CHICKPEA VARIETY,SOWING RATE AND ROW SPACING TRIAL

Nathan Border
District Agronomist, NSW DPI.

Chickpeas are potentially a profitable winter crop for this region. They are well suited to warmer environments, they flower and fill grain in warmer temperatures than other winter pulses. They show good drought hardiness, they are able to extract moisture from good fallows and they can command a high price for their grain.

There are two general types, desi and kabuli varieties. Desi chickpeas are exported to India for human consumption (as split peas or whole). Small seeded kabuli chickpeas (<7mm diameter) compete with desis, however larger kabulis command a higher price (significant premiums apply to each 1mm increment in seed diameter).

The main diseases for this region would be ascochyta and phytophthora root rot (depending on soil type and paddock history). Both cause wilting and death of the plants and thrive in wet, humid conditions and have slowed the development of the chickpea industry in the state. Now with tolerant varieties, the chickpea crop has economic potential for this region.

Aim

This series of trials was set up to determine the best management practices for growing the new varieties of chickpeas here in Condobolin. These varieties show ascochyta and phytophtora resistance which should eliminate the need for fungicides and therefore make chickpeas a profitable option here in the western region.

As with all pulse varieties, seed costs is a major factor determining the rate of adoption. Therefore the sowing rate trial aimed to determine the optimal sowing rate for both production and on an economic basis. Previous research has shown that early sowing can compensate for lower plant numbers, however the research has not been done on these varieties in this region.

The row spacing trial was done in response to research which suggests that sowing on wider row spacings (50 – 75cm) does not decrease yield (in the absence of weeds), in a no tillage situation.

A lot of these trials have been done on heavier soil types, so it was necessary to test this theory in our red loams.

There is also research to suggest that the wider row spacing will have positive effects in reducing disease levels and metering out stored subsoil moisture. Air flow through the crop and a decrease in humidity in the crop canopy also leads to lower disease levels.

Method

The trial was dry sown on the 31st May. The seed was inoculated and sown with 80kg/ha of MAP. The trial emerged following the rainfall on the 11th June.

The varieties used in the trial include: Flipper, Yorker and Genesis 509
The sowing rates used in the trial include: 45, 65 and 85kg/ha
The row spacings used in the trial include: 25, 50 and 75cm

The trial was sprayed with Sencor at 280g/ha PSPE.

Results

Due to the lack of rainfall during spring, the resulting yields were very disappointing. Yields were too low to make any reasonable comparisons and consequently the statistical analysis found no significant differences between treatments.

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