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| Project Title | | Screening and Selecting Non-Xtend Soybeans for Dicamba Tolerance | | | | | | |
| PI’s Name | | Caio Canella Vieira | | E-mail | | [caioc@uark.edu](mailto:caioc@uark.edu) | | |
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| Additional PIs  For this project | | Feng Lin, Assistant Professor, University of Missouri – FDREEC, 147 W State Highway T, Portageville, MO, 63873, 573-379-5431, flbn7@missouri.edu | | | | | | |
| Research locations  (states involved) | | Arkansas: Fayetteville, Marianna, Pine Tree, Stuttgart, Rohwer, Kibler  Missouri: Portageville | | | | | | |
| **Timeline:**  **Current Year - FY23** | | | **Multi-Year Project Information** (if applicable) | | | | | | |
| Year 1 | | Year 2 | | | Year 3 | |
| Start Date | April 1, 2025 | |  | |  | | |  | |
| End Date | March 31, 2026 | |  | |  | | |  | |
| Funds Requested | $64,965 | | $ | | $ | | | $ | |
| **Program Area: Breeding** | | | | | | | | | |
| Other related funding: | |  | | | | | | |
| Objectives: | | The objectives of this proposal include i) fine-mapping genomic regions associated with off-target dicamba tolerance and ii) the development of breeding populations (Enlist-E3 and conventional) stacking various sources of tolerance. | | | | | | |
| Justification: | | The EPA has approved the re-registration of dicamba for over-the-top applications until 2025 and it is expected non-Xtend soybeans will continue to be exposed to and suffer losses from the off target dicamba movement. | | | | | | |
| Exp Setup: | | Trials will be conducted to assess the differential responses to off-target dicamba damage, perform mapping studies, and select advanced breeding materials with enhanced tolerance. | | | | | | |
| Summary: | | Genotypes may respond differently to off-target damage. Tolerant genotypes exposed to off-target dicamba may suffer a maximum of 10% yield penalty whereas susceptible genotypes may suffer as much as 40% yield losses. | | | | | | |
| Benefit to midsouth farmers: | | Flexibility, freedom of choice, and a layer of yield protection to off-target dicamba damage provided by genetics regulating natural tolerance and ability to recovery. | | | | | | |
| Progress Made: | | Six peer-reviewed publications have been published over the course of this study. Many high-yielding lines with tolerance have been advanced in the breeding pipeline. | | | | | | |
| Signature of Principle Investigator | | | | | | | Date: | | |
|  | | | | | | | 7/28/2024 | | |

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