WATERMELON (Seeded), FRESH MARKET, TRICKLE IRRIGATED
Kentucky Estimated per Acre Costs and Returns for 2017
Large Scale (5 or more acres trickle irrigated)*
NOT TO BE CONSIDERED CROPPING RECOMMENDATIONS OR PROFITABILITY PROJECTIONS. FOR COMPARISON AND PLANNING PURPOSES ONLY.

CENTER FOR CROP DIVERSIFICATION

	Quantity	Unit	$/Unit	Total	
GROSS RETURNS	400	cwt			
Watermelons, Seeded	60	bins	$ 90.00	$5,400.00	a,b
				$ -	
Total Returns				**$5,400.00**	
VARIABLE COSTS					
Production					
Watermelon Transplants	1815	plants	$ 0.15	$ 272.25	
N Fertilizer: Urea	100	lbs	$ 0.40	$ 40.00	
K Fertilizer: Potash (0-0-60)	80	lbs	$ 0.30	$ 24.00	
N Fertilizer: Fertigation (Calcium Nitrate)	340	lbs	$ 0.45	$ 153.00	g
Plastic Mulch	1	acre	$ 143.00	$ 143.00	c
Drip Lines & Irrigation Fittings	1	acre	$ 230.00	$ 230.00	c
Pollination	1	hive	$ 75.00	$ 75.00	
Herbicides (Row Middles)	1	acre	$ 12.69	$ 12.69	
Insecticides	1	acre	$ 76.71	$ 76.71	d
Fungicides	1	acre	$ 185.97	$ 185.97	d
Irrigation	1	acre	$ 50.00	$ 50.00	c
Hired Labor (Planting)	16	hrs.	$ 12.50	$ 200.00	
Machinery Variable Costs	1	acre	$ 43.61	$ 43.61	e
Total Preharvest Variable Costs				**$ 1,506.23**	
HARVESTING AND MARKETING					
Plastic Disposal	10	hours	$ 12.50	$ 125.00	
Hired Labor					
Harvest & Field Grading	$ 3.00	cwt		$ 1,199.04	f
Bins (24-inch 45-count)	60	bins	$ 12.00	$ 720.00	
Marketing Costs (10% of Gross)	10%	gross		$ 540.00	
Hauling Variable Costs	400	cwt	$ 0.50	$ 200.00	e
Total Harvesting and Marketing Cost				**$ 2,784.04**	
Interest on Variable Costs				$ 86.95	
TOTAL VARIABLE COST				**$ 4,377.22**	
RETURN ABOVE VARIABLE COSTS				**$ 1,022.78**	
FIXED COSTS					
Machinery and Equipment				$ 74.49	e
Irrigation System Capital Recovery				$ 322.80	c
Taxes on Land				$ 5.00	
Insurance				$ 43.77	
TOTAL FIXED COSTS				**$ 446.06**	
TOTAL EXPENSES				**$ 4,823.28**	
RETURN TO OPERATOR LABOR, LAND, CAPITAL, & MGT.				$ 576.72	
Operator Labor (machinery and irrigation)	15	hrs.	$ 15.00	$ 225.00	
RETURN TO LAND, CAPITAL, AND MANAGEMENT				**$ 351.72**	

a,b **Harvest Labor 4.17 cwt/hour**

Your Numbers

a Yields based on UK variety trials and grower yield estimates. Yields on plastic with trickle irrigation will be 300-400 cwt.
b Price based on shipping point prices from MO and NC and terminal market price trends in Atlanta, 2016.
c Fuel and power for irrigation system. Assumes established well or water source. Depreciation fixed costs in capital recovery line.
d Pesticide costs based on recommended applications of various products using 2017 product costs.
e Machinery costs generator (ISU, 2002) using updated gasoline, purchase price and replacement cost estimates.
f Based on state budgets with revisions by Kentucky vegetable experts.
g Fertilizer assumption: 17.75 lbs calcium nitrate per week per 1,000 plants.
* Farm has 5 or more acres total in trickle-irrigated crops