

**SURVEY OF SUPPLY, PRODUCTION AND DISTRIBUTION OF BIOPESTICIDES**

**Section A      Organisation Type**

1. Organisation Name \_\_\_\_\_

2. Contact Name in Organisation \_\_\_\_\_

3. Type of organisation *[please tick]*

- |   |  |
|---|--|
| <input type="checkbox"/> Private commercial company                                   | <input type="checkbox"/> Government Agency or Research<br>.....Institute |
| <input type="checkbox"/> Subsidiary or joint venture of<br>.....Multinational company | <input type="checkbox"/> Non-Governmental Organisation                   |
| <input type="checkbox"/> Other <i>[please specify]</i> _____                          |  |

4. What is the size of your organisation? Number of staff / employees *[Please tick]*

- |                                    |                                    |                                    |  |
|------------------------------------|------------------------------------|------------------------------------|--|
| <input type="checkbox"/> 1 - 10    | <input type="checkbox"/> 11 – 20   | <input type="checkbox"/> 21 - 50   | <input type="checkbox"/> 51 – 100      |
| <input type="checkbox"/> 101 - 200 | <input type="checkbox"/> 201 – 300 | <input type="checkbox"/> 301 - 500 | <input type="checkbox"/> More than 500 |

5. What are the main products sold or produced by the organisation? *Please circle a score for each type of product between 1 (most important / valuable) to 5 (not sold).*

<i>Level of importance (turnover)</i>							
<i>Most important</i>	<i>Very important</i>	<i>Important</i>	<i>Minor importance</i>	<i>Not sold</i>			
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>			
Biopesticides ( <i>Pesticides based on viruses, fungi, bacteria, nematodes and protozoa</i> )			1	2	3	4	5
Botanical products ( <i>eg. Neem products</i> )			1	2	3	4	5
Parasites and predators			1	2	3	4	5
Pheromone products			1	2	3	4	5
Agrochemicals			1	2	3	4	5
Seeds and planting material			1	2	3	4	5
Other products <i>[please specify]</i> _____			1	2	3	4	5

6. In which year did the organisation start operating? \_\_\_\_\_

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### Section B: General Information on Biopesticide Production

1. What types of biopesticides does the organisation produce?

- |   |  |
|---|--|
| <input type="checkbox"/> Viral pesticides       | <input type="checkbox"/> Fungal pesticides               |
| <input type="checkbox"/> Bacterial pesticides   | <input type="checkbox"/> Fungal or bacterial Antagonists |
| <input type="checkbox"/> Nematode entopathogens | <input type="checkbox"/> Do not produce biopesticides    |

2. Why did your organisation decide to produce biopesticides?

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3. What are your main sources of information on biopesticides production and use?  
*[please circle a score between 1 (very important) and 5 (never used)]*

<i>Very Important</i>	<i>Important</i>	<i>Occasional</i>	<i>Rarely used</i>	<i>Never used</i>			
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>			
Own scientific staff			1	2	3	4	5
University professors			1	2	3	4	5
Department of Agriculture			1	2	3	4	5
Department of Agricultural Extension			1	2	3	4	5
Parent Company (for Multinationals)			1	2	3	4	5
National and international journals and books			1	2	3	4	5
Conferences and seminars			1	2	3	4	5
Other <i>[please specify]</i> _____			1	2	3	4	5

4. How many scientific graduates are involved in biopesticide production? \_\_\_\_\_

5. How many other staff are involved in biopesticide production? \_\_\_\_\_

6. What equipment is available in the production laboratories? *[please tick]*

- |   |  |
|---|--|
| <input type="checkbox"/> Airflow cabinet                | <input type="checkbox"/> Autoclave           |
| <input type="checkbox"/> Controlled environment cabinet | <input type="checkbox"/> Light microscope    |
| <input type="checkbox"/> Moisture analyser              | <input type="checkbox"/> Electron microscope |



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14b) Complete for **Fungal, bacterial and antagonists biopesticides**

What fermentation method is used?

- Liquid  Semi-solid
- Solid
- Other method *[please specify]* \_\_\_\_\_

15. How is the concentration of the biopesticide agent measured as? *[please tick]:*

- PIB Count  Larval Equivalents (LEs) *[for viral pesticides]*
- Other *[please specify]* \_\_\_\_\_

16. What is the maximum quantity that can be produced in one batch? \_\_\_\_\_

17. What is the cost of production per unit? \_\_\_\_\_

18. What checks are undertaken to ensure biopesticide quality and efficacy?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

19. What are the major production constraints (if any)?

\_\_\_\_\_

\_\_\_\_\_

## SURVEY OF SUPPLY, PRODUCTION AND DISTRIBUTION OF BIOPESTICIDES

### Marketing, Distribution and Promotion

1. Who do you sell biopesticides to? *[please circle a score between 1 (almost all sales) and 5 (no sales)]*

**Sales to:**

<i>Almost all</i>	<i>Most</i>	<i>Some</i>	<i>Small amount</i>	<i>None</i>			
1	2	3	4	5			
Government agencies			1	2	3	4	5
Non-Governmental Organisations			1	2	3	4	5
Specialised biocontrol or organic farming dealers			1	2	3	4	5
General agrochemical dealers			1	2	3	4	5
Commercial Seed Producers			1	2	3	4	5
Sugar factories			1	2	3	4	5
Direct to farmers			1	2	3	4	5
Other <i>[please specify]</i> _____			1	2	3	4	5

2. Do you have your own distribution outlets? How many? \_\_\_\_\_

3. In how many locations are your products available for sale?

- One only
  Less than 5  
 National network of outlets
  Network of outlets in the State or Province  
 Mail Order  
 Other *[please specify]* \_\_\_\_\_

4. Do you have your own extension agents? How many? \_\_\_\_\_

5. What extension methods do you use to promote biopesticides? *[please tick]*

- Advice to dealers
  Information leaflets on  
.....biopesticides  
 Farmer Demonstration days
  Extension visits to farmers  
 Farmer Field Trials  
 Other *[please specify]* \_\_\_\_\_

6. Do you advertise your products? If so, how and where?

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7. Do you carry out market research for your biopesticide products? Please describe.

8. Approximately how many farmers buy your products? \_\_\_\_\_

9. In your opinion, what description(s) best fit the type of farms and farmers who use your biopesticides? *[please tick]*

***Size of farm***

Very small, marginal     Small     Medium     Large

***Crops grown***

Staple foods     Vegetables     Legumes & oil  
.....seeds     Sugarcane

Cotton     Tree crops     High value  
.....export crops     Other *[please specify]* \_\_\_\_\_

***Farmer's education***

Little education     Some education     Medium education     Highly educated

***Farmer's attitude to environmental issues***

Interested in organic     Interested     Concerned about     Concerned about  
.....farming    .....in IPM    .....the environment    .....health and safety

No major concerns     More concerned about farm profits  
...about the environment    ....than the environment

10. What are the main constraints in marketing and promoting uptake of biopesticides?

***Constraints:***

<i>Very important</i>	<i>Important</i>	<i>Some importance</i>	<i>Minor importance</i>	<i>Not important</i>			
1	2	3	4	5			
Lack of demand by farmers			1	2	3	4	5
Lack of knowledge by farmers of how to use biopesticides correctly			1	2	3	4	5
Lack of extension support by Government agencies			1	2	3	4	5
Cost of biopesticides			1	2	3	4	5
Technical, production problems			1	2	3	4	5
Competition from agrochemical dealers			1	2	3	4	5
Lack of widespread availability of biopesticides			1	2	3	4	5
Registration costs			1	2	3	4	5
Other <i>[please specify]</i> _____			1	2	3	4	5

**SURVEY OF SUPPLY, PRODUCTION AND DISTRIBUTION OF BIOPESTICIDES**

**Trends in biopesticides**

1. How have your sales of biopesticides changed over the last 3 years?

**Change in Sales**

*Large increase (>100%)*   *Increase*   *About the same*   *Decrease*   *Large decrease*  
*1*   *2*   *3*   *4*   *5*

Change in sales of biopesticide over 3 years                          1   2   3   4   5

2. What was your total annual turnover for biopesticides in 1998/99? \_\_\_\_\_

3. Have you discontinued the sale of any biopesticides? \_\_\_\_\_  
If yes, which biopesticide \_\_\_\_\_  
Why did you stop selling it? \_\_\_\_\_

4. Have you plans to sell new biopesticides?  
If so, what? \_\_\_\_\_

5. Do you plan to change your product range, methods of production or marketing in the future? If so, how?  
\_\_\_\_\_  
\_\_\_\_\_

6. How do you think the market for biopesticides will change over the next 10 years in your country?

**Change in market for biopesticides**

*Large increase (>100%)*   *Increase*   *About the same*   *Decrease*   *Large decrease*  
*1*   *2*   *3*   *4*   *5*

Change in market for biopesticide over the next 10 years                          1   2   3   4   5

7. In your opinion, which type of biopesticide will be the most successful in the future?

- Viral pesticides
- Bacterial pesticides
- Nematode entopathogens
- Fungal pesticides
- Fungal or bacterial Antagonists
- No difference between them

Please explain why \_\_\_\_\_

8. What recommendations would you suggest to promote uptake of biopesticides?  
\_\_\_\_\_  
\_\_\_\_\_

Thank You

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