

**AGRICULTURAL RESEARCH FOUNDATION
INTERIM REPORT
FUNDING CYCLE 2016 – 2018**

TITLE: Utilizing Cover Crops in Carrot Seed Production

RESEARCH LEADER: Tracy M Wilson

COOPERATORS: N/A

SUMMARY: In an effort to provide guidance to carrot seed growers on using cover crops in carrot seed production, small plots were established at the Central Oregon Ag Research Center in Madras, OR. These plots will allow for data collection to determine the effects of cover crops planted in conjunction with the carrot seed on soil moisture, soil temperature, weed competition, and the carrot crop.

OBJECTIVES: The objectives of this study are 1) to evaluate mustard as a potential cover crop for use in carrot seed production, 2) to determine ideal planting dates (fall or spring) for the mustard cover crops, and 3) to quantify the impact of cover crops management on the carrot crop.

Table 1. Treatments and planting dates of carrot and cover crops.

Treatment	Planting Date	Planting Date
	Cover Crop	Carrot Seed
Control, No Cover	N/A	Aug 15
Fall Mustard	Nov 1	Aug 15
Spring Mustard	Mar 1	Aug 15
Winter Wheat	Aug 20	Aug 15
Winter Wheat + Fall Mustard, Termination Date 1	Aug 20/Nov 1	Aug 15
Winter Wheat + Fall Mustard, Termination Date 2	Aug 20/Nov 1	Aug 15

PROCEDURES: Experimental plots were established at the Central Oregon Ag Research Center in Madras, OR in July 2016. The experiment is arranged as a randomized complete block to account for any variation in the field. Treatments were planted as described in Table 1, below.

Soil samples were taken from the plot area prior to planting and the plot area was fertilized as needed.

Carrot seed was planted August 15, 2016 on 30-inch beds using GPS guidance. The carrot seed crop was irrigated using wheel line sprinklers until the end of the irrigation season and managed using integrated pest management (IPM).

SIGNIFICANT ACCOMPLISHMENTS TO DATE: To date, the plots for the 2016/17 season have all been planted to carrots and the fall cover crop planted.

ADDITIONAL FUNDING RECEIVED DURING PROJECT TERM: N/A

FUTURE FUNDING POSSIBILITIES: Future funding possibilities include: Jefferson County Seed Growers Association, Industry support, NRCS.