

Watermelon cultivation through precision farming – An experience

I have practiced the precision farming in watermelon in last year (2009). I would like to share the experience of watermelon cultivation.

I have cultivated watermelon in 2.2 hectares of my land through precision farming drip irrigation system. I used Numhems company's Pukeeza variety in one hectare of land and in remaining one hectare of land I cultivated Apoorva variety of Seminis Company's.

Cultivation Practices

In the beginning stage of cultivation, I ploughed the land twice per month and applied farm yard manure at the rate of 2 loads per hectare. Then ploughed the land to get good tilth. Before last ploughing, applied 6 bags of D.A.P.+ 3 bags of Potash. After leveling the land, I digged a small canal and placed lateral pipes above the canal. Fixed at the rate of 1 lateral pipe per 5 feet and Irrigated for few minutes. Then, sowed one seed at every place of dripper.

I got loan from Bank for one hectare and remaining capital spent by myself to install drip system. For that, horticulture department gave 258 Kg of Potassium Nitrate fertilizer. From the day of transplanting, I gave 5 Kg potassium Nitrate + 5 Kg Urea through drip irrigation at three days interval.

After 15 days of planting, I have removed the weeds by engaging labourers. First weeding done at 3 Days after planting. Then, made a pit near every plant. Mixed 4 bags of potash + 4 bags of Urea and placed evenly into every pit and closed. I adjusted the lateral pipes properly to irrigate over the pit. After 35 days of planting, applied 3 bags of 150 Kg Calcium ammonium Nitrate and irrigate the field evenly by the drippers. Second hand weeding done at 40th day of planting. After 30th day and 40th day of planting, applied 10 liters of Humic acid evenly by the drip irrigation. In between this practice, I applied Potassium Nitrate + Urea at the rate of 5 KG/ha at three days of interval.

1. Sprayed Tata-Rogger @3ml/lit. at 12th day after planting by using hand pump.
2. Then, sprayed Endosulfan @3ml/lit. and Imida Chloride @1ml/2lit at 19th day after planting by using hand pump.
3. After 25th day of planting,

Endosulfan @3ml/lit.

Imida Chloride @1ml/2lit.

Humic acid @3ml/lit.

Fantac @ 5ml/16 lit. sprayed by using the hand pump.

1. 33 days after planting,

Trizophos @5ml/lit.

Voltage(Flora) @ 10ml/tank

Humic Acid @ 3ml/lit

Spic Sytozyme 3ml/lit. sprayed by using the hand pump.

1. 40 day after planting

Trizophos @ 5ml/lit.
 Chlopyriphos @5ml/lit.
 Siaptron @ 2ml/lit. sprayed by using sprayer.

1. 50 day after planting

Voltage(Flora) @ 10ml/tank
 Biovita @ 5 ml/lit.
 Trizophos @ 5 ml/lit. sprayed by using sprayer.

Cost of Cultivation

1	Ploughing – 7 ploughs	Rs.10,000
2	Farm Yard Manure- 4 loads	Rs.4,000
3	D.A.P. Fertilizer -10 bags	Rs.5,000
4	Potash Fertilizer-7 bags	Rs.1,645
5	Urea Fertilizer-7 bags	Rs.1,820
6	Calcium Ammonium Nitrate- 3 bags	Rs.2,250
7	First hand weeding	Rs.1,600
8	Second hand weeding	Rs.2,000
9	Forming ridges	Rs. 600
10	Spraying pesticides	Rs.13,660
11	Labour cost for spraying	Rs. 3,000
	Total	Rs.45,575

(Included the cost of 258 Kg Potassium Nitrate was given by horticulture department)

Income

Nunhems Pukeeza variety watermelon /1 hectare of land	
At first harvest got 55 tones of watermelon and I sold this at Rs.3100/ton 55*3100	Rs.1,70,500
At second harvest got 6 tonnes of watermelon and I sold this at Rs.1000/ton 6*1000	Rs.6000
Total	Rs.1,76,500
Seminis Apoorva Variety watermelon/1.2 hectare of land	
At first harvest got 61 tonnes of watermelon and I sold at Rs.3100/ton 61*3100	Rs.1, 89,100
At second harvest got 4 tonnes of watermelon and sold this at Rs. 1000/ton 4*1000	Rs.4,000
Total	Rs.1, 93,100

Income from 2.2 hectares of land totally - Rs.1, 76,500 + Rs. 1, 93,100 = Rs.3, 69,600
 Expenditure =Rs.45,575
 Net income =Rs. 3, 24,025

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