Abstract

This project on improvement of Omani local cultivars of bread wheat through breeding was organized at Agriculture Research Station, Alkamil, AlSharqiya Governorate, Sultanate of Oman. Sarrya wheat cultivar submitted by Farmer Fields, Alkamil Research Station in AlSharqiya, Oman was selected as a standard local check variety. This research project focused on developing the Omani local varieties of bread wheat through breeding and intensive seed multiplication. The seeds of F1 generation were grown under open pollination (2013) in two locations (Najd and Nizwa) and observed (2013). The seeds of F1 generation were grown in a controlled pollination and open environment (2013, 2014). The seeds of F7 generation were grown in controlled pollination and open environment (2013, 2014, 2015). The results of this trail showed a significant difference among the Omani local cultivars in the study. The superior traits of these cultivars were selected for the indicated characters under study.

Wheat cultivation

Bread Wheat (Triticum aestivum L.) is the world’s third largest crop after corn and rice. It is a leading source of vegetable protein in food. The Omani farmers take care of wheat crop since the ancient times because of the ecological importance and its high nutritional value. They consider wheat as the third largest crop in the world after corn and rice. It is very good for pastries and other baked goods and for preparation of many Omani dishes. Local Wheat Varieties

During the last four decades, wheat cultivars of the breed wheat cultivars were introduced from CIMMYT and the international wheat and maize center (CIMMYT). These varieties were tested in several years under various environmental conditions. The area of wheat (ha) and production during the years

Improved Wheat Varieties

It is worth mentioning that six exotic cultivars were selected under the guidance of the Agriculture Research Station, Jimah, Oman. The seeds of F1 generation were grown under open pollination (2012) in two locations (Najd and Nizwa) and observed (2013). The results of this trial showed a significant difference among the Omani local cultivars in the study. The superior traits of these cultivars were selected for the indicated characters under study.

Selection Criteria

- Grain yield (g/ha)
- Spike length (cm)
- Plant height (cm)
- Shain, Medium, Long Tiller per plant
- Days to heading and maturity
- Color of kernel: Light yellow
- Shape of spike: Erect
- Disease and insects: Others like Phi, B. Dial, A. etc.

Genes Freese of first generation obtained for 12 twice crosses in 2013

The seeds of F1 generation were grown under open pollination (2012) in two locations (Najd and Nizwa) and observed (2013). The seeds of F1 generation were grown under open pollination (2013) in two locations (Najd and Nizwa) and observed (2014). The seeds of F7 generation were grown under open pollination (2013, 2014, 2015) in two locations (Najd and Nizwa) and observed (2014, 2015, 2016). The results of this trial showed a significant difference among the Omani local cultivars in the study. The superior traits of these cultivars were selected for the indicated characters under study.

Concluding remarks

This research project focused on developing the Omani local cultivars of bread wheat with high yield potential and early maturity limits on high yielding and good bread quality. This research project showed a significant difference among the Omani local cultivars in the study. The superior traits of these cultivars were selected for the indicated characters under study. This research project will continue in order to improve the protein quality of F7 generation of bread wheat. This research project will continue in order to improve the protein quality of F7 generation of bread wheat.

Bread Wheat Hybrids selected and named

The seeds of F1 generation were grown under open pollination (2012) in two locations (Najd and Nizwa) and observed (2013). The seeds of F1 generation were grown under open pollination (2013) in two locations (Najd and Nizwa) and observed (2014). The seeds of F7 generation were grown under open pollination (2013, 2014, 2015) in two locations (Najd and Nizwa) and observed (2014, 2015, 2016). The results of this trial showed a significant difference among the Omani local cultivars in the study. The superior traits of these cultivars were selected for the indicated characters under study. This research project will continue in order to improve the protein quality of F7 generation of bread wheat.