SOP: 6.3 Rev. 1

EFFECTIVE DATE: September 10, 2024

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APPROVED BY: see cover page

TITLE: **Procedures for the Application of the Test Substance**

PURPOSE: To describe the procedures used in the application of a test substance to ensure the rate listed in the protocol is accurately applied.

SCOPE: Applies to all field trials in the Minor Use Foundation's magnitude of pesticide residue studies.

PROCEDURES:

1. All personnel involved in the mixing, application, storage, and cleanup of the test substance should be properly trained in accordance with current policies and guidelines of their institution.

2. When handling pesticides for crop maintenance or test substances for GLP trials, personnel must wear appropriate protective clothing.

3. If the pesticide application is for maintenance of the plots, then apply the pesticide to all the plots in the study according to the directions on the pesticide label.

4. If the pesticide application involves the test substance, then procedures for handling the test substance as indicated in SOP 4.1 should also be followed.

5. Spraying equipment for test substance application should be inspected for leaks, damaged hoses, etc., and calibrated before application. Inspect that the operating fluids such as oil and gasoline, are at recommended levels. Check that all settings for subsequent applications are the same as those of the previously performed calibration.

6. If a 3-run calibration of the application equipment has been performed away from the test plot (following SOP 6.2), upon arriving at the test

plot, perform a calibration recheck to ensure equipment or settings have not changed or been altered during travel due to bumpy roads. Ensure that the sprayer discharge rate is the same as that of the original 3-run calibration. If the recheck calibration is within 5% of the initial, 3-run calibration, then the spray equipment can be used for the application. If the 3-run calibration is made next to the test plot, then a recheck is not needed.

7. Once the test substance and water are mixed and in the spray tank, charge the system far away from the test plots to eliminate risk of contamination to the plots and to fill up the spray lines. Agitate the spray mix before and during application to ensure an even mixing of the test substance and water.

8. Just before entering the test plot, make sure you are traveling at the correct speed. Maintain the correct speed throughout the plot.

9. Apply the spray mixture according to the directions in the protocol or as specified on the label. Calculations should be made to minimize the amount of spray material left in the spray equipment. The amount left on the spray equipment should be sprayed on a similar crop or disposed of according to current policies and guidelines of the research testing facility.

10. Apply the test substance solution while being timed with a stopwatch or a similar device. Begin timing as the activated sprayer enters the plot and stop timing when the activated sprayer exits the plot.

11. For multiple treatments, apply the spray mixture beginning with the lowest concentration and work up to the highest concentration.

12. Based on pass times and discharge rate of the sprayer, perform a rate confirmation calculation (a form is in the field data notebook) to determine whether the application is within the protocol requirement (usually between –5% and +10%). If the calculation shows a deviation beyond protocol requirements, notify the Study Director immediately.

13. For granular formulations of the test substance, application can be made with a spreader (which can be calibrated) that is designed for granular or other dry formulations. For increased accuracy in delivery, if given prior approval by the Study Director, the test substance may be delivered with a gloved hand or a hand-held shaker can (neither of

which can be properly calibrated), making several passes over the test plot to ensure uniform distribution. The plot can also be divided into quadrants, and the test substance can be weighed out in four separate aliquots for more precise application of the dry formulation.

Approved by:



October 5, 2026

Anna Gore, Executive Director
Minor Use Foundation

Date