

Drip Micro Irrigation



THIS CHECKLIST

This is a minimum list of checks of drip or micro irrigation systems that should be made before the irrigation season starts.

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

Checks include physical checks of the system, and performance checks of water flow, emitter 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 the centre pivot or linear move machine itself. 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 drip micro irrigation 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"/> Pump switch is tagged/locked
Water supply	<input type="checkbox"/> Checks completed
Filtration	<input type="checkbox"/> Condition of filter media <input type="checkbox"/> Rings/screens clean with no holes <input type="checkbox"/> Pressure gauges in good condition
Fertigation/ Chemigation	<input type="checkbox"/> No signs of corrosion <input type="checkbox"/> System clean, no blockages <input type="checkbox"/> No leaks <input type="checkbox"/> Wiring and hydraulic lines secure
Control valves	<input type="checkbox"/> Valves, wiring and hydraulic lines secure
Off-takes	<input type="checkbox"/> Manual taps correctly set
Flushing points	<input type="checkbox"/> Flushing points accessible <input type="checkbox"/> Caps in place
Pipe network	<input type="checkbox"/> Sub-mains/headers <input type="checkbox"/> Laterals undamaged
Emitters	<input type="checkbox"/> Every emitter against nozzle chart, for damage and correct size <input type="checkbox"/> Risers for wear or damage
Control unit	<input type="checkbox"/> Electronic controls and battery charge
Prepare to start	<input type="checkbox"/> Before starting: Pump system secure

SYSTEM ON CHECKS

(SYSTEM RUNNING)

Component	Check
Pipe network	<input type="checkbox"/> For leaks along mains <input type="checkbox"/> For leaks along sub-mains <input type="checkbox"/> For leaks along laterals <input type="checkbox"/> Laterals flush clear
Emitters	<input type="checkbox"/> All flowing correctly <input type="checkbox"/> Moving sprinkler parts free
Headworks	<input type="checkbox"/> For leaks <input type="checkbox"/> Flow rate of each block
System pressure	<input type="checkbox"/> Pump pressure for each block <input type="checkbox"/> Pressure before and after filters <input type="checkbox"/> All off-take pressures correct <input type="checkbox"/> End pressure – tested at ends of far laterals
Calibration	<input type="checkbox"/> Calibration checks completed
Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>