IRRIGATION

	Below Standard Practice	Acceptable Practice	Innovative Practice
Farm Plan Water Source	No farm irrigation management plan	Farm plan or irrigation design available for the farm and implementation commenced.	Farm plan/irrigation design fully implemented
	Irrigation water quality is not known	Irrigation water quality is known and management practices are in place to manage potential salinity or other issues	

Surface Irrigation - Irrigation Management

Application rates	Water use is not measured across the farm.	Water application is measured and recorded for each paddock and the whole farm.	Water use is measured and recorded for each paddock on the farm.
		Water is applied to achieve application volumes and flow rates identified in the irrigation management plan.	Water use is measured and recorded for individual sections of the farm.
Cut off	Irrigation water is cut off once water has reached the end of the bay.	Fixed cut -off points for each watering or a fixed interval, or a fixed amount for each bay or set of bays, determined by experience.	Cut-off point depends on bay conditions (ie. soil moisture, wind, pasture density) at each irrigation event.
Irrigation interval	Timing of irrigation is ad hoc, resulting in sub-optimal pasture production and poor water use efficiency.	Timing of irrigation based on plant requirements, ie. replacement of measured plant water usage or soil moisture (measurement instrumentation).	Irrigation scheduling based on estimated plant water use from measured rainfall and evaporation records. Automated scheduling is used.
	Irrigation on a set rotation, not varied.	Irrigation on a set rotation, varied according to weather conditions and experience. More than one form of scheduling information is used.	
Watering time	On more than 50% of the bays on farm, watering time is greater than eight hours resulting in water logging and low pasture productivity.	On more than 80% of bays, watering time is between four and eight hours providing near optimum pasture productivity.	More than 90% of bays are watered within two and six hours; duration of irrigation follows design guidelines related to soil type and bay characteristics to avoid water logging.
Automation	No automation used	Semi-automation or full automation of irrigation	Fully automated irrigation system

Surface Irrigation - Farm Drainage and Surface Runoff

	Below Standard Practice	Acceptable Practice	Innovative Practice
Farm run-off	Runoff water quality is not known and water is not reused	Quality of irrigation drainage is known and where acceptable water is reused or shandied and reused.	
	Irrigation run-off regularly leaves the property, resulting in financial losses and potentially contributing to nutrient loads in rivers & streams.	No irrigation run-off leaves the property.	Run off is recycled.
		Where the farm has access to community drainage runoff entering the community drain meets all local regulations and guidelines	
	Bay runoff regularly exceeds 10% of water applied	Bay runoff is limited to 5-10% of water applied	
Re-use storage	None or little of the irrigated area drains to a re-use storage.	Total Irrigated area drains to a re-use storage.	
	No (or limited) re-use storage in place.	Sufficient re-use storage to meet local legislative requirements.	
	Re-use storage always full and /or none or limited re-use water used on farm.	Reuse storage emptied when full.	Re-use storage managed to maintain storage availability while also making best use of the reuse water on farm. Re-use storage emptied at end of each irrigation and used on farm.
Re-use pump	No permanent pump on re-use system.	Permanent pump and motor on re-use system.	Correctly sized permanent pump and motor on re-use system; automated operation.
Re-use area	Re-use water is used on less than 10% of the irrigable area, potentially resulting in salt and or nutrient problems.	Re-use water used on more than 60% of the irrigable area.	Re-use water spread over full irrigable area.

Surface Irrigation - Farm Drainage and Surface Runoff (cont'd)

	Below Standard Practice	Acceptable Practice	Innovative Practice
Waterlogging & bay drainage	Water still lying on bays on more than half of the farm 24 hours after water is cut off, causing poor pasture management.	Minimal waterlogging in bays on less than half of the farm 24hrs after irrigation.	No waterlogging; no free water lying on bays (ie. no splash from motor bike) 12 hrs after irrigation water is cut off.
	Water backs up in most bays (>10m and /or six hrs) for 50% of the farm causing water logging.	Minimal water backing up on bays (<10m and /or 6 hrs) for 80% of the farm.	No water backing up in the bays.
		Farm has been designed to achieve optimal bay slope. Works have commenced to achieve optimal slopes.	All bays have slopes of 1:800
Lasering	None, or limited attempts, have been made to improve irrigation bay drainage through lasering.	More than half of the irrigable farm area has been laser graded, particularly those areas with poor drainage.	All irrigation bays have been laser-graded. According to the farm plan/design.
Fencing & maintenance of channels and drains	None or limited fencing on channels and drains to keep stock out.	Main channels and drains fenced.	All channels and drains fenced.
	None or limited efforts to keep channels and drains free of weeds.	Regular weed control in main channels and drains.	All channels and drains permanently kept free of weeds.

Pressurised Irrigation

	Below Standard Practice	Acceptable Practice	Innovative Practice
System design	Unaware of the amount of water applied by the system for individual irrigation events.	Aware of original application specifications or system when installed and confident it can meet peak crop water requirements.	Water use per ha measured and recorded at each irrigation and compared with expected application rates.
	Distribution uniformity not checked	Distribution uniformity checked annually using catch cans is >80%.	Distribution uniformity checked seasonally using catch cans is >80%.
	Water delivery volume not metered or calculated	Water delivery volume checked annually	Water delivery volume checked seasonally or more regularly if metered.
Application losses	Do not know if applying too much irrigation at each application, resulting in deep drainage and/or surface run-off.	Aim to wet root zone without excess water going to deep drainage and/or surface run-off.	System monitored and managed to avoid deep drainage and/or run-off.
Scheduling	Irrigation scheduling not based on monitored soil moisture or plant requirements.	Irrigation scheduling based on estimated plant water use from rainfall and evaporation records from own weather station or on the internet.	Irrigation scheduling based on plant water use and accurate soil moisture monitoring.
Maintenance	Irrigation equipment not maintained or is repaired only when a break down occurs.	Irrigation equipment serviced regularly, as per manufacturers recommendations.	Irrigation equipment serviced regularly as per manufacturers recommendations, including checks for efficiency of pumps and distribution uniformity.
	Never perform system pressure check.	Pressure check regularly.	Pressure check monthly.
Monitoring	Seasonal water use not measured.	Seasonal water use measured.	Water use measured for each irrigation and records kept.

Water Source - Groundwater

	Below Standard Practice	Acceptable Practice	Innovative Practice
Groundwater Resource exploration	Never explored for pumpable aquifers on-farm; or explored, found viable, but did not take follow up action.	Have assessed groundwater resource through exploratory drilling and (when pumpable aquifer was found) installed groundwater pump.	
Groundwater resource management	Groundwater is not considered in the management of the farm's resources, or groundwater is used but the quality of the shandy is never checked.	Groundwater is used and incorporated in the farm's water budget following local regulations and guidelines for groundwater use.	Records are kept of water quality and soil is monitored to prevent toxicities.
Salinity hazard awareness	Not aware of watertable levels on farm.	Shallow observation bores installed on critical low lying areas on the property and measured at appropriate levels.	Has a network of observation bores over the property, monitors network at appropriate intervals, and keeps records.
	Not aware of watertable salinity on farm.	Has own salinity meter; measure water salinity at appropriate intervals.	Measures water quality in observation bore network at appropriate intervals and keeps records.