

## Herbicides for control of round-leaved mallow(*Malva rotundifolia*).

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### ABSTRACT

Round-leaved mallow is an annual weed introduced from Europe that has natural tolerance to many of the herbicides used for broad-leaved weed control in western Canada. Herbicides that are presently registered for its control in cereal crops include, *fluroxypyr* @ 108 gai/ha plus 2,4-D ester @ 564 gai/ha (Attain<sup>®</sup>) and *Dichlorprop* + 2,4-D (Turboprop 600<sup>®</sup>, Dichlorprop-D<sup>®</sup> and Estaprop<sup>®</sup>). Herbicides that are registered for suppression of round leaved mallow include, *thifensulfuron methyl* @ 10 gai/ha plus *tribenuron methyl* @ 5 gai/ha (Refine Extra<sup>®</sup>) and *dicamba* @ 123 gai/ha plus 2,4-D amine @ 330 gai/ha plus *mecoprop* @ 90 gai/ha (Dyvel DS<sup>®</sup>). Field trials were conducted in 2002 and 2003 at the University of Saskatchewan with the following herbicides,– *fluroxypyr* @ 108 gai/ha plus 2,4-D ester @ 564 gai/ha (Attain<sup>®</sup>),– *fluroxypyr* @ 144 gai/ha plus *clopyralid* @ 100 gai/ha plus *MCPA* ester @ 560 gai/ha (Prestige<sup>®</sup>),– *florasulam* @ 5 gai/ha plus 2,4-D ester @ 420 gai/ha (Frontline<sup>®</sup> 2,4-D),– *florasulam* @ 5 gai/ha plus *clopyralid* @ 75 gai/ha plus *MCPA* ester @ 420 gai/ha (Spectrum<sup>®</sup>),– *thifensulfuron methyl* @ 10 gai/ha plus *tribenuron methyl* @ 5 gai/ha plus 2,4-D @ 564 gai/ha (Refine Extra<sup>®</sup> + 2,4-D). Consistent control of round-leaved mallow (over 80%) was achieved with Attain<sup>®</sup> at the 3-6 leaf stage, Frontline 2,4-D<sup>®</sup> at the 1-3 leaf stage, Spectrum<sup>®</sup> at the 1-3 leaf stage and Refine Extra<sup>®</sup> plus 2,4-D at the 1-3 leaf stage. Attain<sup>®</sup> at the 1-3 leaf stage did not provide season-long control of round-leaved mallow in 2002. This was probably due to a flush of mallow after application. The short term residual characteristics of Frontline<sup>®</sup>, Spectrum<sup>®</sup> and Refine Extra<sup>®</sup> controlled flushes of round-leaved mallow after application. In 2002, other treatments in the trial included Dyvel DS<sup>®</sup>, Estaprop<sup>®</sup>, Frontline<sup>®</sup> and Trophy<sup>®</sup>. These products gave little to no control of mallow when applied at the 1-3 leaf stage and only suppression (70 to 80%) of mallow at the 4 –6 leaf stage when rated 35 DAA. 2002 wheat seed yield was significantly increased compared to the check by all treatments except Attain<sup>®</sup> at the 1-3 leaf stage. In 2003 only Attain<sup>®</sup> at the 1-3 leaf stage resulted in significantly lower wheat yield than the UTC.