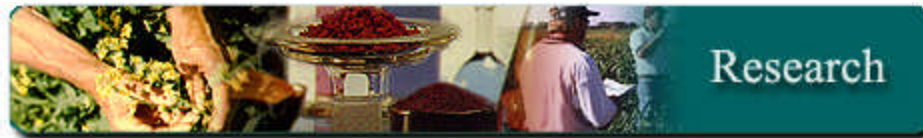




Manitoba
Agriculture
and Food



Chickpea Evaluation

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Site Information:

Location: Laurier, Manitoba
Cooperator: Ferme Saquet

Seeded: May 25, 2000

Background:

Canada is now the world's largest exporter of chickpea. Chickpea harvested area in 2000 was estimated at 680,000 acres, an increase from only 12,000 acres in 1996. Canada produces both desi and kabuli type chickpeas. Chickpea production is expected to nearly double from present levels in the next five years.

Strong market potential and high gross returns are stimulating a significant increase in chickpea production in the Brown soil zone (southern Saskatchewan) where crops other than wheat had not been traditionally grown on a large scale. Of the total seeded area, large-sized kabuli-type chickpea accounts for 54% and small-sized desi-type chickpea accounts for the remaining 46%. The projected acreage of seeded chickpea may reach 1,360,000 acres by 2005, with 90% of the acreage being in Saskatchewan.



Objective:

The trial will evaluate new chickpea varieties for yield and maturity.

Design, Materials and Operation:

Five varieties were included in this trial (Table 1). The plots were 1.15m by 6m in size and replicated three times. The chickpea seed was inoculated. Select was sprayed for grassy weed control.

Table 1: Chickpea varieties

| | |
|-----------|------|
| Myles | |
| Sanford | |
| CDC Yuma | B-90 |
| CDC Chico | |

Results:

Harvest could not be completed for this trial. Germination was poor and the chickpeas did not reach maturity.

Important Considerations and Recommendations:

Chickpea has been grown for centuries in semiarid regions of the world, but are still new on the Canadian prairies. Studies at Swift Current demonstrate that to reach full maturity, desi chickpea requires 80 to 115 days or 1000 to 1200 growing-degree-days, and kabuli chickpea needs 90 to 120 days or 1100 to 1300 growing-degree-days. In recent years, Canadian chickpea highest success came from the southwest corner of Saskatchewan. Here the relatively long growing season, the high GDD desirable for warm-season crops and the minimal amount of disease at the seedling stage have made chickpea a winner under these conditions. Moisture deficit is the major constraint in choosing an appropriate broadleaf crop.

Chickpea is showing its best fit in southern Saskatchewan, mainly due to its deep rooting systems, the relatively strong ability to tolerate water and drought stresses, and the need for heat stress late in the life cycle, to terminate the indeterminate growth habit.

A key factor for Canadian -grown chickpea to attract international buyers is superior seed quality; this is fulfilled by our lower inputs for the dry land chickpea production as compared to other parts of the world. Chickpea produced in this region has large seed size with high protein and lysine concentrations, unique starch and oil properties, desirable for human health.

Conclusions:

Chickpea production in the Northwest Region of Manitoba will be limited because of the limited growing-degree-days, which limits its ability to mature. Extra disease pressure is evident in climates with above normal precipitation. Present chickpea varieties are not considered suitable for high quality production in northwestern Manitoba.

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