

Chickpea agronomy demonstration

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Aim

To evaluate two chickpea varieties sown at two seeding depths and two seeding rates by two different row spacing's.

Background

This demonstration aims to illustrate some of the agronomic features of chickpeas on a paddock-scale. Two different trials were being tested; the first to discover which variety (Slasher or Genesis 836) grew best under differing seeding depths. The other question to be answered concerned the seeding rate in combination with seeding depth.

Trial Details

Property	Wellparks, SA & AM Roach, East Pithara
Plot size & replication	15.3m x 100m x 3 replicates
Soil type	Red loam
Soil pH	6.5
Paddock rotation	2009 wheat, 2010 wheat
Variety	Genesis 836 and as per protocol
Sowing date	23/5/11
Seeding rate	60 kg/ha and 100 kg/ha
Fertiliser	23/5/11: 50 kg/ha Agflow
Herbicides	1.1 kg/ha Simazine, 0.4 kg/ha Diuron
Growing Season Rainfall	251mm

Trial Design and Layout

There were two separate experiments in this demonstration: (1) two varieties (Slasher and Genesis 836) by two seeding depths (5cm and 10cm) (2) two row spacing's (narrow (30cm) and wide (60cm) with every second tube blocked off) by two seeding rates (100 kg/ha and 60 kg/ha).

Results

Table 1: Chickpea average yield of different seeding depths, rates and varieties.

Treatment	Average Yield (kg/ha)
<i>Row Spacing x Seeding Rate</i>	
30cm, 60 kg/ha	222
30cm, 100 kg/ha	246
60cm, 60 kg/ha	134
60cm, 100 kg/ha	183
L.S.D.	NS
<i>Variety x Seeding Depth</i>	
Slasher 5cm	113
Slasher 10cm	192
Genesis 836 5cm	143
Genesis 836 10cm	151
L.S.D.	NS

Comments

Grub infestations attacked the pods of the chickpea, resulting in a lack of seed development. As a result a high number of pods are unable to produce seed, significantly reducing crop yield.

Poor Diuron incorporation resulted in weeds in furrow but not on ridges.

There was no significant difference between Slasher and Genesis 836.

Wider row spacing resulted in reduction in chickpea yield, however this was not significantly different.

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