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PESTICIDE ALTERNATIVES QUESTIONNAIRE

Name of Respondent: FERRIS, H.

County/Campus: Yolo/Davis

Crop: Alfalfa FS

Target Pesticide (TP): ^N ~~Dischloropropene~~ DICHLOROPROPENE

What is the standard method of application for this pesticide? soil injection

What is the frequency of application? once - preplant

Section I. Chemical Alternatives Not in the Catalogue to the Replace the Loss of the Above Pesticide

Identify your first choice as an alternative pesticide: ~~Dischloropropene~~ Methyl bromide

What is the expected crop yield with this pesticide compared to the target pesticide (TP)? (Circle number)
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this pesticide compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the standard method of application for this pesticide? ~~preplant~~ once soil injection

What is the frequency of application? once - preplant

Describe deficiencies or problems with this alternative: Too expensive for this crop and not registered, registered.

Identify your second choice as an alternative pesticide: ~~Dischloropropene~~ FENAMIPHOS

What is the expected crop yield with this pesticide compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this pesticide compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the standard method of application for this pesticide? soil injection (ringworm)

What is the frequency of application? annual

Describe deficiencies or problems with this alternative: lower efficiency, higher pesticide load, not registered

Section II. Non-Chemical Alternatives to the Replace the Loss of the Target Pesticide

Identify your first choice for a non-chemical alternative or alternative program for replacing this pesticide:

resistant cultivars

How would you describe this alternative? (Circle number of answer.)

- 1 BIOLOGICAL (such as biological control, a biopesticide, host/plant resistance, bacteria, etc.)
- 2 PHYSICAL (such as flaming, mechanical incorporation, cultivation, flooding, canopy mgt., etc.)
- 3 MANAGEMENT (such as time or location of planting, cultivar, not to plant the crop, rotation, etc.)
- 4 REGULATORY (such as mandatory host-free periods, crop termination, seed indexing, etc.)
- 5 A COMBINATION OF SEVERAL OF THE ABOVE

What is the expected crop yield with this alternative compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this alternative compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

Estimate the cost of this alternative on a per acre basis, or, identify the kind of costs that need to be estimated to determine cost: Higher seed cost, lower yield

Describe difficulties or constraints to the use of this alternative or alternative system that you feel need to be studied or researched to provide an effective alternative: Stability of resistance?

Need for soil sampling/diagnostic Cultivar/host range
cutworms / host range

Identify your second choice for an alternative or alternative program for replacing this pesticide: Biological control

How would you describe this alternative? (Circle number of answer.)

- 1 BIOLOGICAL (such as biological control, a biopesticide, host/plant resistance, bacteria, etc.)
- 2 PHYSICAL (such as flaming, mechanical incorporation, cultivation, flooding, canopy magt., etc.)
- 3 MANAGEMENT (such as time or location of planting, cultivar, not to plant the crop, rotation, etc.)
- 4 REGULATORY (such as mandatory host-free periods, crop termination, seed indexing, etc.)
- 5 A COMBINATION OF SEVERAL OF THE ABOVE

What is the expected crop yield with this alternative compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this alternative compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

Estimate the cost of this alternative on a per acre basis, or, identify the kind of costs that need to be estimated to determine cost: Cost of soil management

Is alternative proposed available now? Yes (No) (Circle answer)

Describe difficulties or constraints to the use of this alternative or alternative system that you feel need to be overcome to provide an effective alternative:

Need to study soil biology

Section III. Research, Development and Implementation Activities

Describe what research, development or implementation activities you have underway that might provide an alternative to the pest problem and indicate the time frame that you would predict the alternative might be available as a practical treatment or control program: (Use additional sheet if needed)

No current research?

PESTICIDE ALTERNATIVES QUESTIONNAIRE

Name of Respondent: WESTERDAHL, B. B.

County/Campus: Yolo/Davis

Crop: Alfalfa FS

Target Pesticide (TP): N Dichloropropene

What is the standard method of application for this pesticide? shank injection

What is the frequency of application? once per crop

Use of chemical has not been shown to be economical or alfalfa in California
Section I. Chemical Alternatives Not in the Catalogue to the Replace the Loss of the Above Pesticide
Use of chemical has not been shown to be economic on alfalfa in CA

Identify your first choice as an alternative pesticide: KAPAM

What is the expected crop yield with this pesticide compared to the target pesticide (TP)? (Circle number)
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this pesticide compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the standard method of application for this pesticide? shank injection or flood

What is the frequency of application? once per crop

Describe deficiencies or problems with this alternative: lack of efficacy,
broad spectrum material

Identify your second choice as an alternative pesticide: chloropicrin

What is the expected crop yield with this pesticide compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this pesticide compared to the target pesticide (TP)?
VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the standard method of application for this pesticide? shank injection

What is the frequency of application? once per crop

Describe deficiencies or problems with this alternative: lack of efficacy,
broad spectrum material

Section II. Non-Chemical Alternatives to the Replace the Loss of the Target Pesticide

Identify your first choice for a non-chemical alternative or alternative program for replacing this pesticide:

resistant varieties/cultivars

How would you describe this alternative? (Circle number of answer.)

- 1 BIOLOGICAL (such as biological control, a biopesticide, host/plant resistance, bacteria, etc.)
- 2 PHYSICAL (such as flaming, mechanical incorporation, cultivation, flooding, canopy mgt., etc.)
- 3 MANAGEMENT (such as time or location of planting, cultivar, not to plant the crop, rotation, etc.)
- 4 REGULATORY (such as mandatory host-free periods, crop termination, seed indexing, etc.)
- 5 A COMBINATION OF SEVERAL OF THE ABOVE

What is the expected crop yield with this alternative compared to the target pesticide (TP) ?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this alternative compared to the target pesticide (TP) ?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

Estimate the cost of this alternative on a per acre basis, or, identify the kind of costs that need to be estimated to determine cost: ~~costs of resistant or susceptible cultivars need to be~~

costs of resistant or susceptible cultivars needs to be determined.

Describe difficulties or constraints to the use of this alternative or alternative system that you feel need to be studied or researched to provide an effective alternative: _____

Identify your second choice for an alternative or alternative program for replacing this pesticide: fallow

How would you describe this alternative ? (Circle number of answer.)

- 1 BIOLOGICAL (such as biological control, a biopesticide, host/plant resistance, bacteria, etc.)
- 2 PHYSICAL (such as flaming, mechanical incorporation, cultivation, flooding, canopy magt., etc.)
- 3 MANAGEMENT (such as time or location of planting, cultivar, not to plant the crop, rotation, etc.)
- 4 REGULATORY (such as mandatory host-free periods, crop termination, seed indexing, etc.)
- 5 A COMBINATION OF SEVERAL OF THE ABOVE

What is the expected crop yield with this alternative compared to the target pesticide (TP) ?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this alternative compared to the target pesticide (TP) ?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

Estimate the cost of this alternative on a per acre basis, or, identify the kind of costs that need to be estimated to determine cost: cost needs to be determined

Is alternative proposed available now? Yes No (Circle answer)

Describe difficulties or constraints to the use of this alternative or alternative system that you feel need to be overcome to provide an effective alternative: length of fallow needed needs

be determined

Section III. Research, Development and Implementation Activities

Describe what research, development or implementation activities you have underway that might provide an alternative to the pest problem and indicate the time frame that you would predict the alternative might be available as a practical treatment or control program: (Use additional sheet if needed)

~~Research~~ working on resistance in Imperial Valley. seed companies working on new resistant varieties.

Working on resistance in Imperial Valley
Seed companies working on new resistant varieties

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PESTICIDE ALTERNATIVES QUESTIONNAIRE

Name of Respondent: CASWELL, E. P.

County/Campus: Yolo/Davis

Crop: ALFALFA FS

Target Pesticide (TP): N ~~Dichloropropene~~ ~~13D~~

What is the standard method of application for this pesticide? FUMIGANT

What is the frequency of application? preplant

Section I. Chemical Alternatives Not in the Catalogue to the Replace the Loss of the Above Pesticide

Identify your first choice as an alternative pesticide: MEBE Methoxy Bromide

What is the expected crop yield with this pesticide compared to the target pesticide (TP)? (Circle number) VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this pesticide compared to the target pesticide (TP)? (Circle number) VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the standard method of application for this pesticide? FUMIGANT

What is the frequency of application?

Describe deficiencies or problems with this alternative: NOT REGISTERED, EXPENSIVE

Identify your second choice as an alternative pesticide: JAPAM Methan

What is the expected crop yield with this pesticide compared to the target pesticide (TP)? (Circle number) VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this pesticide compared to the target pesticide (TP)? (Circle number) VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the standard method of application for this pesticide? DRENCH & FUMIGANT

What is the frequency of application? annual or biannual

Describe deficiencies or problems with this alternative: Not as effective

Section II. Non-Chemical Alternatives to the Replace the Loss of the Target Pesticide

Identify your first choice for a non-chemical alternative or alternative program for replacing this pesticide: Host plant resistance probably the best

- How would you describe this alternative? (Circle number of answer.) 1 BIOLOGICAL (such as biological control, a biopesticide, host/plant resistance, bacteria, etc.) 2 PHYSICAL (such as flaming, mechanical incorporation, cultivation, flooding, canopy mgt., etc.) 3 MANAGEMENT (such as time or location of planting, cultivar, not to plant the crop, rotation, etc.) 4 REGULATORY (such as mandatory host-free periods, crop termination, seed indexing, etc.) 5 A COMBINATION OF SEVERAL OF THE ABOVE

What is the expected crop yield with this alternative compared to the target pesticide (TP)?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this alternative compared to the target pesticide (TP)?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

Estimate the cost of this alternative on a per acre basis, or, identify the kind of costs that need to be estimated to determine cost: Plant material more expensive

Describe difficulties or constraints to the use of this alternative or alternative system that you feel need to be studied or researched to provide an effective alternative: Problems with ID of nema species, and stability of resistance

Identify your second choice for an alternative or alternative program for replacing this pesticide: _____

Biological Control

How would you describe this alternative? (Circle number of answer.)

- 1 BIOLOGICAL (such as biological control, a biopesticide, host/plant resistance, bacteria, etc.)
- 2 PHYSICAL (such as flaming, mechanical incorporation, cultivation, flooding, canopy magt., etc.)
- 3 MANAGEMENT (such as time or location of planting, cultivar, not to plant the crop, rotation, etc.)
- 4 REGULATORY (such as mandatory host-free periods, crop termination, seed indexing, etc.)
- 5 A COMBINATION OF SEVERAL OF THE ABOVE

What is the expected crop yield with this alternative compared to the target pesticide (TP)?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

What is the expected crop quality with this alternative compared to the target pesticide (TP)?

VERY LOW = 1 2 3 4 5 6 7 8 9 10 = AS HIGH AS TP

Estimate the cost of this alternative on a per acre basis, or, identify the kind of costs that need to be estimated to determine cost: _____

Is alternative proposed available now? Yes No (Circle answer)

Describe difficulties or constraints to the use of this alternative or alternative system that you feel need to be overcome to provide an effective alternative: NEED TO UNDERSTAND SOIL ECOLOGY, REQUIRES

RESEARCH

Section III. Research, Development and Implementation Activities

Describe what research, development or implementation activities you have underway that might provide an alternative to the pest problem and indicate the time frame that you would predict the alternative might be available as a practical treatment or control program: (Use additional sheet if needed)

~~NONE AVAILABLE~~