

## Some soils may not suit durums

Grain growers outside of the major durum producing areas who are keen to try this cereal have been urged to study their soils before embarking on this addition to their enterprise mix.

The advice comes from David Cooper of the University of Adelaide who says that current durum varieties are intolerant of saline soil conditions (and also high pH and high soil boron levels), more so than locally-bred bread wheat varieties.

He says that the current major durum producing areas are the lower north, northern Mt Lofty ranges and central Yorke Peninsula – regions where most subsoils contain low levels of salt.

“The other major cropping areas that are likely to achieve high protein (required in durums) such as the Eyre Peninsula, Murray Mallee and the plains stretching from Two Wells through Brinkworth to Pt Pirie are dominated by subsoils with higher salt concentrations,” Mr Cooper said.

“A large percentage of SA’s subsoils are affected by transient salinity. Transient salinity is not caused by rising groundwater. The salt in the soil is prevented from being leached by impermeable sodic subsoils, low rainfall and high evaporation/transpiration levels.”

Mr Cooper says that when these soils dry out, say in a dry spring, then the concentration of salt in them increases, affecting plant growth and production.

However, research supported by SAGIT, has shown that losses due to salt toxicity can occur without visible symptoms such as bare patches in crops being evident.

“In the SA environment, the period in the growing season with the highest risk (of crop losses) runs from flowering until the completion of grain fill,” Mr Cooper says.

“At this time the moisture requirement (of crops) is high, soils are drying out and the frequency of significant rainfall events is diminishing. Consequently crops are likely to be relying on subsoil moisture which is high in salt and boron across much of the cereal zone

“To aid in choosing a suitable paddock, soil sampling at a depth of 30 to 60cm will provide very useful data. Salinity levels above 4dS/m ECe, and boron in excess of 15ppm, are likely to cause problems in a dry spring. Alternatively EM surveys will show up areas with high salinity levels.”

*Next week – new information on high soil pH and durum production.*

*ENDS: dc1ok*