

# Sprayline Irrigation



## THIS CHECKLIST

This is a minimum list of checks of sprayline 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, sprinkler delivery and pressure. It can be helpful if two people work together to perform checks.

- **Begin the checks with the machine turned off**
  - Ensure electrical isolator or motor switches are tagged/locked to prevent accidental starting.
  - Observe the state of equipment and components, 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 pumping system is safe before starting the system.
  - Check the operation of the pump system, pipework, hydrants/off-takes, laterals 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 for sprayline irrigation systems. With thought, it may also be used for long-lateral systems. 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](http://www.irrigationnz.co.nz).

### **Calibration Guidelines**

IRRIG8Lite software and IRRIG8Quick system calibration guidelines and worksheets for sprayline irrigation systems can be downloaded from [www.pagebloomer.co.nz/resources](http://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"/> Rings/screens clean with no holes <input type="checkbox"/> Pressure gauges in good condition
Control valves	<input type="checkbox"/> Wiring and hydraulic lines secure
Off-takes	<input type="checkbox"/> Hydrants secure <input type="checkbox"/> Manual valves correctly set
Flushing points	<input type="checkbox"/> Flushing points accessible <input type="checkbox"/> Caps in place
Laterals	<input type="checkbox"/> Laterals undamaged <input type="checkbox"/> Tapping saddles/connections secure <input type="checkbox"/> Risers for wear or damage
Sprinklers	<input type="checkbox"/> Every sprinkler against nozzle chart <input type="checkbox"/> Every sprinkler for wear and damage <input type="checkbox"/> Alignment correct
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
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"/> Lateral inlet pressures* <input type="checkbox"/> Lateral end pressures**
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
Off-takes	<input type="checkbox"/> Hydrants not leaking
Sprinklers	<input type="checkbox"/> Application pattern <input type="checkbox"/> Moving sprinkler parts free
Calibration	<input type="checkbox"/> Calibration checks completed
Other	<input type="checkbox"/> <input type="checkbox"/>

\* Can measure at first sprinkler

\*\* Can measure at last sprinkler