J. Connor Ferguson

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J Connor Ferguson is in the second year of his PhD at the University of Queensland in Gatton under the direction of Professor Andrew Hewitt, Dr. Chris O'Donnell, Dr. Bhagirath Chauhan, and Professor Steve Adkins and externally advised by Dr. Greg Kruger at the University of Nebraska-Lincoln. His research focuses on identifying improved pesticide application methods and technologies to maximise herbicide efficacy and reduce pesticide spray drift. His current study is determining the effect of droplet size on the efficacy of a wide range of herbicide mode of actions for grass weed control in wheat and canola. His first study examined the consistency and repeatability of nozzles that produce a Coarse median droplet size by testing 21 different nozzle types and 5 units of each nozzle for droplet size across three spray solutions. The results showed that some nozzles are very consistent across units while others are quite variable. The research also discovered that some nozzles are very sensitive to spray solution while some are not. The outcomes from this research will help growers to select nozzle technologies that reduce spray drift, but also are consistent across their boom to reduce variability in herbicide efficacy for weed control. Additional studies are looking at grass weed control across herbicide type with these Coarse droplet producing nozzles. The overarching thesis research is hoping to identify grass weed control regimes that can be implemented today as well as new technologies to aid application and improve herbicide efficacy while reducing spray drift.

He is also working as part of a Grains Research and Development Corporation (GRDC) project titled "Options for improved insecticide and fungicide use and canopy penetration in cereals and canola." His role in this project is to help identify the spray application technologies that will reduce spray drift without reducing efficacy of fungicides and insecticides. Application technologies that have been identified as superior for weed control are being trialled for insect and fungus control to ensure that pesticide efficacy is not compromised when drift reducing technologies are recommended to the grower.

Connor is a member of the Weed Society of Queensland, Weed Science Society of America, the North Central Weed Science Society (USA), and the Association of Applied Biologists (UK). He has presented papers at the 2014 New Zealand Plant Protection Society Annual Meeting, the 69th Annual North Central Weed Science Society meeting in Minneapolis, MN USA in Dec 2014, and will present his research findings at the 13th Weed Science Society of Queensland meeting in Longreach, QLD in September.

Connor will use his CAWS Student Travel Grant to attend the and present 2 papers at the joint 56th Annual meeting of the Weed Science Society of America and the Southern Weed Science Society (USA) in San Juan, Puerto Rico in February 2016.