

**Project Title:** Increasing lentil production through devising safe methodology for post-emergent metribuzin application in lentils

S0407R Final Report

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## **Executive Summary**

A major limitation to lentil production and profitability in SA is the effective control of broadleaf weeds, including bifora and medic. Metribuzin applied post-emergent has been used to provide control of these weeds. However this application is not registered in lentil. Experiments were conducted to determine if metribuzin could be applied safely post-emergent in lentil and, if successful, to provide Pulse Australia with data to seek a permit for use.

*Key findings and outcomes were:*

- Metribuzin applied post-emergent in lentil was generally more damaging than when applied in field peas. However safe application was achieved in lentil under some conditions.
- Highly damaging post-emergent metribuzin applications in lentil were associated with low post-treatment minimum temperatures (<5<sup>0</sup>C) for five days after application and the absence of rainfall (< 1mm) in the first 48 hours after application.
- Post-treatment climatic conditions had a greater impact on crop damage than growth stage.
- Industry consultation suggested that a permit for the use of post-emergent metribuzin in lentil for 'salvage' situations is warranted. Project personnel are currently assisting Pulse Australia in developing the application for submission to the APVMA (by October 2009) which, if successful, will allow a permit to be in place prior to sowing in 2010.
- Findings on the climatic conditions which predispose crops to damage from post-emergent metribuzin application have broader industry benefits. A major benefit of the outcomes will be in providing general crop safety guidelines for post-emergent metribuzin use in current registered crops like field peas and potentially barley.