



International Conference

# FROM SEED TO PASTA III

**A SUSTAINABLE DURUM WHEAT CHAIN  
FOR FOOD SECURITY AND HEALTHY LIVES**

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## BREEDING AUSTRALIAN DURUM WHEAT FOR QUALITY

Gururaj Kadkol, Mike Sissons

*NSW Department of Primary Industries, Tamworth Agricultural Institute, 4 Marsden Park Road, Calala, NSW 2340*

Durum wheat from the Northern region (NSW and QLD) is considered world class for its technological processing quality by the European pasta makers. On average, annually, 200,000t durum grain has been exported from NSW in the recent years. The Durum Breeding Australia (DBA) Northern program works to enhance the quality of the crop further and combine quality traits with higher yield and disease resistance into new varieties. Significant improvements have been achieved to date in semolina yellow pigment (YP), 1000 grain weight (TGW), screenings (SCR) and semolina yield (SY) through the release of DBA Lillaroi. In our breeding program strong selection is practised for grain protein content and YP from the early stages (S0) in breeding. Analysis of the selection data will be presented to show the realised heritability and genetic gain for these traits. Analysis of the correlation between the various quality traits in breeding populations and simultaneous selection for these traits will be discussed. Selection for detailed grain, semolina and pasta making quality traits is practised S2 onwards. This approach has resulted in the development of high yielding lines with excellent grain and technological processing quality under the frequent adverse terminal drought conditions experienced in the Northern region.

**ABSTRACT**