MISSISSIPPI SOYBEAN PROMOTION BOARD
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Title: Dicamba Volatility Under Field Conditions

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OBJECTIVES

Thanks to the funding from the MSPB Board we have become a world leader in volatility research. We have several new techniques we have developed and Bayer has asked us to share our techniques with others in the US and Canada. Additionally, we have been asked to participate in an academic summit in Brazil to share with them our research techniques as they begin to evaluate the potential use of dicamba in Brazil.

Objective 1. To compare dicamba volatility of all available salts and including new novel experimental formulations.

We are in the process of developing a manuscript on this objective relative to the low tunnel volatility method of evaluation. The manuscript for this objective will be submitted first quarter of 2019. Additional testing that includes the use of air samplers that will provide a quantitative value to measure volatility will be conducted in 2019.

Objective 2. To determine the effect of potential tankmix partners on the volatility of the new dicamba formulations.

Monsanto/Bayer is providing samples of their new high load formulation for evaluation. These formulations contain extra Vaporgrip and some are of different salts. We have been asked to lead an objective to be conducted at multiple locations across the US. I am currently finalizing the protocol and will have access to data from all locations.

Objective 3. To compare volatility profiles of a given formulation as a function of spray target.

Because of our lost experiments mentioned in the last report, additional data are needed for this objective. This is an area of high interest among academics relative to the effect on volatility. We are in the process of developing a modified humidome methodology that should allow for these assessments in a more controlled environment.

Objective 4. To quantify the effect of temperature on volatility.

Because of the lack of control of environmental conditions in the field, we will be modifying our efforts on this objective to use the modified humidome technique for evaluations. By using this technique, we will be able to evaluate a broader, more controlled range of soil temperatures. This approach will utilize propagation mats to control the temperature of the treated soil independent of the

soil in which the bio-indicator plants are growing. Additionally, it will be a totally closed system with positive airflow through a sampler that with trap all of the dicamba present in the volatile form.