AERIAL APPLICATION OF GRANULE FLUTRIAFOL

ABSTRACT

Aerial application of granule fungicides for Asian Soybean Rust (ASR) on the vegetative stages may provide high operational performance with reduced risk of drift, resulting in larger and flexible time intervals for application. Also, possible fungicide residual effects may reduce the number of applications needed on the season. The aim of this study was to evaluate aerial application of granule flutriafol (Impact 1.5 GR) at 10, 15 and 20 kg/ha at V9 stage. The experiment was set up with 2 different areas for each granule dose rate. Inside each area there was a randomized block experiment with four replications and five treatments, as follows: (1) control plot without any fungicide, (2) no granules and ground liquid applications after the first symptoms at RS.1, (3) only granule application, (4) granule application and complementary applications from R2 and (5) granule application and complementary applications after the first symptoms at RS.1. The results showed that treatments with complementary applications gave better performance compared to a single granule application at V9. Among the treatments with complementary applications the best results were found with the granule application followed by complementary applications after the first symptoms. There was a tendency of better results with higher granule dose rates.

METHODS

• Soybean field of Monsy 8867, Rancho Novo Farm (Sementes Petrovina), Pedra Preta/MT, Brazil.
• planters EMB 202 agricultural aircraft with Aeromot spreader, flight level 10 m above the canopy; 20 m swath width, flight speed 177 km/h, calibration based on ASAE S341.3 FEB04 and ASAE S386.2 FEB04;
• Two field trials (Trial 1 and Trial 2) designed with one application area of 80 m x 200 m for each granule dose rate (10, 15 and 20 kg/ha) and inside each one of those areas it was set up a 5 treatment replication experiment with complementary liquid ground applications;
• Granule application at V9 and complementary applications from R2 or at the first symptoms (RS.1). Complementary application with pressurized knapsack sprayer, 120 L/ha and fine droplets. Non treated areas covered by the time of granule application;
• Granule application: RH from 41 to 63%, air temperature from 29.4 to 38.8°C; crosswind from 4 to 15.5 km/h;
• Data collection: ASR severity and soybean yield.

RESULTS, DISCUSSION AND CONCLUSIONS
• Granule distribution CV: 23.5% for 10 kg/ha, 18.9% for 15 kg/ha and 25.5% for 20 kg/ha.
• Best results with granule application
• Looking at the mean yield value for all treatments and field trials there was a significant difference between treatments and field trials. The results showed that treatments with complementary applications gave better performance compared to a single granule application at V9.
• Because of the late occurrence of infection (ASR symptoms started at R4), the effect of the granule application was only observed from RS.1.
• Among the treatments with complementary applications the best results were found with the granule application followed by complementary applications after the first symptoms (RS.1).
• The results showed that treatments with complementary applications gave better performance compared to a single granule application at V9.
• Among the treatments with complementary applications the best results were found with the granule application followed by complementary applications after the first symptoms (RS.1).
• There was a tendency of better results with higher granule dose rates.

ASIAN SOYBEAN RUST CONTROL WITH AERIAL APPLICATION OF GRANULE FLUTRIAFOL

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