# Scalded? Try this! Waterponding

Ray F. Thompson
*Bogan-Central West Catchment Management Authority, Australia*



The XXI International Grassland Congress / VIII International Rangeland Congress took place in Hohhot, China from June 29 through July 5, 2008.

Proceedings edited by Organizing Committee of 2008 IGC/IRC Conference

Published by Guangdong People's Publishing House

# Scalded ?Try this !Waterponding

*R . F . Thompson*
*Catchment Officer Bogan-Central West Catchment Management Authority*
*PO Box 121 Nyngan NSW 2825 Australia . E-mail : Ray .Thompson@cma .nsw .gov .au*

**Key words :** survey ,construction ,seeding of banks

**Abstract** Bare , scalded , semi-arid areas of Australia are being transformed into productive grazing lands with the environmentally proven waterponding technique which is returning clear profit to landholders .

The Nyngan Central West CMA District , since 1985 has taken the waterpond method from a struggling reclamation technique to a scald rehabilitation technique that is being used world wide .

**Introduction** Removal of native vegetation from the semi-arid soil by drought and over utilisation , accelerated by wind and water erosion of the red duplex soil has left a bare environment called scalds or clay pans . A 3mm crust on top of the exposed clay subsoil prevents water penetration and lodgement of seed .Waterponding has worked better than any other method previously tried .Waterponding is holding water on the scald in horse-shoe shaped banks of about 0 .4 hectare each .Each pond has a bank of approximately 240 metres long and retains up to 10cm of water after rain .The ponded water leaches soluble salts from the scald surface . This improves the remaining soil structure , inducing surface-cracking , better water penetration and entrapment of wind-blown seed .Increase in native pasture yield has made waterponding an economic method of raising production .

**Survey** Waterponds are surveyed with a spectra-physics laser leveller mounted on and within a dual cab 4WD vehicle . When the waterpond position is being surveyed , it is marked on the scald by a vacuum tine marker which is attached to the back of the vehicle . This surveying and marking unit allows one person to survey and mark over one hundred waterponds in a day , ready for the construction phase to begin . The equivalent to one day's survey is two day's construction .

**Construction** Waterpond banks should be constructed to a height of 45cm and basal width of 1 .8 m to account for wave action , stock trampling , tunnelling , flooding and settlement of bank .In most soil conditions , banks can be constructed by a road grader making three passes ; one pass on the inside and two passes on the outside . Blade position is a critical factor in building water ponds .

**Seeding of banks** Waterponded areas normally take about five years to become productive . Reseeding the banks has the potential to reduce this time to three years or less depending on seasonal conditions .Sowing of waterpond banks is carried out simultaneously with construction . Seed is sown during the inside pass along the inside batter of the bank just above natural ground level .

**References**

Soil Conservation Service of NSW 1987 . *Journal of Soil Conservation , New South Wales* , Volume 43 , Number 2 .
R F Thompson . 1991 . *Earthmovers Training Course* , Unit 20 . Special earthworks incorporating waterponding , beach reclamation and mining rehabilitation , ,7-39 .