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-Roger @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**

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ploughing – 7 ploughs</td>
<td>Rs.10,000</td>
</tr>
<tr>
<td>2</td>
<td>Farm Yard Manure- 4 loads</td>
<td>Rs.4,000</td>
</tr>
<tr>
<td>3</td>
<td>D.A.P. Fertilizer -10 bags</td>
<td>Rs.5,000</td>
</tr>
<tr>
<td>4</td>
<td>Potash Fertilizer-7 bags</td>
<td>Rs.1,645</td>
</tr>
<tr>
<td>5</td>
<td>Urea Fertilizer-7 bags</td>
<td>Rs.1,820</td>
</tr>
<tr>
<td>6</td>
<td>Calcium Ammonium Nitrate- 3 bags</td>
<td>Rs.2,250</td>
</tr>
<tr>
<td>7</td>
<td>First hand weeding</td>
<td>Rs.1,600</td>
</tr>
<tr>
<td>8</td>
<td>Second hand weeding</td>
<td>Rs.2,000</td>
</tr>
<tr>
<td>9</td>
<td>Forming ridges</td>
<td>Rs. 600</td>
</tr>
<tr>
<td>10</td>
<td>Spraying pesticides</td>
<td>Rs.13,660</td>
</tr>
<tr>
<td>11</td>
<td>Labour cost for spraying</td>
<td>Rs. 3,000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>Rs.45,575</strong></td>
</tr>
</tbody>
</table>

(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
Contact Address:
C.Muruga Perumal
S/o V.M. Chinnappan
Veppurchekkadi
Thandarampathu(T.K.)
Thiruvannamalai District-606706
Ph.No. 90479990521

Source: web.thehindu@thehindu.co.in Copyright © 2012, The Hindu