# Centre Pivot and Linear Move Irrigators



# THIS CHECKLIST

This is a minimum list of checks of pivot and linear systems 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 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 centre pivot and linear move systems can be downloaded from www.pagebloomer.co.nz/resources.

# PRE-SEASON CHECKLIST

Checks completed by:	IRRIGATION
Signature: Date:	NEW ZEALAND

Signature:	D	Pate:	NEW ZEALAND	
SYSTEM OFF CHECKS (SYSTEM NOT RUNNING)			SYSTEM ON CHECKS (SYSTEM RUNNING)	
Component	Check	Component	Check	
Safety	Electrical isolator switch is tagged/locked	Pivot point	For leaks, movement	
Pivot point	Lubrication, grease	Riser and spans	For leaks along spans and at towers	
Drag hose (linear)	Condition of other connections		Flanges – call service company if flanges leaking	
	Hose condition and fittings secure	Towers	<ul> <li>Motors, gear box and drive shaft operation for noise or vibration</li> </ul>	
Towers	U joints for wear, replace if necessary	Sand trap	Empty and flush	
	Cable and rod connections  Wheel lug bolts, tyre	Sprinklers	Each sprinkler is turning correctly and cage not damaged	
	condition and pressure  Gearboxes, drive shafts –	End gun, corners	Droppers for leaks, repair or replace as necessary	
Riser and spans	lubricate as required  Boots – tighten bands if necessary		<ul><li>Connections</li><li>Operation</li></ul>	
- 1	Flanges		Gun angles are correct, turns on and off at right locations	
End gun, corners	Connections  Wiring and hydraulic lines		Corner arm sprinklers turn on and off correctly	
Sprinklers	Every sprinkler against nozzle chart, for damage and correct size	<b>System pressure</b>	<ul><li>Inlet pressure gauge with alternative – replace if necessary</li></ul>	
	Droppers for wear or damage replace as necessary	ge,	Inlet pressure is correct	
Control unit	Electronic controls and battery charge		<ul><li>End pressure – above pressure regulator at last dropper</li></ul>	
Prepare to start	Before starting: Ensure nothing is parked in front of the irrigator	Other		