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**Checklist for Environmental Mitigation and Monitoring Program (EMMP)**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_ Time: \_\_\_\_\_\_\_\_\_\_\_\_**

**Initial Environmental Examination (IEE) activity 4i and 4ii: Evaluating efficacy of PICS and GrainPro Superbags**

**Mitigation measures**

Are instructions on proper use of PICS 🞎 Yes 🞎 No 🞎 Needs attention

and Super bags shared with the researchers?

PICS: (<https://www.youtube.com/watch?v=RZN-IqukCPw>)

Super bags: (<https://www.youtube.com/watch?v=CJFGgxwJKbs>)

Are training materials written in a local language 🞎 Yes 🞎 No 🞎 Needs attention

for sharing with researchers or end users?

Is training provided on proper use of PICS and 🞎 Yes 🞎 No 🞎 Needs attention

Super bags to researchers or end users?

Are there holes/damage to PICS/Super bags? 🞎 Yes 🞎 No 🞎 Needs attention

Were holes repaired/sealed with electric tape 🞎 Yes 🞎 No 🞎 Needs attention

prior to use?

How many PICS/Super bags are unsuitable for PICS: \_\_\_\_\_bags Super bags:\_\_\_\_\_bags

use in tests?

Have you identified a plastic recycling center 🞎 Yes 🞎 No 🞎 Needs attention

nearest to you?

If yes, provide address of the recycling center \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Tel: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If no, all unusable bags should be collected Number of PICS bags collected : \_\_\_\_

and returned to the manufacturer.

 Number of Superbags collected: \_\_\_\_\_

List dates when bags were returned to Date(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

manufacturer:

**Monitoring measures**

Number of PICS bags procured Date of procurement: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of Superbags procured Date of procurement: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location where PICS bags are stored Name of location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Number of bags stored: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location where Super bags are stored Date of storage:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Name of location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Number of bags stored: \_\_\_\_\_\_\_\_\_\_\_\_\_

 Date of storage:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location where PICS bags are used Name of location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 Number of bags used: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location where Super bags are used Date of use:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Name of location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Number of bags used: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date of use:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Indicate quantity of grain used in PICS bags \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_\_\_

Indicate quantity of grain used in Super bags \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_\_\_

Quantity of grain buried under the ground \_\_\_\_\_\_\_\_kg. Type of grain:\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_kg. Date of burial: \_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_kg. Type of grain:\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_kg. Date of burial: \_\_\_\_\_\_\_\_\_

Location of burial site \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IEE activity 4viii: Evaluating efficacy of diatomaceous earth (DE) dusts or silica nano-particles (including other inert materials)**

**Mitigation measures**

Is the DE or inert dust used registered by the 🞎 Yes 🞎 No

US Environmental Protection Agency?

Is a new or unregistered dust in the US 🞎 Yes 🞎 No

or in the FTF country being used in tests

with grain?

 -If Yes, is the new dust safe?\* 🞎 Yes 🞎 No

Is the locally available inert dust effective 🞎 Yes 🞎 No

against insects?\*\*

Are researchers or end users using the dust 🞎 Yes 🞎 No

explained about proper use, including safety

safety of dust?\*\*\*

Are proper application procedures displayed 🞎 Yes 🞎 No

in the laboratory or at farmer’s site?

Are proper application procedures written 🞎 Yes 🞎 No

in a local language?

Are researchers or end users applying the 🞎 Yes 🞎 No

dust wearing a dust mask?

**Monitoring measures**

Indicate quantity of dust procured \_\_\_\_\_\_\_\_\_ g or kg.

 Date of procurement: \_\_\_\_\_\_\_\_\_\_\_

 Name of dust: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the dust stored in a labeled container? 🞎 Yes 🞎 No

Is the pesticide container stored in a closet/ 🞎 Yes 🞎 No

cabinet under lock and key?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*If Yes, provide safety information. If No, indicate how safety will be assessed or assumed.

\*\*Effectiveness data can be from published literature or your own tests.

\*\*\*For registered pesticide a safety data sheet must be read and understood by all applicators.

Indicate quantity of dust used in tests \_\_\_\_\_\_\_\_\_ g or kg.

Indicate quantity of grain used in dust tests \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_

 Date of treatment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_

 Date of treatment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Indicate quantity of dust-treated grain buried \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_\_

under the ground.

 Date of burial: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_\_

 Date of burial: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location of burial site \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IEE Activity 4ix: Evalutaion of approved chemical insecticides (NOT fumigants) or insecticide impregnated Zerofly® bags**

**Mitigation measures**

Are researchers or end users using approved 🞎 Yes 🞎 No

chemical provided safety data sheets from

manufacturer?

Are researchers or end users handling Zerofly® 🞎 Yes 🞎 No

bags explained safety and environmental impact

information by the manufacturer (Vestergaard

Frandsen)?

Are researchers or end users using a chemicals 🞎 Yes 🞎 No

trained in proper application to grain?

Are researchers or end users using a chemicals 🞎 Yes 🞎 No

making application in ventilated area or outdoors?

Are researchers or end users using Zerofly® 🞎 Yes 🞎 No

bags trained in proper handling and use of bags?

Are the Zerofly® bag training materials written 🞎 Yes 🞎 No

in a local language?

Are researchers or end users handling Zerofly® 🞎 Yes 🞎 No

bags wearing a long sleeve shirt?

Are researchers or end users handling Zerofly® 🞎 Yes 🞎 No

bags wearing disposable gloves?

**Monitoring measures**

Indicate name of chemical being used in tests Chemical name(s):\_\_\_\_\_\_\_\_\_\_\_\_

with insects?

 Chemical purity: \_\_\_% (active ingredient)

Is the chemical stored in its original container? 🞎 Yes 🞎 No

Is the chemical container stored in a cabinet/ 🞎 Yes 🞎 No

closet under lock and key?

Indicate quantity of chemical procured \_\_\_\_\_\_\_\_\_\_ ml.

Indicate quantity of chemical used in tests \_\_\_\_\_\_\_\_\_\_ ml.

with insects?

Amount of grain treated with the chemical \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_\_

Amount of chemically-treated grain buried

under the ground \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_kg. Type of grain: \_\_\_\_\_\_\_\_\_

Location of burial site \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Indicate number of Zerofly® bags procured \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bags

Indicate location where bags are stored \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Indicate number of Zerofly® bags used in tests \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bags

Quantity of grain stored in Zerofly® bags \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_\_\_

Are Zerofly® bags effective in suppressing 🞎 Yes 🞎 No

Insect infestation?#

Number of Zerofly® bags torn or damaged \_\_\_\_\_\_\_ bags

Number of Zerofly® torn and damaged bags \_\_\_\_\_\_\_ bags. Date returned: \_\_\_\_\_\_\_\_

returned to manufacturer

Quantity of grain in Zerofly® bags that was

buried under the ground \_\_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_\_

 Date of burial: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_\_

 Date of burial: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location of burial site \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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#Document effectiveness data from published/unpublished studies or current tests.

**New IEE activity (recently added): Handling and disposal of mycotoxin affected grain.**

**Mitigation measures**

Are standard operating procedures (SOPs) from 🞎 Yes 🞎 No

Guatemala mycotoxin project written in a local

language?

Did researchers working on mycotoxin research 🞎 Yes 🞎 No

read and understand the SOPs?

 -If Yes, have a separate sheet with name,

 signature, and date.

Are SOPs posted in the mycotoxin laboratory? 🞎 Yes 🞎 No

**Monitoring measures**

Indicate amount of grain tested for mycotoxins \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

Is grain used for mycotoxin analyses buried 🞎 Yes 🞎 No

or incinerated per information given in

EMMP?@

Amount of grain incinerated or buried? \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

Location of burial site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Indicate amount of grain used in drying \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

research

 \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

Is grain used in drying research buried 🞎 Yes 🞎 No

under the ground?

Amount of grain buried? \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_ kg. Type of grain: \_\_\_\_\_\_\_\_

Location of burial site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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@Researchers must not add mycotoxins to grain. All data must be collected from naturally-occurring mycotoxins.