

Travelling Irrigators



THIS CHECKLIST

This is a minimum list of checks of travelling irrigators that should be made before the irrigation season starts.

BE SAFETY CONSCIOUS – ELECTRICAL, HEIGHT AND MECHANICAL HAZARDS PRESENT.

Checks include structural and mechanical checks of the structure, and performance checks of water flow, nozzle delivery and pressure. It can be helpful if two people work together to perform checks.

- **Begin the checks with the machine turned off**
 - Ensure the electrical isolator switch is tagged/locked to prevent accidental starting.
 - Observe the state of the machine, looking for damage or wear and tear.
 - Tighten, adjust, maintain or replace components as required.
- **Make checks with the system running**
 - Consider which aspects required qualified expert (e.g. electrical).
 - Ensure the irrigator travel path is clear before starting the machine.
 - Check the operation of the machine, drive system and nozzles.
- **Check system calibration**
 - Ensure the depth and uniformity of application are as expected.

Many items can be fixed on-farm. Others require specialist skills or equipment. Tick the check boxes as each item is found OK. Make notes on the checklist overleaf against items requiring follow-up attention.

OTHER RESOURCES

System Operation Manual

Every system should be supplied with a system operation manual. Read it and follow instructions. The manual may include extra checks not listed here. It will give more detail than this checklist including information specific to your system.

Other Checklists

This checklist is only for travelling irrigators themselves. Irrigation New Zealand has additional checklists for the water supply system (intakes, pumps and mainlines) and for other irrigation types.

See www.irrigationnz.co.nz

Calibration Guidelines

IRRIG8Lite software and IRRIG8Quick system calibration guidelines and worksheets for travelling irrigator systems can be downloaded from www.pagebloomer.co.nz/resources.

PRE-SEASON CHECKLIST

Checks completed by: _____

Signature: _____

Date: _____



SYSTEM OFF CHECKS

(SYSTEM NOT RUNNING)

Component	Check
Safety	<input type="checkbox"/> Electrical isolator and motor switches are tagged/locked
Hose reel and cable reel	<input type="checkbox"/> Structure condition, corrosion or damage <input type="checkbox"/> Wheel lug bolts, tyre condition and pressure <input type="checkbox"/> Gearboxes, drive shafts – lubricate as required <input type="checkbox"/> Cable winch action and ratchets <input type="checkbox"/> Tighten all bolts, check pins <input type="checkbox"/> Lubrication, grease (see manual) <input type="checkbox"/> Seals and flanges
Gun cart	<input type="checkbox"/> Structure condition, corrosion or damage <input type="checkbox"/> Wheel lug bolts, tyre condition and pressure <input type="checkbox"/> Tighten all bolts, check pins <input type="checkbox"/> Condition of other connections <input type="checkbox"/> Lubrication, grease (see manual) <input type="checkbox"/> Seals and flanges <input type="checkbox"/> Rotating boom turntable not worn, allows free turning
Drag hose	<input type="checkbox"/> Hose condition for wear, kinks or other damage <input type="checkbox"/> Boots – tighten bands if necessary
Sprinklers	<input type="checkbox"/> Nozzle orifice condition – replace if wear detectable <input type="checkbox"/> Ensure rotating nozzles are free turning and cages not damaged <input type="checkbox"/> Splash plate, angle, alignment <input type="checkbox"/> Components for looseness, freedom of movement <input type="checkbox"/> Outlet nozzle orifice condition – replace if wear detectable <input type="checkbox"/> Electronic controls and battery charge
Prepare to start	<input type="checkbox"/> Before starting: Ensure nothing is parked in front of the irrigator

SYSTEM ON CHECKS

(SYSTEM RUNNING)

Component	Check
Hose reel and cable reel	<input type="checkbox"/> Reel turning smoothly <input type="checkbox"/> Hose or cable winding in correctly <input type="checkbox"/> Inlet pressure gauge – replace if necessary <input type="checkbox"/> Inlet pressure – preferably at furthest hydrant
Drag hose	<input type="checkbox"/> Turbine functioning
Gun cart	<input type="checkbox"/> Cart moving correctly <input type="checkbox"/> Inlet pressure – replace gauge if necessary <input type="checkbox"/> No leaks
Drag hose	<input type="checkbox"/> No leaks <input type="checkbox"/> Not mis-shapen
Sprinklers	<input type="checkbox"/> Each sprinkler is turning correctly and cage not damaged <input type="checkbox"/> No leaks, repair or replace as necessary <input type="checkbox"/> Pressure above last sprinkler, above pressure regulator if fitted
Gun	<input type="checkbox"/> Operation <input type="checkbox"/> Gun angles are correct, switches direction at right locations
Control unit	<input type="checkbox"/> Correct functioning
Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>