

COST OF PRODUCTION MODEL FOR TOMATO 2009

This model estimates the production cost for tomato. It uses expenses incurred from existing production practices and assumes that users have an appropriate level of technical and managerial ability. Benchmarks have been defined and are intended to guide project planning and evaluation.

ASSUMPTIONS:

Acreage (ha.)	1
Time of planting	Year round
Method of planting	Transplanting
Seedling purchase	Commercial nursery
Plant spacing	Staked - 30-60 cm x 90 - 120 cm Not staked - 45 - 90cm x 120cm
Plant density	17,500 - 20,000 plants/ha.
Topography	Flat
Soil type	Well drained clays, clay loams and sandy loams
Soil pH	6 - 6.5
Irrigation	Sprinkler system
Stakes	Teak
Life span of stakes	10-16 Crops
Time to maturity	12 weeks
Crop Duration	16 weeks
Yield - kg./ha.	25,000- 30,000
Losses	20%
Marketable yield (kg.)	24,000
Market price/kg. (Wholesale) (Medium)	\$10.45
Labour cost/ man day	\$200

VARIABLE COST

ACTIVITY	UNIT	COST/UNIT	NO. OF UNITS	TOTAL COST
LAND PREPARATION				
Brush cut	ha.	\$1,250.00	1	\$1,250
Rotovate - twice	ha.	\$2,500.00	2	\$5,000
Drainage establishment	ha.	\$850.00	1	\$850
Soil treatment (Banrot and Rizolex)	kg.	\$675.00	0.5	\$338
Labour	man days	\$200.00	10	\$2,000
PLANTING/TRANSPLANTING				
Seedling purchase	trays	\$70.00	155	\$10,850
Stakes	each	\$1.50	20,000	\$30,000
Twine	250g	\$7.29	40	\$292
Labour	man days	\$200.00	40	\$8,000
FERTILIZING				
Fertilizers :				
12:12:17 +2	kg.	\$10.00	405	\$4,050
Fersan 12:24:12	kg.	\$10.98	500	\$5,490
10:52:10	kg.	\$54.56	0.5	\$27
Nutrex	kg.	\$25.70	0.5	\$13
Calcium Nitrate	kg.	\$8.69	270	\$2,346
Muriate of potash	kg.	\$8.56	7	\$60
Manure	truck load	\$1,800.00	3	\$5,400
Labour	man days	\$200.00	60	\$12,000
WEED CONTROL				
Selective herbicide	kg.	\$371.27	1	\$371

Systemic herbicide	litre (l.)	\$84.69	1	\$85
Contact herbicide	l.	\$230.00	1	\$230
Pre-emergent herbicide	l.	\$260.71	2	\$521
Labour	man days	\$200.00	30	\$6,000
PEST & DISEASE CONTROL				
Fungicides :				
Broad spectrum fungicide	kg.	\$92.50	10	\$925
Fungicide / bactericide	kg.	\$120.46	20	\$2,409
Contact fungicide	kg.	\$93.43	2	\$187
Soil fungicide	kg.	\$200.40	1	\$200
Insecticides :				
Contact insecticide	kg.	\$275.50	2	\$551
Miticide / insecticide	l.	\$755.92	4	\$3,024
Miticide	l.	\$380.00	2	\$760
Systemic insecticide	l.	\$66.00	1	\$66
Nematicide	l.	\$126.76	1	\$127
Labour	man days	\$200.00	30	\$6,000
HARVESTING				
Labour	man days	\$200.00	84	\$16,800
Removal of stakes	man days	\$200.00	5	\$1,000
Packing for market	man days	\$200.00	36	\$7,200
TRANSPORTATION				
Fertilizer	trip	\$250.00	1	\$250
Farm produce	bags	\$10.00	529	\$5,286
TOTAL VARIABLE COST				\$139,958
GROSS RETURNS		kg.	\$10.45	24,000
GROSS MARGIN				\$110,842

NOTES:

1. Farmer Hires Tractor services & Transportation
2. Adjust land preparation activities and costs depending on the existing status of the land.
3. Soil test must be done before cultivation to determine the pH and nutrient requirements.
4. One seedling tray contains 128 plants
5. Price of seedlings vary depending on the variety from \$55 - \$85/ tray. Price of \$70 used in the model
6. All Agro Chemicals must be used in the rates as recommended by the manufacturers.
7. Protective wear is essential when applying all agro chemicals.

MAIN VARIETIES

Dry Season Varieties:

Rio Grande, Rio Fuego, Calypso, Floradade

Heatmaster, Heatwave, Gemster, Gempride, Gempear, Nema 1400, Gempack.

Rainy Season Varieties:

Kada, Trinity Pride, Early Cascade, Heatmaster, Gempride, Gempear, Hybrid 61

MAJOR PESTS & DISEASES	CHEMICAL SOLUTION
White flies	Systemic insecticide
Pin worms , Tomato Fruit worm	Contact insecticide
Mites	Miticide
Nematodes	Nematicide
Bacterial Leaf Spot	Systemic fungicide
Grey Leaf Spot, Early Blight,	Fungicide
Cercospora Leaf Spot	Fungicide
Anthracnose	Soil fungicide

REFERENCES:

Prices of chemicals were derived from an average of prices from three (3) different suppliers located in North, Central and South Trinidad.

Chemicals suggested for use were recommended by the MALMR and Agronomists in the field.

Youth Window Programme (YWP) Enterprise Management Article on Solanaceous Crops provided technical information for the Model.

Yield information was verified by the Agronomist at the MALMR - CENTENO

Market price was obtained from NAMDEVCO - Average Wholesale price for a three year period 2006- 2008.

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