The IR-4 Project

PERFORMANCE OF S-METOLACHLOR ON CARINATA
IR-4 Project: P13631 (2024)

Date: 01/24

PROJECT TITLE, JUSTIFICATION AND OBJECTIVES:

Performance of s-Metolachlor on Carinata. The purpose of this research is to collect performance data to support registration of s-metolachlor on carinata. Adherence to Good Laboratory Practices (GLPs) is not required for trials conducted under this research plan.

IR-4 PRODUCT PERFORMANCE RESEARCH COORDINATOR:

Consult with the Research Coordinator listed below regarding desired changes in this research plan prior to occurrence.

Roger B. Batts, IR-4 Project Headquarters, 1730 Varsity Dr., Venture IV, Suite 210, Raleigh, NC 27606, (919) 515-3054, e-mail: rbbatts@ncsu.edu

TEST SITE, TEST SUBSTANCES AND STATISTICAL ANALYSIS:

Field trials should be conducted at appropriate sites to determine the performance of s-Metolachlor when applied to carinata. Evaluate the test materials listed below. Do not use old products for trials conducted under this research plan. If needed, the IR-4 Research Coordinator will arrange for fresh test substances to be delivered. If unsure, contact the IR-4 Research Coordinator for guidance.

Follow local agricultural practices for carinata production including fertilization, irrigation, if necessary and available, and other practices that ensure good crop production. Use a commercial variety of carinata.

Each test site will include at least three replicates of each treatment, arranged in an appropriate statistical design. **Each plot will include at least 2 different carinata varieties.** The individual plots should be large enough to permit accurate application of the test substances in a manner that represents the major application technique that will be used commercially. Conduct appropriate statistical analysis to determine if significant differences exist between treatments. Statistical analysis from commonly used agricultural data programs, such as Agricultural Research Manager (ARM), is acceptable.

TREATMENTS AND TIMING:

Use application equipment that will provide uniform application of the test substance and simulates the intended commercial application technique as specified below. To ensure accurate delivery, calibrate test application equipment prior to application of the test substance(s).

Treatments:

Trt#	Product(s)	Active ingredient(s)	Rate of formulated product(s)	Rate of active ingredient(s) (lb ai/a)	Application Placement & Timing	Spray Volume Range*
01	Untreated –Weed free[1]	N/A	N/A	N/A	N/A	N/A
02	Dual Magnum[1]	s-metolachlor	10.5 fl oz/a	0.625	Pre-emergence (PRE)	≥10 GPA
03	Dual Magnum[1]	s-metolachlor	21 fl oz/a	1.25	PRE	≥10 GPA
04	Dual Magnum[1]	s-metolachlor	31.5 fl oz/a	1.875	PRE	≥10 GPA
05	Dual Magnum[1]	s-metolachlor	42 fl oz/a	2.5	PRE	≥10 GPA
06	Dual Magnum[1]	s-metolachlor	84 fl oz/a	5.0	PRE	≥10 GPA
07	Dual Magnum[1]	s-metolachlor	10.5 fl oz/a	0.625	Early postemergence (EPOST)	≥10 GPA
08	Dual Magnum[1]	s-metolachlor	21 fl oz/a	1.25	EPOST	≥10 GPA
09	Dual Magnum[1]	s-metolachlor	31.5 fl oz/a	1.875	EPOST	≥10 GPA
10	Dual Magnum[1]	s-metolachlor	42 fl oz/a	2.5	EPOST	≥10 GPA

[1]It is acceptable to control emerged grass weeds with a selective herbicide. If maintenance herbicides are used, they must not compromise the crop response evaluations targeted by this protocol.
*GPA=gallons per acre

Application description:

TRT 02 – TRT 06: Make one pre-emergence broadcast application after seeding and before weeds or crop emerge. After final evaluation, these treatments should be kept as weed-free as possible through mechanical methods or registered maintenance herbicides. Trade name(s), active ingredient(s), rate(s) and application date(s) of maintenance herbicides will be included in the final report.

TRT 07 – TRT 10: Make one broadcast postemergence application when carinata is at 3 – 6 lf stage. Prior to application, plots should be maintained as weed-free as possible. After final evaluation, these treatments should be kept as weed-free as possible through mechanical methods or registered maintenance herbicides. Trade name(s), active ingredient(s), rate(s) and application date(s) of maintenance herbicides will be included in the final report.

NOTE ON DUAL MAGNUM TREATMENTS: In order to activate the s-metolachlor treatments, rainfall + irrigation amounts within 2 days after application should be at least 0.5".

DATA COLLECTION:

Crop Injury: YES__X__ NO_____ OPTIONAL_____
Crop injury data will be collected at 14, 28 and 42 days after application. Specify the type of injury (stunting, stand loss, leaf burn, leaf cupping or twisting, chlorosis, etc.) and assess if this level of injury is commercially acceptable. Photo images of significant injury should be collected and included in the final report.

Weed Control: YES__X__ NO_____ OPTIONAL_____
Weed control data will be collected at 14, 28, and 42 days after application and just prior to carinata canopy closure. Specify the weed(s) and the method used to evaluate the level of weed control.

Yield: YES__X__ NO_____ OPTIONAL_____
Carinata seed yield data will be collected at commercial maturity. An explanation of harvest timing and collection methods should be included in the final report.

FINAL REPORT:

At trial completion, please submit a final report to the Research Coordinator and the appropriate ARS/Regional Field Coordinator listed below within 60 days of last data collection. This shall include but not be limited to:

- Data requirements listed above
- Test site and application information; including soil characteristics, crop maintenance pesticides and cultural practices, description of the application equipment, environmental conditions at applications(s), meteorological and irrigation records, and other pertinent information, such as photos of significant crop injury.

The final report will also include a thorough narrative that analyzes the results and evaluates the potential of the tested products for use in the tested crop(s). The final report may be in paper or electronic format.

TRIAL SITE INFORMATION

Researcher	Field ID NO.	RFC
Stanley Culpepper, 2353 Rainwater Road, Tifton, GA 31793; ph: 229-392-5202; e-mail: stanley@uga.edu	P13631.24-GAP01	SOR
Ramon Leon, Dept of Crop & Soil Sciences, NCSU, Campus Box 7620, Williams Hall, Raleigh, NC 27695-7620; Ph: 919-515-5328; e-mail: rleon@ncsu.edu TEST SUBSTANCE SHIPPING: Dr. Ramon Leon, NC State Univ, Central Receiving/NCSU, 3240 Ligon Street, Raleigh, NC 27695; ph: 919-515-5328; e-mail: rleon@ncsu.edu	P13631.24-NCP04	SOR

RFC = Regional/ARS Field Coordinator

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Location:
SOR: Dr. Janine Spies, Univ of Florida, 1642 SW 23rd Drive, PO Box 110720, Gainesville, FL 32611-0720; Ph: 352-294-3991; e-mail: jrazze@ufl.edu

Roger B Batts
Signature of IR-4 Product Performance Research Coordinator
Roger B. Batts

1-3-24
Date