 16" 30.000 14.50 12.84 3.00 28.80 80.0000 9.60 768.00 768. Labor hour 1000 Load onto truck 1000 Cleanup of beds 1000 Wagon, 4 wheel 5' x 12' 35 hp 1.000 0ct TOTALS 1000 TOTALS 1000 20.87 4.95 1.20 3.41 3.75 36.00 0.7500 30.00 22.50 22. 4.95 1.20 3.41 3.75 36.00 0.7500 30.00 24.95 1444.17 32481.64 35372. 50.7500 30.00 22.50 22. 4.95 1.20 3.41 3.75 36.00 0.7500 30.00 22.50 22. 4.95 1.20 3.41 3.75 36.00 0.7500 30.00 22.50 22. 56. 56. 570.00 0ct 1000 12.84 3.00 28.80 180.0000 9.60 768.00 768. 56. 570.00 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728.00 1728. 100 0ct 12.84 3.00 28.80 180.0000 9.60 1728. 100 0ct 12.84 3.0		20 hp		1.000			2.15	5.59			1.00	9.60				17.34
Sprayer on util veh 100 gal 35 hp 3.000 20.87 4.95 1.20 3.41 3.75 36.00 66. 66. Horticultural oil gal.		hour			1 00	_							2.0000	9.60	19.20	19.20
Horticultural oil gal. Acephate 75 WP 1b. Acephate 75 WP 1b. Acephate 75 WP 1b. Acephate 75 WP 1b. Bancozeb pt Irrigate 10/1-11/30 pUtruck for irrig 1/2 ton 0.100 0ct PU truck for irrig 1/2 ton 0.100 0ct Pumping Cost/ac/inch inch Mowe to holding area Wagons (3) 1 gal can 5'X12' 35 hp 18.500 128.72 30.52 3.83 13.62 18.50 177.60 Conveyor 16" 30.000 14.50 12.84 3.00 28.80 Product Tag 1000 Load onto truck Conveyor 16" 30.000 14.50 12.84 3.00 28.80 Conveyor 16" 30.000 0ct Labor hour Load onto truck Conveyor 16" 30.000 14.50 12.84 3.00 28.80 Conveyor 16" 30.000 9.60 768.00 768. Labor hour Labor hour Totals Total		100 gal	35 hn	3 000	1.00	Aug	20 87	4 95	1 20	3 41	3 75	36 00				66.43
Acephate 75 WP			33 Hp	3.000			20.07	1.55	1.20	3.11	3.75	30.00	0.7500	30.00	22.50	22.50
Irrigate 10/1-11/30		lb.														7.83
PU truck for irrig 1/2 ton		pt											6.2500	8.66	54.13	54.13
Pumping Cost/ac/inch inch Move to holding area Wagons (3) 1 gal can 5'X12' 35 hp 18.500 Load onto truck Conveyor 16" 30.000 Load onto truck Cleanup of beds Wagon, 4 wheel 5' x 12' 35 hp 10.00 TOTALS TOTALS INTEREST ON OPERATING CAPITAL 1.00 Oct 1.00 Oct 1.0		1/2 ton		0 100	10.00	OCT	9 67	7 20			1 00	9 60				25.56
Move to holding area				0.100			0.07	1.23			1.00	9.00	10.0000	3.92	39.20	39.20
Conveyor 16" 30.000 14.50 12.84 3.00 28.80 56. Labor hour 80.0000 9.60 768.00 7					1.00	Oct										
Labor hour Product Tag 1000 1000 1000 0ct 1000 0			35 hp						3.83	13.62						354.29
Product Tag 1000 Load onto truck 1.00 Oct Conveyor 16" 30.000 Vet Labor hour Cleanup of beds 1.00 Oct Wagon, 4 wheel 5' x 12' 35 hp 1.000 Cot Labor hour TOTALS TOTALS INTEREST ON OPERATING CAPITAL 30.000 49.95 1498.50 1498.5				30.000			14.50	12.84			3.00	28.80	80 0000	0 60	762 00	56.14 768.00
Load onto truck 1.00 Oct Conveyor 16" 30.000 14.50 12.84 3.00 28.80 180.000 9.60 1728.00 1728. Cleanup of beds 1.00 Oct Wagon, 4 wheel 5' x 12' 35 hp hour 5.50 1.65 0.07 0.25 1.00 9.60 2.0000 9.60 19.20																1498.50
Labor hour Cleanup of beds Wagon, 4 wheel 5' x 12' 35 hp 1.000 oct Labor hour TOTALS INTEREST ON OPERATING CAPITAL 180.0000 9.60 1728.00 172					1.00	Oct										
Cleanup of beds				30.000			14.50	12.84			3.00	28.80				56.14
Wagon, 4 wheel 5' x 12' 35 hp 1.000 5.50 1.65 0.07 0.25 1.00 9.60 2.0000 9.60 19.20 19.20 Labor hour 702.04 677.08 16.25 50.87 148.95 1444.17 32481.64 35372. TOTALS 702.04 677.08 16.25 50.87 148.95 1444.17 32481.64 35372. INTEREST ON OPERATING CAPITAL 173.12 18.95 1444.17		hour			1 00	0~+							180.0000	9.60	1728.00	1728.00
Labor hour 2.0000 9.60 19.20 19.00 TOTALS 702.04 677.08 16.25 50.87 148.95 1444.17 32481.64 35372. INTEREST ON OPERATING CAPITAL 1731.		5' x 12'	35 hp	1.000	1.00	OCL	5.50	1.65	0.07	0.25	1.00	9.60				17.07
TOTALS 702.04 677.08 16.25 50.87 148.95 1444.17 32481.64 35372. INTEREST ON OPERATING CAPITAL 1731.			P				2.33		,	25		00	2.0000	9.60	19.20	19.20
INTEREST ON OPERATING CAPITAL 1731.																
		CADIMAT					702.04	677.08	16.25	50.87	148.95	1444.17			32481.64	
	TOTAL SPECIFIED COST	- CMPIIAL														1731.78 37103.83

Appendix Table 8. Tractors/Harvesters: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, ornamentals budgets, 2008.

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr			\$	/hour		
Tractor (35 hp)	35 hp	12,200	1000	10	2.00	9.60	5.86	1.09	16.55	1.64	18.20
Tractor w/loader	35hp	12,000	1000	10	2.00	15.30	5.86	1.08	22.24	1.62	23.86
Tractor w/loader	60 hp	20,000	1000	10	3.86	9.60	11.31	1.80	22.71	2.70	25.41
Tractor(40-59hp)RB	2WD50	18,914	600	8	2.57	15.30	7.54	0.59	23.43	4.30	27.73
Utility vehicle	20	9,725	200	10	0.60	15.30	1.39	0.97	17.67	6.40	24.07

Notes: Labor - Includes allocated labor from power unit.

Total Direct: Does not include interest on operating capital.

Appendix Table 9. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, ornamentals budgets, 2008.

Item Name	Size	Power Unit	Purchase Price	Annual Use				r Fuel	R& Imp.	P.U.	Total Direct		red P.U.	Total Cost
			dollars	hours	years	hr/ac	!			\$	/acre			
Blade	6'	2WD50	2,000	50	15	2.500	38.25	18.85	4.40	1.47	62.97	11.31	10.75	85.04
Sprayer airblast tow	300 gal	2WD50	15,883	27	7	0.250	3.82	1.88	8.40	0.14	14.26	24.12	1.07	39.46
Sprayer on util veh	100 gal	20	800	100	10	3.000	53.10	4.19	1.20	2.91	61.41	3.41	19.22	84.04
Wagon (3) 7 gal can	5'X12'	35 hp	2,850	550	10	35.000	336.00	205.10	7.25	38.43	586.78	25.77	57.74	670.30
Wagon, 4 wheel	5' x 12'	35 hp	950	550	10	1.000	9.60	5.86	0.06	1.09	16.62	0.24	1.64	18.52
Wagons (2) 1 gal can	8'X14'	35 hp	3,000	550	10	15.000	144.00	87.90	3.27	16.47	251.64	11.62	24.74	288.01
Wagons (3) 1 gal can	5'X12'	35 hp	2,850	550	10	18.500	177.60	108.41	3.83	20.31	310.15	13.62	30.51	354.30
Wagons (3) 3 gal can	5'X12'	35 hp	2,850	550	10	18.200	174.72	106.65	3.77	19.98	305.12	13.40	30.02	348.55
Wagons (3) liners	5'x12'	35 hp	2,850	550	10	2.500	24.00	14.65	0.51	2.74	41.91	1.84	4.12	47.87
Wagons, 4 wheel	8'X14'	35 hp	1,200	550	10	1.000	9.60	5.86	0.08	1.09	16.64	0.31	1.64	18.60

Notes: Labor - Includes labor from Power unit plus additional labor from the implement.

Total Direct: Does not include interest on operating capital.

Appendix Table 10. Operating inputs: estimated prices, ornamental plants budgets, 2008.

ITEM NAME	UNIT	PRICE			
		dollars			dollars
FERTILIZERS					
Dolomitic lime	lb	0.14	Micronutrients	lb	1.33
Osmocote 14-14-14	50 lb	65.00	Osmocote 19-5-11	50 lb	60.00
FUNGICIDES					
Kocide DF	lb	5.20	Mancozeb	pt	8.66
thiophanate methyl	OZ	0.60			
GREENHOUSE SUPPLIES					
Chlorine bleach	gal	1.00	Shade cloth	each	600.00
HARVEST					
Product Tag	1000	49.95			
HERBICIDES					
Glyphosate	gal	20.00	Pendulum	gal	38.00
Ronstar	50 lb	90.00	Surfactant	gal	27.50
INSECTICIDES					
Acephate 75 WP	lb.	7.83	Floramite	qt	242.00
Horticultural oil	gal.	30.00			
LABOR					
Labor	hour	9.60	Prune labor	hour	9.60
OTHER					
End-wall plastic	roll	80.00	Pumping Cost/ac/inch	inch	3.92
PLANTING					
Dip n Grow	gal.	160.00	Liner Azalea	1000	500.00
Liner Crape Myrtle	1000	500.00	Liner Fig	1000	750.00
Liner Lantana	1000	500.00	Liner Liriope	1000	350.00
Live Oak liner	each	2.00	Pine bark	cu yd	15.00
Pot inserts 3.25"	box	40.00	Trays	bundle	18.00
1 gal containers	1000	250.00	3 gal containers	1000	650.00
7 gal containers	1000	700.00	Frost prot. blanket	roll	277.00