

Evaluation Report for Category B, Subcategory 4.1 Application

Application Number: 2013-4131
Application: Conversion to full registration without consultation
Product: Jazz
Registration Number: 29725
Active ingredients (a.i.): *Bacillus subtilis* (strain QST 713) [BSA]
PMRA Document Number: 2362431

Purpose of Application

The purpose of this application was to fulfill the conditions of the full registration of the end-use product, Jazz, containing the active ingredient *Bacillus subtilis* (strain QST 713). As a condition of registration, additional information was required to support use of Jazz as a drench application. In recognition of the importance of green mould disease in mushroom production and the potential benefit of multiple applications of Jazz in extending the period of disease suppression, one drench application of 0.3 to 0.6 kg Jazz in 75 L irrigation water per 100 m² bed surface area was conditionally supported as a subsequent (third) application to the casing layer prior to first crop break (flush) of mushroom beds in which both Jazz-treated spawn and Jazz-treated supplement had been mixed with the underlying mushroom growing substrate.

Chemistry, Health and Environmental Assessments

Chemistry, health and environmental assessments were not required for this application.

Value Assessment

Reports of two trials conducted in Pennsylvania in 2011 were submitted in which the efficacy of up to three applications of Jazz was evaluated for suppression of *Trichoderma* green mould in white button mushroom production. In one trial, application of Jazz at 0.6 kg/3.6 kg gypsum/100 m² production bed area to both spawn and supplement followed by a third application as a drench at 0.6 kg Jazz in 75 L water/100 m² production bed area to the casing layer prior to the first break was effective in suppressing green mould, spores of which were introduced at spawning, as evidenced by assessments of disease incidence: 0, 20, 20, 20 and 60% when assessed at casing, prior to first, second and third break, and post-crop, respectively, and disease severity (rated on a 0-6 scale): 0, 0, 0.6, 0.6 and 1.6 at casing, prior to first, second, and third break, and post-crop, respectively. While the crop yield over three breaks for this three-Jazz application treatment was 28% less than the non-inoculated healthy control treatment, it was greater than the diseased control treatment (90% less than the healthy control) or treatments of Jazz applied as a drench to the casing layer from one to three times. In this trial, the crop yield of drench-only treatments did not significantly differ from the diseased control treatment.

A 100% incidence of mould had developed in the Jazz drench treatments by the first or second break. Disease severity was greatest and similar in the diseased control and the drench-only treatments, rated at 4.4-4.8 and 5-5.4, when evaluated at prior to third break and post-crop, respectively.

In the second trial, Jazz applied at 0.3 kg/3.6 kg gypsum/100m² production bed area to spawn only or to both spawn and supplement provided protection under conditions of severe disease pressure from green mould throughout the harvest period as evidenced by crop yield data over three breaks that was similar to that of the healthy control treatment.

The efficacy of Jazz applied three times (to spawn, supplement and as a drench to the casing layer prior to first break) was not compared to that of two applications (to spawn and to supplement) in the two trials. However, as application of Jazz to spawn or to both spawn and supplement can be expected to provide suppression of green mould, even under conditions of severe disease pressure, a third application as a drench would not normally be necessary. However, the potential benefit of a drench application to the casing layer prior to first break is that it may extend the period of disease suppression in this high value crop, or suppress a new infestation of green mould on the casing layer.

Based on these results, a maximum of three applications of Jazz are fully supported, including one as a drench to the casing layer prior to first break at 0.3-0.6 kg JAZZ in 75 L of irrigation water per 100 m² of production bed surface.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided in support of the product, Jazz, and has found the information sufficient to fulfill the conditions associated with its full registration.

References

PMRA Document Number	Reference
2330783	2011, Crop 1110 - Evaluation of JAZZ™ and Compost Inoculants for the Control of <i>Trichoderma</i> Green Mold, DACO: 10.2.3.2
2330784	2011, Crop 0411 - Evaluation of JAZZ™ for the Control of <i>Trichoderma</i> Green Mold on Mushroom, DACO: 10.2.3.2

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