WHAT'S UP WITH WARC?

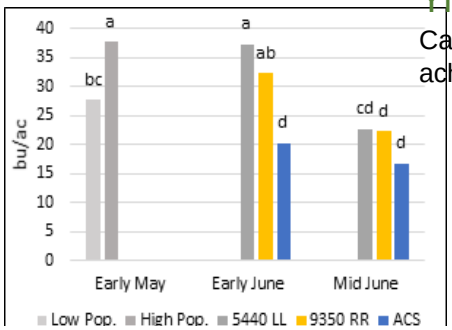
December 31st 2013

Canola Re – Seeding Options

By: Laryssa Grenkow

When canola plant densities are below the recommended target range (<50 plants m^{-2}), producers are faced with the decision whether or not to re-seed. To assess the yield response and economic returns of various re-seeding options, trials were conducted in 2010, 2011 and 2012 at Scott, Saskatoon, Swift Current, Melfort and Indian Head. Canola (5440LL) was seeded at low and high seeding rates (40 and 150 seeds m^{-2}) to simulate poor and optimal emergence conditions in early May. Additional plots were re-seeded to either hybrid canola (5440LL and 9350RR) or polish canola (ACS-C18) in early and mid-June.

Over all, the high plant population control seeded in early May yielded 10 bu/ac higher and re-seeding 5440LL in early June yielded similar. Re-seeding with 9350RR in early June resulted in significant yield increases compared to the low population control at a ¼ of all site years. Polish canola and all re-seeding options in mid-June had the lowest yields on average and never produced significant yield increases compared to the control treatments.



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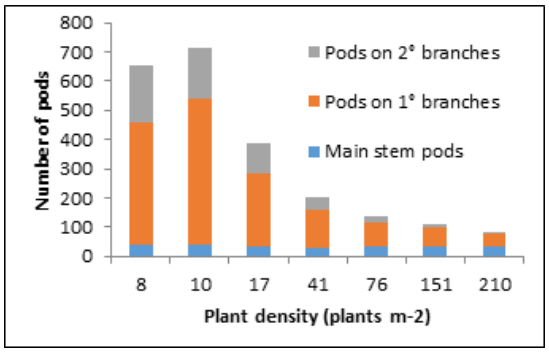
Photos taken July 20, 2012 (Scott)

Yield Potential of Low Canola Plant Population

By: Laryssa Grenkow

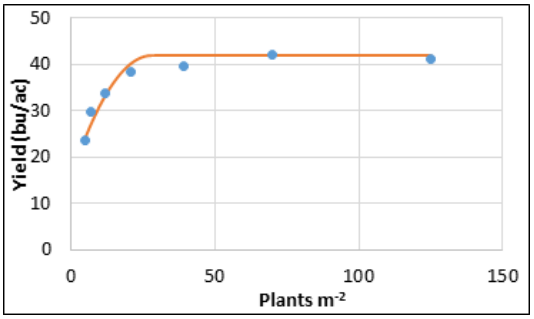
Canola plant establishment is critical to achieve seed yield and quality potential. Sufficient plant populations can also improve; crop uniformity, harvestability, weed competition and days to maturity. The Canola Council of Canada recommends a target plant density of 70-140 plants m^{-2}; below 50 plants m^{-2} yields can be reduced. However, producers may choose to seed lower plant densities due to improved plant vigor and increasing seed costs of canola hybrids. Plant density can also be reduced by late spring frosts or flea beetle damage. Under normal conditions, seedling survival is generally only 50%. Modern hybrid cultivars have the ability to compensate at low plant densities by increasing the number of pods per branch and seeds per pod.



Data collected at Scott and Saskatoon in 2010 shows that a greater number of pods were found on primary and secondary branches on plants from low plant population plots.

But to what extent can low plant populations compensate? What is the minimum plant population required to reach maximum yield of hybrid canola? To address these questions, trials were conducted from 2010 to 2012 at Scott, Saskatoon, Swift Current, Melfort and Indian Head SK to determine the yield potential of low canola plant populations. Canola was seeded at 5, 10, 20, 40, 80, 150 and 300 seeds m^{-2}.

Minimum plant density to reach maximum yield potential ranged from 15-41 plants m^{-2}. Although yield potential can be achieved with lower than recommended plant populations, it is important that there is uniform distribution of seedlings in the field and adequate weed control. We still recommend targeting a higher plant population at seeding.



WARC WEATHER STATION

(April 1st – December 30th)

2013 Precipitation (mm) = 363 Average Precipitation (mm) = 352

First Frost: September 28th (-3.5°C)

Average First Frost: September 9th – 15th

Growing Degree Days (base temp 5 °C) = 1572

Average Growing Degree Days = 1436

UPCOMING EVENTS

Crop Production Show – January 13th – 17th 2014

Agri – ARM Meeting – January 17th 2014

Crop Opportunity Meeting – March 6th 2014

Scott Field Day- July 16th 2014