

AFFIRM: Decision Support Tool for 4R Nutrient Stewardship

Submitted by Alberta Agriculture and Forestry

The Alberta Farm Fertilizer Information and Recommendation Manager (AFFIRM) was originally created to be a downloadable application as a decision support software to aid farmers in making nutrient management decisions. The soon to be released updated version of AFFIRM (version 3.0) will now be a web-based application on the GoA server.

The enhancements of AFFIRM to 4R (Right Source @ Right Rate, Right Time, and Right Place) were based on extensive Alberta-based nutrient stewardship research. AFFIRM incorporates various fertilizer and manure sources with management options (timing and placement) that includes economics to help determine optimum nutrient rates for application under different moisture conditions. Optimizing agronomic and economic benefits can assist in minimizing the environmental footprint of crop production in Alberta.

AFFIRM is designed to assist farmers in making efficient nutrient management decisions specific to their farm conditions and operations. Nutrient management scenarios in AFFIRM match decisions made by experts, and can help farmers look at their own management practices for improving their economic returns. This extension tool can also be used by researchers, students, industry agents, consultants and extension specialists. AFFIRM will also support the compliance needed by farmers for the Nitrous Oxide Emission Reduction Protocol (NERP) of the Alberta Carbon Offset Market.

Funding to update AFFIRM came from the GoA Information Management Technology fund, plus the Alberta Agriculture and Forestry capital fund, operational funds from the Environmental Stewardship Branch (ESB) and the Growing Forward 2 Research Opportunities and Innovation Fund. Watch for announcement of AFFIRM (version 3.0) on the Environmental Stewardship page or you can contact the following ESB staff for more information. For the existing AFFIRM (version 2.0) program ([https://www1.agric.gov.ab.ca/\\$department/softdown.nsf/main?openform&type=AFFIRM&page=information](https://www1.agric.gov.ab.ca/$department/softdown.nsf/main?openform&type=AFFIRM&page=information))

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