

## APPENDIX-I

**Title : "Adoption of recommended practices for muskmelon cultivation and problems faced by the muskmelon growers of Punjab"**

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### Interview Schedule Bio-data

Sr. No. .... Village : ..... Block : ..... District .....

1. Name of the Farmer: ..... S/o. ....

2. Education :

- (a) Illiterate      (b) Primary  
(c) Middle        (d) High School  
(e) Graduate and above

3. Operational land holding during the year 2003

- (a) Owned .....acres  
(b) Rented in .....acres  
(c) Rented out .....acres  
Total : a + b - c.....acres

4. Area under muskmelon during 2003.....acres

5. Approximate yield of muskmelon : .....q/acre

6. Income:

- (a) Income from sale of muskmelon : .....Rs.  
(b) Income from sale of other crops : .....Rs.  
(c) Income from subsidiary occupations: .....Rs.  
(d) (dairy, poultry, mushroom, beekeeping, etc.)

Annual Gross Income : a + b + c : ..... Rs.

7. Mass media exposure : How often did you use the following mass media to improve your knowledge of agriculture/muskmelon cultivation during the last one year.

Mass Media	Regularly 2	Often 1	Never 0
(a) Radio			
(b) TV			
(c) Audio-cassettes of PAU			
(d) <i>Changi kheti</i>			
(e) Progressive Farming			
(f) Newspapers			
(g) Any other related literature (please specify)			

8. Extension contacts: How many times you contacted the following officials to discuss your muskmelon and other farming problems during the last one year?

Officials	Twice in a month	Once in a month	Once in six months	Once in a year	Never
	4	3	2	1	0
(a) Horticulture Officers of State Department of Horticulture					
(b) Agriculture Officer of State Department of Horticulture					
(c) Scientist of PAU					
(d) Scientist/Extension personnel of private agencies					
(e) Private dealers of inputs					
(f) Any other (please specify)					

9	Scientific Orientation	Agree 2	Undecided 1	Disagree 0
(a)	New methods of farming give better results to farmers than old			
(b)	Higher yields can be obtained by adopting scientific methods of farming			
(c)	New methods of farming are costly though they are time consuming			
(d)	A farmer can progress better when scientific methods are brought into practice			
(e)	Traditional methods of farming have to be changed in order to raise the level of agriculture production and living standard of farmer			
(f)	Even farmer with low to experience should use scientific technology of farming			

10. Source of Irrigation  
 11. Method of Irrigation  
 12. Crop rotation followed  
 13. Knowledge Test

- (i) Do you know that muskmelon has hybrid varieties : Yes/No
- (ii) Seed rate of muskmelon for direct sowing crop is : ....kg/acre
- (iii) Seed rate for transplanted crop is : ....kg/acre
- (iv) For direct sown crops how many seeds are sown together : 1,2,3,4
- (v) While transplanting of seedling soil should be removed from roots : Yes/No
- (vi) Are seedling of muskmelon grown in polythene bags : Yes/No
- (vii) Age of seedling for transplanting is : (a) Upto 30 days  
(b) 30-40 days  
(c) Above 40 days
- (viii) Row to row distance in muskmelon crop is : .....feet
- (ix) Plant to plant distance in muskmelon crop is : .....feet
- (x) After sowing/transplanting of muskmelon the first weeding should be done : After ..... days
- (xi) Total number of mechanical weeding s done in muskmelon are : .....
- (xii) Muskmelon crop requires maximum water at the stage of : (a) Initial growth  
(b) Vine development  
(c) Fruit repining
- (xiii) Dosage of FYM for direct sown crop : .....q/acre
- (xiv) Dosage of urea for direct sown crop : .....kg/acre
- (xv) Dosage of DAP for direct sown crop : .....kg/acre
- (xvi) Dosage of FYM for transplanted crop : .....kg/plant
- (xvii) Dosage of urea for transplanted crop : .....kg/plant
- (xviii) Dosage of DAP for transplanted crop : .....kg/plant
- (xix) Name common insect pests of muskmelon : (a).... (b).....
- (xx) Name common disease of muskmelon : (a).... (b).....
- (xxi) Name two insecticide sued for pest control in muskmelon : (a).... (b).....
- (xxii) Name to fungicides used for controlling the disease in muskmelon : (a).... (b).....
- (xxiii) Farmers can use the seeds of hybrid muskmelon crop for sowing purposes : Yes/No
- (xxiv) For distant market crop should be harvested at full slip stage : Yes/No

14. Source of seed of muskmelon patronized by farmers:

(a)	Source	Adopted
(i)	P.A.U.	
(ii)	State Department of Horticulture	
(iii)	Private agencies	
(iv)	Fellow farmers	
(v)	Own seed	

(b). Reasons for selecting the source of seed of muskmelon

Source	Reasons for selecting source of seed
	(i) Better quality
	(ii) High yielding variety
	(iii) Low cost of seed
	(iv) Popular variety
	(v) Resistance to disease and pests
	(vi) Easy availability
	(vii) Locally adopted
	(viii) Confidence in own seed

(c) After how many years you replace the seeds of muskmelon?

Source of seed	Replacement rate in years			
	Every year	After tow years	After three years	After four years
(i) P.A.U.				
(ii) State Department of Horticulture				
(iii) Private agencies				
(iv) Fellow farmers				
(v) Own seed				

- (i) P.A.U.
- (ii) State Department of Horticulture
- (iii) Private agencies
- (iv) Fellow farmers
- (v) Own seed

**Technical Deviations**

(1) Name the variety/varieties of muskmelon you have sown during the year 2003.

- (a) .....
- (b) .....
- (c) .....

(2) Did your treat the seeds before sowing : Yea/No

If yes, please given following information:

(a) Name of chemical used for (b) Date of chemical/kg of seed treatment

- (3) Seed rate used per acre :
- (a) For direct sowing crop : .....kg/acre
  - (b) For transplanted crop:.....kg/acre
- (4) Sowing and transplanting time
- (a) Time of sowing seed for direct sown crop
  - (b) Time of sowing seed for transplanted crop
- (5) At what depth you sow seeds in polythene bags:
- (a) 1.2 cm deep
  - (b) 1.5 cm deep
  - (c) 1.85 cm deep
  - (d) 2.25 cm deep
  - (e) 2.85 cm deep
- (6) What type of soil mixture you use in polythene bags for muskmelon cultivation
- (a) Soil + FYM
  - (b) Only soil
  - (c) Only FYM
- (7) Age of seeding at the time of the transplanting
- (a) 20-25 days
  - (b) 25-30 days
  - (c) 30-35 days
  - (d) 35-40 days
- (8) How many times you irrigate your direct sown muskmelon crop
- (a) 12 times
  - (b) 9-11 times
  - (c) 6-8 times
  - (d) 5 times
  - (e) 4 times
- (9) At what interval you irrigation your direct sown muskmelon crop
- (a) 14 days interval
  - (b) 12 days interval
  - (c) 10 days interval
  - (d) 7 days interval
- (10) Method of irrigation the direct sown muskmelon crop
- (a) Flooding

- (b) Furrow irrigation
- (11) Amount of FYM applied to direct sown crop : q/acre
- (12) Time of FYM application to direct sown crop
- (a) 10-15 days before sowing
- (b) 8-12 days before sowing
- (c) 5-7 days before sowing
- (d) 3-5 days before sowing
- (13) Amount of FYM applied in transplanting muskmelon pant ..... kg/plant
- (14) Time of application of FYM in transplanted muskmelon plant
- (a) Before transplanting
- (b) After transplanting
- (15) Do you apply chemical fertilizers to your direct down muskmelon crop  
Yes/No  
If yes, please give the information

Name of fertilizer	Quantity (kg/acre)	applied	Time of application
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- (16) Application of fertilizers to the transplanted muskmelon crop

Name of fertilizer	Quantity applied (f/plant)	Method of application
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- (17) How do you control weeds in muskmelon crop
- (a) Chemically
- (b) Mechanically

- (18) Number of weeding done

- (a) 1
- (b) 2
- (3) 3

	Time of weeding	Days after sowing/transplanting
(i)	Time of 1 <sup>st</sup> weeding	
(ii)	Time of 2 <sup>nd</sup> weeding	
(iii)	Time of 3 <sup>rd</sup> weeding	

**Plant protection Measures**

(19) How do you control insect pests and disease in muskmelon crop

I.	Name of insect pest	Method of control	Insecticides used with dosage	Method of application	Number of sprays
	(a)				
	(b)				
	(c)				

II.	Name of Disease	Method of control	Fungicides used with dosage	Time of application	Number of sprays
	(a)				
	(b)				
	(c)				

(20) At what stage of fruit maturity you harvested the muskmelon crop

- (a) Harvest at complete ripening
- (b) Harvested at mature green stage
- (c) Harvested at full slip stage
- (d) Harvested at half slip stage

(21) What were the various marketing procedures you have adopted for marketing of muskmelon

- (a) Sold in local market
- (b) Sold in distant market
- (c) Sold through commission agents
- (d) Sold the crop to contractor before harvest

Constraints experienced by muskmelon growers in production and marketing of muskmelon

- (a) Land management
  - (i) Waterlogged are
  - (ii) Prolonged wet land due to rains
- (b) Weather
  - (i) Unexpected rains during May
  - (ii) High humidity at fruit formation
- (c) Seed
  - (i) High cost of seed
  - (ii) Non availability of disease resistant varieties
- (b) Fertilizer
  - (i) Lack of correct dose and method of fertilizer application
- (e) Disease and pest control (i) High cost of fungicides

- (ii) Lack of knowledge of correct dose of fungicides
- (iii) Blight and downy mildew are difficult to control
- (iv) Heavy infestation of fruit fly
- (v) Lack of knowledge regarding their management
- (f) Crop management
- (i) High prone to disease and insect attack
- (ii) Requires more irrigation
- (iii) Pollination problem (because of sunflower crop)
- (iv) Less profitable as compared to sunflower
- (v) Early rice growing effects the crop
- (g) Marketing and storage
- (i) No support price
- (ii) Heavy price fluctuation
- (iii) Poor shelf life
- (iv) Lack of storage facilities
- (v) Low remunerative prices
- (vi) Exploitation by commission agents
- (vii) No standard weighing procedures



**PART-B**

Cultivation practice being followed by riverbed muskmelon growers

Name of Farmers :..... Area:.....

**Profile**

- (1) Education
- (2) Area under muskmelon
- (3) Mass media exposure
- (4) Extension contacts
- (5) Scientific orientation
- (6) Name the varieties you are using for cultivation
- (7) Do you follow seed treatment : Yes/No
- (8) Seed rate you follow : ....kg/acre
- (9) Time of sowing : .....
- (10) Number of irrigations given to the crop
- (11) Method of irrigation
- (12) Interval of irrigation
- (13) Depth of sowing
- (14) Plant to plant distance
- (15) Row to row distance

**(16) Application of fertilizers and manures**

	Fertilizer (kg/acre)	Method of application
(a)	Urea kg/acre	
(b)	DAP kg/acre	
(c)	FYM q/acre	

**(17) Method of control of weeds/insect pests/diseases**

	Problem	Method of control
(a)	Weeds	
(b)	Insect pests	
(c)	Diseases	

**(18) Control measures of insect pests and diseases**

(a)	Name of insect pest/disease	Insecticide/fungicide used	Dosage

## APPENDIX-II

### Item selection on the Basis of Difficulty Index and Discrimination Index

Item No.	Difficulty Index	Discrimination Index
I	95*	0.12*
II	54	0.48
III	88**	0.18*
IV	44	0.53
V	63	0.48
VI	54	0.52
VII	38	0.63
VIII	91*	0.17
IX	88*	0.21
X	36	0.61
XI	49	0.67
XII	41	0.63
XIII	68	0.51
XIV	28	0.34
XV	29	0.37
XVI	13*	0.80
XVII	43	0.57
XVIII	41	0.49
XIX	39	0.39
XX	37	0.43
XXI	35	0.38
XXII	41	0.63
XXIII	53	0.76
XXIV	46	0.53
XXV	87*	0.13
XXVI	76	0.61
XXVII	77	0.56
XXVIII	91*	0.13*
XXIX	65	0.63
XXX	27	0.47
XXXI	41	0.53

\* Items deleted fro final test

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