

A P P E N D I C E S

APPENDIX I

LIST OF VILLAGES WITH NUMBER OF FARM FAMILIES

A. BABWALA BLOCK

| Sr. No. | Name of the Villages | Number of Farm Families | Cumulative Total |
|---------|----------------------|-------------------------|------------------|
| 1. | 2. | 3. | 4. |
| 1. | Sandol | 101 | 101 |
| 2. | Kirafa | 114 | 215 |
| 3. | Kumba Khara | 145 | 360 |
| 4. | Panghal | 148 | 508 |
| 5. | Haya Gaon | 180 | 688 |
| 6. | Sarhara | 184 | 872 |
| 7. | Kaller Bhani | 194 | 1066 |
| 8. | Dhingtana | 216 | 1282 |
| 9. | Kheri Barki | 231 | 1513 |
| 10. | Bhani Badshah Pur | 241 | 1754 |
| 11. | Bhugana | 245 | 1999 |
| *12. | Bichhpari | 258 | 2257 |
| 13. | Badom Path | 284 | 2541 |
| 14. | Jecra | 292 | 2833 |
| *15. | Bahbalpur | 298 | 3131 |
| 16. | Kharkara | 306 | 3437 |
| 17. | Bheri Akbarpur | 306 | 3743 |

| 1. | 2. | 3. | 4. |
|------|-----------------|------|-------|
| 18. | Budha Khora | 316 | 4059 |
| 19. | Bobuwa | 328 | 4387 |
| *20. | Kirori | 333 | 4720 |
| 21. | Sham Sukh | 365 | 5085 |
| 22. | Gabipur | 366 | 5451 |
| 23. | Dhani (Barwala) | 384 | 5835 |
| 24. | Juglan | 389 | 6224 |
| *25. | Sarsod | 395 | 6519 |
| 26. | Talwandi Rana | 418 | 7037 |
| 27. | Hasanganh | 457 | 7494 |
| 28. | Parbhuwala | 462 | 7956 |
| *29. | Matloda | 498 | 8454 |
| 30. | Daulatpur | 521 | 8975 |
| 31. | Balak | 538 | 9533 |
| 32. | Latani | 570 | 10103 |
| 33. | Nangthla | 675 | 10778 |
| 34. | Uklana | 740 | 11518 |
| 35. | Khedar | 815 | 12333 |
| 36. | Barwala | 2235 | 14558 |

B. HANSI I BLOCK

| 1. | 2. | 3. | 4. |
|------|-------------------|-----|------|
| 1. | Dhani Kumharan | 186 | 186 |
| 2. | Dhani Raju | 208 | 394 |
| 3. | Khanpur | 210 | 604 |
| 4. | Dopal | 214 | 618 |
| 5. | Bir Hansi | 215 | 1033 |
| 6. | Kutebpur | 216 | 1249 |
| 7. | Dhad | 235 | 1484 |
| 8. | Rajpura | 240 | 1724 |
| 9. | Sainipura | 247 | 1971 |
| 10. | Sulkhni | 265 | 2236 |
| 11. | Dhani Pal | 265 | 2501 |
| 12. | Kulana | 272 | 2773 |
| 13. | Majod | 275 | 3048 |
| 14. | Kharkhari | 296 | 3334 |
| 15. | Sindhar | 315 | 3649 |
| 16. | Ramayan | 318 | 3967 |
| 17. | Puthi Mangal Khan | 326 | 4293 |
| 18. | Khokha | 335 | 4628 |
| *19. | Dhandheri | 335 | 4763 |
| 20. | Singhwa Ragho | 340 | 5303 |
| 21. | Lohari Ragho | 344 | 5747 |

| 1. | 2. | 3. | 4. |
|------|-----------------|------|-------|
| 22. | Hazampur | 345 | 6092 |
| 23. | Moth Karnail | 356 | 6448 |
| *24. | Kherigangan | 360 | 6808 |
| 25. | Moth Rangran | 365 | 7173 |
| 26. | Sheikhpur | 375 | 7548 |
| 27. | Chirai | 375 | 7923 |
| 28. | Gurana | 416 | 8339 |
| 29. | Rajli | 425 | 8764 |
| 30. | Badhewar | 425 | 9189 |
| *31. | Bhatla | 445 | 9634 |
| 32. | Maksodpur | 455 | 10090 |
| 33. | Channot | 455 | 10546 |
| 34. | Sultanpur | 498 | 11044 |
| 35. | Jamawari | 550 | 11594 |
| 36. | Datta | 635 | 12430 |
| 37. | Umra | 980 | 13410 |
| 38. | Sisai Bolo | 1535 | 14945 |
| 39. | Sisai Kalirawan | 1775 | 15720 |

* Village selected in the sample.

APPENDIX II

(A)

FOR ENTOMOLOGISTS ONLY

Given below is a list of insect-pests of cotton, baija, wheat, gram and rape seed and mustard as mentioned in the package of practices, H.A.U. Hissar. Please indicate by tick mark () on five-point rating-continuum as to what extent a pest is serious in terms of causing damage to a given crop in Hissar district. While recording your judgement, kindly keep in view the losses due to pests in the previous years.

| Insect-Pest | Extremely serious | Very serious | Serious | Slightly serious | Least serious |
|-------------|-------------------|--------------|---------|------------------|---------------|
| | 1 | 2 | 3 | 4 | 5 |

BAJRA

- i) Grass hopper
- * ii) Hairy caterpillar (II)
- iii) Grey weevil (III)
- iv) White grub (I)
- v) White ants

COTTON

- * i) Jassid (III)
- ii) Hairy caterpillar
- iii) Semilooper
- * iv) Spotted bollworm (II)
- v) Pink bollworm (I)
- vi) White ant

vii) Leaf roller

viii) Surfa grass
hopper

ix) White fly

x) Thrips

xi) Dusky cotton bug

GRAM

* i) Termites (I)

* ii) Cutworms (III)

* iii) Gram caterpillar (I)

iv) Gujhia weevil

RAPE SEED AND
MUSTARD

i) Mustard saw fly

* ii) Painted bug (III)

* iii) Mustard aphid (I)

* iv) Leaf minor (II)

WHEAT

i) Gujhia weevil

* ii) Termites (I)

iii) Surfa e grasshopper

iv) Wheat aphid

v) Jassid

vi) Army worm

* vii) Field rats (I)

(B)

FOR PLANT PATHOLOGISTS ONLY

Given below is a list of diseases of cotton, Bajra wheat, gram and rape seed and mustard as mentioned in the package of practices, H.A.U. Hissar. Please indicate by tick mark (✓) on five-point rating continuum as to what extent disease is serious in terms of causing damage to a given crop in Hissar district. While recording your judgement, kindly keep in view the losses due to diseases in the previous years.

| Sr. No. | Disease | Extre- mely serious | Very serious | Serious | Sligh- tly serious | Least serious |
|---------|---------|---------------------------|-----------------|---------|--------------------------|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

BAJRA

* i) Downy mildew (II)
(Green ear disease)

* ii) Ergot (I)

* iii) Smut (III)

iv) Leaf spot

COTTON

i) Seedling Diseases

ii) Mytothecium leaf
spot

* iii) Angular leaf spot (III)
(or bacterial
blight)

iv) Anthracnose

* v) Root rot (I)

vi) Grey mildew
(Ramularia blotch)

* vii) Boll-rot complex (II)

| | | | | | | |
|----|----|----|----|----|----|----|
| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|----|----|----|----|----|----|----|

GRAM

- * i) Wilt complex (I)
- ii) Stem rot
- * iii) Root rot (II)
- iv) Stunt disease
- v) Blight

RAPE SEED AND MUSTARD

- i) Phyllody (III)
- * ii) Alternaria (I)
- iii) Downy mildew
- * iv) White rust (I)

WHEAT

- i) Yellow rust
(Stripe rust)
- * ii) Brown rust (II)
(Leaf rust)
- iii) Black rust
(Stem rust)
- * iv) Loose smut (I)
- v) Flag smut
- vi) Black point
- vii) Karnal bunt
- viii) Yellow ear rot
and ear cockle
- ix) Molya

* Important insect-pests and diseases.

Note: The figures in parenthesis indicate the place of the pest.

APPENDIX III

DEPARTMENT OF EXTENSION EDUCATION

H.A.U., HISSAR

Ph. D. Research Project

Research Scholar : Shri Siya Ram Singh

Topic : A Study of Technological Gap in
Adoption of Plant Protection
Practices.

Sr. No. _____

Date of
Interview _____

Village _____

Block _____

-
1. Respondent's Name: Shri _____
S/o Shri _____
 2. Age _____ years. 3. Caste: _____
 4. Education: Illiterate/Primary/Middle/Matric/Graduate
 5. Family Size (Number of members):
 - a) Above 12 years of age _____
 - b) Below or up to 12 years of age _____
 6. Family Type:
 - a) Single
 - b) Joint
 7. Adult Family Education and main occupation (of above 12 years of age):

| Number of Members | Level of Education | Main occupation |
|----------------------|-----------------------|--------------------|
|----------------------|-----------------------|--------------------|

8. Social Participation:

| Sr. No. | Institutions | Number of Member | Number of Office Bearer | Relationship (with the Respondent) |
|---------|----------------------|------------------|-------------------------|------------------------------------|
| i) | Gram Panchayat | | | |
| ii) | Co-operative Society | | | |
| iii) | Block Samiti | | | |
| iv) | Any other (specify) | | | |

Details of the Land Holding:

9. How many acres of cultivable land do you own? _____ acres.
10. How many acres of this is irrigated? _____ acres.
11. Have you also leased-out some part of your holding?
Yes/No
If yes, then, how many acres? _____ acres.
12. How many acres of this is irrigated? _____ acres.
13. Have you also leased-in the land of the other farmer(s)?
Yes/No
If yes, then, how many acres? _____ acres.
14. How many acres of this is irrigated? _____ acres.
15. Have you also raised some of your holdings on rent?
Yes/No
If yes, then, how many acres? _____ acres.
16. Have you rented-in some land of the other farmer(s)?
Yes/No
If yes, then, how many acres? _____ acres.

Farm Power and Implements:

17. How many bullock, camels or tractors do you own?
1-2 bullocks/3-4 bullocks/5-6 bullocks/camel/tractor
18. What hands, bullock or camel driven implements of agriculture do you own?
i) Bullock-cart, ii) Mould Board Plough,
iii) Disc Plough, iv) Plank, v) Triphala,
vi) Sprayer, vii) Duster, viii) Any other(specify).
19. What electrical, diesel power and tractor driven implements of agriculture do you own?
Power tiller/Tractor trolley/Pumping set/Diesel engine/Seed drill/Thresher/Any other

Extension Contact and Mass Media Exposure:

20. Do you own a radio/transistor? Yes/No
21. Does any one of your neighbours have a radio/transistor? Yes/No
22. If yes (in any of the above two questions), then how frequently do you listen Krishi Darshan Programme?
Daily/Sometimes/Rarely/Never.
23. Do you subscribe a farm magazine? Yes/No
24. If yes, then, what is the title of that farm magazine? _____.
25. Do you read news paper(s)? Yes/No
If yes, then, how frequently?
Daily/Sometimes/Rarely/Never

26. Did Agricultural Development Officer (ADO) ever visit you? Yes/No

If yes, then please recall when did he visit you last time?

i) Within the last 3 months

ii) Between 3-6 months

iii) Between 6 months to 1 year.

27. Did you ever visit the ADO in his office? Yes/No

If yes, then, when?

i) Within the last 3 months

ii) Between 3-6 months

iii) Between 6 months to 1 year

28. Was any method/result demonstration ever organised on your fields? Yes/No

If yes, then, when?

i) Within the last 6 months

ii) Between 6 months to 1 year

iii) Between 1 to 2 years

29. Did you ever see any method/result demonstration on the field of any other farmer? Yes/No

If yes, then, when?

i) Within the last 6 months

ii) Between 6 months to 1 year

iii) Between 1 to 2 years

30. Did you ever visit a Kisan Mela/Farm Darshan, in Haryana Agricultural University or in any other Agricultural Institution? Yes/No

If yes, then, when?

- i) Within the last 6 months
- ii) Between 6 months to 1 year
- iii) Between 1 to 2 years

31. Risk Orientation:

| Sr. No. | Statements | S.A. | A. | U.D. | D. | S.D. |
|---------|--|------|----|------|----|------|
| i) | A farmer should grow larger number of crops to avoid greater risks involved in growing one or two crops. | | | | | |
| ii) | A farmer should take more of a chance in making a big profit than to be content with a smaller but less risky profit. | | | | | |
| iii) | A farmer who is willing to take greater risk than the average farmer usually does better financially. | | | | | |
| iv) | It is good for a farmer to take risk when he knows his chance of success is fairly high. | | | | | |
| v) | It is better for a farmer not to try new farming method unless most of the others in the locality have used it with success. | | | | | |

- vi) Trying entirely a new method in farming by a farmer involves risk, but it is worth.

S.A. = Strongly Agree, A = Agree
U.D. = Un-Decided, D = Disagree
S.D. = Strongly Disagree

32. Scientificism:

| Sr. No. | Items | S.A. | A. | U.E. | D. | S.D. |
|---------|---|------|----|------|----|------|
| 1. | Mantros' have far-reaching effects. If one can change and recite accurately right 'Mantros' on right occasion he can produce miraculous effects. | | | | | |
| 2. | Every event in a man's life has already been settled & determined by his fate. | | | | | |
| 3. | There can not be any real relationship between massive chinase attack and congregation of eight planets in the same year though some astrologers claim it to be so. | | | | | |
| 4. | A basic human tragedy is that man proposes-but God disposes. | | | | | |

- iv) Please explain from your experience if you get the chemicals from the market in the packings/ bottles you need to purchase?
a) Always b) Sometimes c) Never
- v) Did you ever perceive (yourself) any adulteration in the chemical(s) that you have been purchasing?
a) Always b) Sometimes c) Never
- vi) Do you think the chemicals are sold to the farmers before their expiry date or after the expiry date?
a) Always after expiry date
b) Sometimes after the expiry date.
c) Always before the expiry date.
- vii) How costly are the chemicals in comparison to the benefits of their spraying?
a) Very costly
b) Price are alright
c) Cheap
- viii) Do you get the sprayer always at the time when you need it?
a) Always b) Sometimes c) Never
- ix) How do you think about the rent on a sprayer in comparison to work accomplished by it?
a) Very high
b) Rent is alright
c) Very low

24. Attitude

| Sr. No. | Statements | S.A. | A. | U.D. | D. | S.D. |
|---------|---|------|----|------|----|------|
| i) | A scientific agriculture is not possible without the use of pesticides. | | | | | |
| ii) | Pesticides use is not profitable. | | | | | |
| iii) | There is no alternative to chemical pest control. | | | | | |
| iv) | The plant protection recommendations are too technical to the farmers and thus can not be adopted. | | | | | |
| v) | The use of the plant protection recommendations should be made compulsory by the law. | | | | | |
| vi) | It is foolish to think that production can be increased by controlling the insect-pests and diseases. | | | | | |
| vii) | Use of pesticides (on crops) should be completely banned by the law as it may cause health hazards. | | | | | |
| viii) | Pests do not cause any serious damage to our crops. | | | | | |

S.A. = Strongly Agree

A. = Agree

U.D. = Undecided

D. = Disagree

S.D. = Strongly Disagree

- vii) How much water should be used for preparing an optimum concentration of the spray solution for an acre spray by Knop Sack Hand Sprayer?
240 litres
- viii) How many times the crop should be sprayed to control the pink boll worm?
4-6 times
- ix) Which chemical did you spray to control the pink boll worm?
a) b) c) d)
e) f) g)
- x) How much chemical (of the above mentioned) did you spray on one acre crop?
a) b) c) d)
e) f) g) h)
- xi) How many acres under cotton, in total, did you spray these chemicals?
_____ acres.
- xii) What spray equipment did you use for spraying on cotton?
a) Knop Sack Hand Sprayer
b) Foot sprayer
c) Power sprayer
- xiii) How much water did you use to prepare an optimum concentration of the spray solutions?
_____ litres

- xx) What measure did you adopt to control spotted boll worm on cotton?
Yes/No
- xxi) If sprayed, which chemical(s) did you spray?
a) b) c) d)
e) f) g) h)
- xxii) How much chemical did you spray in one acre?
a) b) c) d)
e) f) g) h)
- xxiii) How many acres, in total, did you spray?
_____ acres.
- xxiv) How much water did you use to prepare an optimum concentration of the spray solution?
_____ litres
- xxv) How many times did you spray your cotton to control the spotted boll worms?
_____ times
- xxvi) Which chemicals should be sprayed to control jassids on cotton?
a) Rogor b) Antihio
c) Metasystox d) Dimcron
- xxvii) How much chemical (of the mentioned above) is needed to spray one acre crop?
a) 250-350 ml. b) 300-400 ml.
c) 300-400 ml. d) 80-100 ml.

xxviii) How much water should be used for preparing an optimum concentration of the spray solution for an acre spray?

240 Litres

xxix) How many times the crop should be sprayed to control the cotton jassids?

1-2 times

xxx) Which chemical(s) did you spray to control cotton jassids?

a) b) c) d)

xxxi) How much chemical (of the above mentioned) did you spray ~~on~~ one acre?

a) b) c) d)

xxxii) How many acres under cotton, in total, did you spray these chemicals? _____ acres.

xxxiii) How much water did you use to prepare an optimum concentration of the spray solution?

_____ litres

xxxiv) How many times did you spray your crop to control jassids? _____ times

xxxv) Name three important diseases of cotton in your area?

a) Root-rot, b) Boll-rot, c) Angular leaf spot.

- iii) What measures should be adopted to save bajra crop from the Ergot disease?
- a) Seed treatment
 - b) Spraying on the crop
 - c) Uproot the diseased plants and destroy them by burning or burying under the soil.
 - d) Sowing should be done at right time (the recommended time)
 - e) Do not sow in the field in which the crop had received the disease last year.
- iv) Which chemical should be used for the treatment of bajra seed?
- a) Salt solution
 - b) Mixture of Ceresan/Monosan and Thiram
- v) How much salt is required to prepare right solution for treating seed for one acre?
- 200 gm.
- vi) Whether the seed treatment with the mixture of Ceresan/Monosan and Thiram should be done before or after salt treatment?
- vii) How much Ceresan/Monosan and Thiram will be required to prepare right mixture for 1 kg seed?
- Ceresan/Monosan = 2.5 gms.
Thiram = 4 gms

iv) Name any two wheat varieties resistant to the brown rust disease?

a) Arjun (HD 2009) b) Sonalika (SS06)

v) Which chemical should be sprayed to control this disease?

Zineb

vi) How many times, this chemical should be sprayed to give full protection to the crop?

3-4 times.

vii) How much water should be used for preparing spray solution?

viii) How much chemical should be used to spray one acre?

600 gm.

ix) Which chemical did you spray to control the Ergot disease?

x) How much chemical did you use to spray on one acre crop?

xi) How much water did you use for preparing spray solution?

xii) How many times did you spray the chemical?

xiii) What measures should be adopted to prevent the occurrence of the loose smut disease?

a) Dry-up the seed under

b) Seed treatment

- xiv) Which chemical should be used to treat the seed?
a) Benlate, b) Bayistin, c) Vitavax
- xv) How much chemical should be used to treat 40 kg seed? _____ 80 gms.
- xvi) What measures did you adopt to prevent the occurrence of this disease in your crop?
a) Solar treatment of seeds in June month.
b) Seed treatment
- xvii) Which chemical did you use for seed treatment?
a) _____ b) _____ c) _____
- xviii) How much chemical did you use for the treatment of 40 kg. seed? _____ gms.
- xix) Did any insect-pest attack your wheat crop last year?
Yes/No
If yes, name the insect-pest.
- xx) What chemical did you spray to control the attacking insect-pest?

- Gram
- i) Name three important insect-pests of gram?
a) Pod borer b) Cut worm, c) Termite
- ii) Which insect-pest did attack your crop last year?
a) _____ b) _____ c) _____
- iii) What measure should be adopted to control the pod borer?
_____ spraying on the crop

- iv) Which chemical should be sprayed to control the pod borer?
a) Thiodan/Thiotox/Endocel
b) Monocrotophos
- v) How much Thiodan/Thiotox/Endocel should be used to spray one acre crop?
_____ 400 ml.
- vi) How much Monocrotophos should be used to spray one acre crop?
_____ 200 ml.
- vii) How much water should be used to prepare the spray solution of the chemicals on gram crop?
_____ 240 litres
- viii) How many times the crop should be sprayed?
_____ 2-3 times
- ix) Which chemical did you spray to control the pod borer?
a) _____ b) _____
- x) How much chemical did you spray on one acre crop?
_____ ml. Thiodan
_____ ml. Monocrotophos
- xi) How much water did you use to prepare the spray solution?

- xii) How many times did you spray the crop?
_____ times

xiii) Which chemical did you use to control termites?

xiv) How did you use this chemical?

_____ in soil

_____ as seed treatment

xv) Name three important diseases of gram?

- a) Gram wilt b) Root-rot c) Gram blight

xvi) What measures should be adopted to protect the crop from the gram wilt disease?

- a) Sow resistant variety
b) Preserve moisture in the soil.
c) Sowing in time
d) Seed treatment

xvii) Which variety of gram is resistant to wilt?

G-24

xviii) Which chemical should be used for seed treatment?

- Mixture of Bressical and
Thiram chemicals

xix) How much mixture (of the above chemicals) is used for treating 40 kg seed?

_____ 50 gms.

xx) Which diseases did infect your gram crop last year?

- a) b) c)

xxi) **What** measures did you adopt to prevent the wilt disease from affecting your gram crop?

- a) Resistant variety sown.
b) Sowing done at the recommended time.
c) Conducted seed treatment.

xxii) Which chemical did you use for treating the seed?

xxiii) How much chemical did you use for treating
40 kg. seed?

xxiv) Which chemical should be sprayed to control
gram blight?

xxv) How much chemical should be sprayed on an acre
crop?
_____ gm.

xxvi) How much water should be used to prepare the
spray solution?
_____ liters.

xxvii) How many times the crop should be sprayed?
_____ times.

xxviii) Which chemical did you spray to control the gram
blight disease?

xxix) How much of this chemical did you spray on an
acre crop?
_____ gm.

xxx) How much water did you use to prepare the spray
solution?
_____ litres.

xxxi) How many sprayings did you give to control the
gram blight disease?

ix) What chemical did you spray (if says sprayed in
Q. 8 a) b)

x) How much chemical did you use for spraying
one acre crop?
_____ gms.

xi) How much water did you use to prepare the spray
solution?
_____ litres.

xii) How many times did you spray your crop against
the diseases?
_____ times.

xiii) Name three important insect pests of rape seed
and mustard?
a) Mustard aphids
b) Leaf minor
c) Painted bug.

xiv) Which insect pest did attack your rape seed
mustard crops last year?
a) b) c)

xv) Which chemicals should be sprayed to control
mustard aphids?
a) Matesystox b) Rogor c) Dimecron.

xvi) How many sprays should be given to control this
pest?
_____ 3 times.

xvii) _____ I I "

xvii) What should be the doses of the chemicals in Ist, IIInd & IIIrd sprayings?

| | <u>Ist spray</u> | <u>IIInd spray</u> | <u>IIIrd spray</u> |
|----|------------------|--------------------|--------------------|
| a) | 250 ml. | 350 ml. | 400 ml. |
| b) | 250 ml. | 350 ml. | 400 ml. |
| c) | 60 ml. | 90 ml. | 100 ml. |

xviii) How much water should be used to prepare the spray solution for an acre spray?

250 Litres Ist spray
350 Litres IIInd spray
400 Litres IIIrd spray

xix) What chemical did you spray to control the mustard aphids?

xx) How many times did you spray your crops?

_____ times.

xxi) How much chemical did you use in different sprayings?

_____ ml. Ist spraying
_____ ml. IIInd spraying
_____ ml. IIIrd spraying

xxii) How much water did you use to prepare the spray solution for different sprays?

_____ litres Ist spraying
_____ litres IIInd spraying
_____ litres IIIrd spraying.

- xxiii) Which chemical should be sprayed/dusted to control leaf minor?
BHC 50% W.P/BHC 10% Powder
- xxiv) How much chemical should be used for spraying/
dusting on one acre crop?
800 gms B.H.C. 50% W.P./
10 kg B.H.C. 10% dust.
- xxv) How much water should be use if spraying is to be
done?
_____ 200 litres.
- xxvi) Which chemical did you spray/dust to control the
leaf minor?
- xxvii) How much chemical did you spray/dust on one acre
crop?
_____ gm/_____ kg.
- xxviii) How much water did you use to prepare the spray
solution (if sprayed)?
_____ Litres.
- xxix) How many times did you spray/dust the chemical?
_____ times.
- xxx) Which chemical should be sprayed to control the
pointed bug of Rape seed and mustard?
Malathion 50 EC/BHC 10% dust.
- xxxi) How much chemical should be used for spraying/
dusting one acre crop?
200 ml. malathion/10kg BHC powder

xxxii) How much water should be used to prepare the spray solution (if sprayed)?

_____ 200 Litres.

xxxiii) How many times the chemical should be sprayed/dusted to control this pest?

1-2 times.

xxxiv) Which chemical did you spray/dust?

Malathion/B.H.C. Powder

xxxv) How much chemical did you use for spraying/dusting on one acre crop?

_____ ml/_____ kg.

xxxvi) How much water did you use to prepare the spray solution (if sprayed)?

_____ Litres.

xxxvii) How many times did you spray to control the pointed bug pest of rape seed and mustard?

_____ times.

APPENDIX IV

HARYANA AGRICULTURAL UNIVERSITY

HISSAR-125004

Dr. Kamlesh Kumar,
Professor and Head,
Deptt. of Ext. Education,
College of Agriculture,
HAU, Hissar.

No. HAU/Ext. 80/

Dated: August 6, 1980

Dear Sir,

One of my students, Sh. Siya Ram Singh, is working on a research problem entitled "A STUDY OF TECHNOLOGICAL GAP IN ADOPTION OF PLANT PROTECTION PRACTICES", for his Ph.D. degree.

I am quite conscious of your busy schedule of engagements but still sure that you will find some time to go through the enclosed list of statements on attitude towards plant protection practices, which is a crucial dimension of the above study.

It is requested that you may indicate with a tick mark (✓) against each statement in appropriate column whether it is 'favourable', 'neutral' or 'unfavourable'. You are also requested to give your valued suggestions on the statement i.e. addition, deletion and modification, if any.

It is needless to say that we very much value and bank on your replies. I shall appreciate if you could return the filled in questionnaire at your earliest convenience.

I am also enclosing a self-addressed stamped envelop to facilitate early reply.

With regards,

Yours sincerely,

Sd/-

(KAMLESH KUMAR)

Encls: as above

| Sr. No. | Statements | Rating Categories | | |
|---------|--|-------------------|---------|------------------------|
| | | Favour- able | Neutral | Un- favour- able |
| 17. | Effectiveness of most of the plant protection practices is doubtful. | | | |
| 18. | Pesticides use is not profitable. | | | |
| 19. | Training about the use of plant protection practices is a waste of time. | | | |
| 20. | The means to sustain agricultural production is plant protection. | | | |
| 21. | The recognition to the plant protection activities of the farmers encourages them in farming. | | | |
| 22. | People look down upon the farmers killing the insects. | | | |
| 23. | Saving the crops from pests brings respects from others. | | | |
| 24. | Killing the rats brings misfortune. | | | |
| 25. | I fear God in killing rats. | | | |
| 26. | Farmers following the plant protection practices are more progressive than not following ones. | | | |
| 27. | Adoption of plant protection practices is a symbol of forwardness. | | | |
| 28. | Better not to use pesticides as they may cause health hazards. | | | |
| 29. | I am afraid of poisonous effect of the pesticides. | | | |
| 30. | Pests are the greatest enemies of the farmers. | | | |

| Sr. No. | Statements | Rating Categories | | |
|---------|--|-------------------|---------|----------------|
| | | Favour-able | Neutral | Un-favour-able |
| 31. | By following the plant protection measures, the country will never face food problem. | | | |
| 32. | We can get sufficient harvest for livelihood without using plant protection practices. | | | |
| 33. | I hate killing insects. | | | |
| 34. | Pests do not cause any serious damage to our crops. | | | |
| 35. | Use of pesticides burns the crops. | | | |

Dhingra, A.K