Oregon State University
Columbia Basin Ag Research Center

KJM44 Wheat Plant-Back Trial 10-11 months after Application at Pendleton, OR

Trial ID: 08-142
Location: CBARC
Study Director: Larry Bennett
Investigator: Daniel A Ball

General Trial Information
Study Director: Larry Bennett  Title: Research Assistant
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Crop Description
Crop 1: Triticum aestivum  Variety: ORCF-102
Winter wheat
Planting Date: 10-3-08
Planting Method: John Deere 1560 drill  Rate: 22 seeds/ft2
Depth: 1 in
Row Spacing: 7 in

Site and Design
Plot Width: 9 FT
Plot Length: 30 FT
Replications: 4  Study Design: Randomized Complete Block

Soil Description
% Sand: 25.6  % OM: 1.3  Texture: Silt loam
% Silt: 61.6  pH: 5.6
% Clay: 12.8  CEC: 16.8

Application Description
Application Date: 11-8-07
Time of Day: 2:50 pm
Application Method: Broadcast
Application Timing: Epreplt
Application Placement: Surface
Air Temperature: 57 F
% Relative Humidity: 46
Wind Velocity: 1 mph
Dew Presence (Y/N): N
Soil Temperature: 42 F
Soil Moisture: Good
% Cloud Cover: 70
Crop Stage At Each Application

Crop 1: Wheat
Stage: 11 months preplant

Application Equipment

Appl. Equipment: Hand boom
Operating Pressure: 30 psi
Nozzle Type: Flat fan
Nozzle Size: XR-8002
Nozzle Spacing: 18 in
Boom Length: 9 ft
Ground Speed: 3.5 mph
Carrier: Water
Spray Volume: 16 gpa
Propellant: CO2
Trial Comments

This trial was designed to determine the carryover of KJM44 to winter wheat when applied to chemical fallow approximately 11 months prior to planting. Four rates of KJM44, 0.27, 0.54, 1.08, and 2.16 oz/a were applied Nov. 8, 2007 and compared to a standard treatment of 2,4-D + dicamba @1.47 pt and 6 fl oz/a respectively. Winter wheat, variety ORCF-102, was planted Oct. 3, 2008. Stand counts were taken Dec. 2, 2008 by counting the number of wheat plants per meter of row in two locations per plot. There were no differences between any of the treatments. Wheat height measurements were made on Jun 17, 2009 by measuring the height of the wheat in inches in two different locations per plot. Head counts were also made on June 17, 2009 by counting the number of heads per meter of row in two locations per plot. There were no statistically significant differences in wheat height or number of heads between any of the treatments. The plots were harvested July 27, 2009 with a Hege small plot combine. The harvested samples were further cleaned with an Almaco air cleaner, weighed and test weights taken. The yields were converted to bu/a using a standard 60 lb/bu test weight. All of the KJM44 rates, with the exception of the low (0.27 oz/a), had significantly reduced yields compared to the 2,4-D + dicamba standard. Yields appeared to be very rate dependent, the higher the rate, the lower the yield. The high rate yielded only 1 bu/a, while the 2,4-D + dicamba standard yielded 73 bu/a. No test weights were taken on the high rate of KJM44 due to the lack of sufficient sample of harvested wheat. There were, however, no significant differences in test weights between the other treatments.