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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 |
| PI’s Title | Assistant Professor | Institution: | University of Arkansas – CSES |
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| Additional PIsFor 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, KiblerMissouri: 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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