



Water Quality Used for Weed Control in WA Survey 2022/23

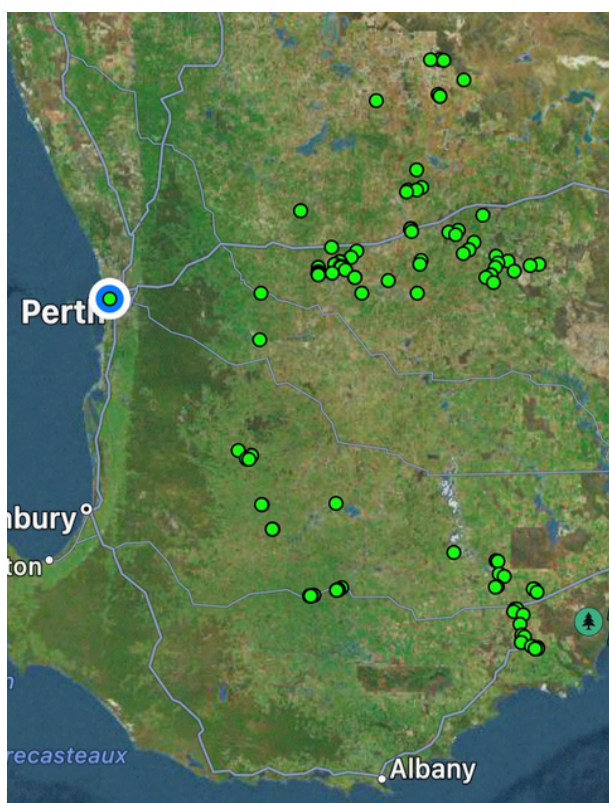


Figure 1 In September 2022 and April/May 2023. 182 water samples from multiple sources which farmers use for herbicide applications were collected from the WA wheatbelt, these were analysed for multiple properties (pH, Bicarbonate Alkalinity, Total Alkalinity, Electrical Conductivity, Hardness, Turbidity, and others). In the photo, each bottle is an example of one of those sources (Bores, Dams, Desalinated water, Rainwater tanks, and Scheme water). The samples were taken from the source of water extraction; importantly this photo demonstrates the high turbidity levels of some sources.

Key points

- Poor water quality can adversely affect many products. Always consult product labels and the manufacturer’s technical information about water quality requirements.
- Water testing should be done on a regular basis when using bore water, water from streams and rivers, reticulated (piped) water sourced from ground water, and water stored in unlined dams or concrete tanks.
- Water tests should analyse the following to be useful: pH, total hardness (including a measure of bi-carbonate levels) and total dissolved salts (TDS) or salinity (electrical conductivity).

Table 1 Examples of products affected by water quality

Active/products	Hardness	Bicarbonates	Salinity	Muddiness	Alkalinity
Alpha Cypermethrin (Fastac® Duo)					LI-700
Atrazine WG	Liase*				
Chlorsulfuron (Lusta®)	Liase*		Acid		
Clethodim (Sequence®)		Liase*			
Clopyralid (Archer®)	Liase*				LI-700
Chlorpyrifos EC					LI-700
Cypermethrin EC					LI-700
Dicamba Amine (Kamba® M)	Liase*				LI-700
Diclofop-methyl (Rhino®)					LI-700
Diffufencan					LI-700
Diffufencan/MCPA (Nugrex®)	Liase*				LI-700
Dimethoate					LI-700
Diquat/Paraquat (Revolver®)				Avoid	
Diuron	Liase*		Avoid		LI-700
Diuron + 2,4-D amine	Liase*	Avoid			LI-700
Diuron + MCPA amine (Agritone® 750 amine)	Liase*		Avoid		LI-700
Glyphosate (Roundup® DST)	Liase*			Avoid	LI-700
Glyphosate (Roundup® Attack)	Liase*			Avoid	
Imazamox/Imazapyr (Intervix®)					
Imazamox (Raptor®)	Liase*				
MCPA ester (Agritone® LVE)	Liase*				LI 700
MCPA amine (Agritone® 750 amine)	Liase*		Avoid		
Simazine 900 DF	Liase*		Avoid		
Tralkoxydim (Achieve®)		Liase*			
2,4-D ester (Estericide Xtra® 680)	Liase*		Avoid		
2,4-D amine (Surpass® 475)	Liase*	Avoid			LI 700

Chart legend: Managing water quality – recommendations depend on the severity of problem

Can be managed with Liase	Liase*	Generally no problem	
Can be managed with LI 700	LI 700	Water should be avoided	Avoid

SOURCE: NUFARM NOZZLE CHARTS 2012 AND NUFARM SPRAYWISE SPRAY LOG

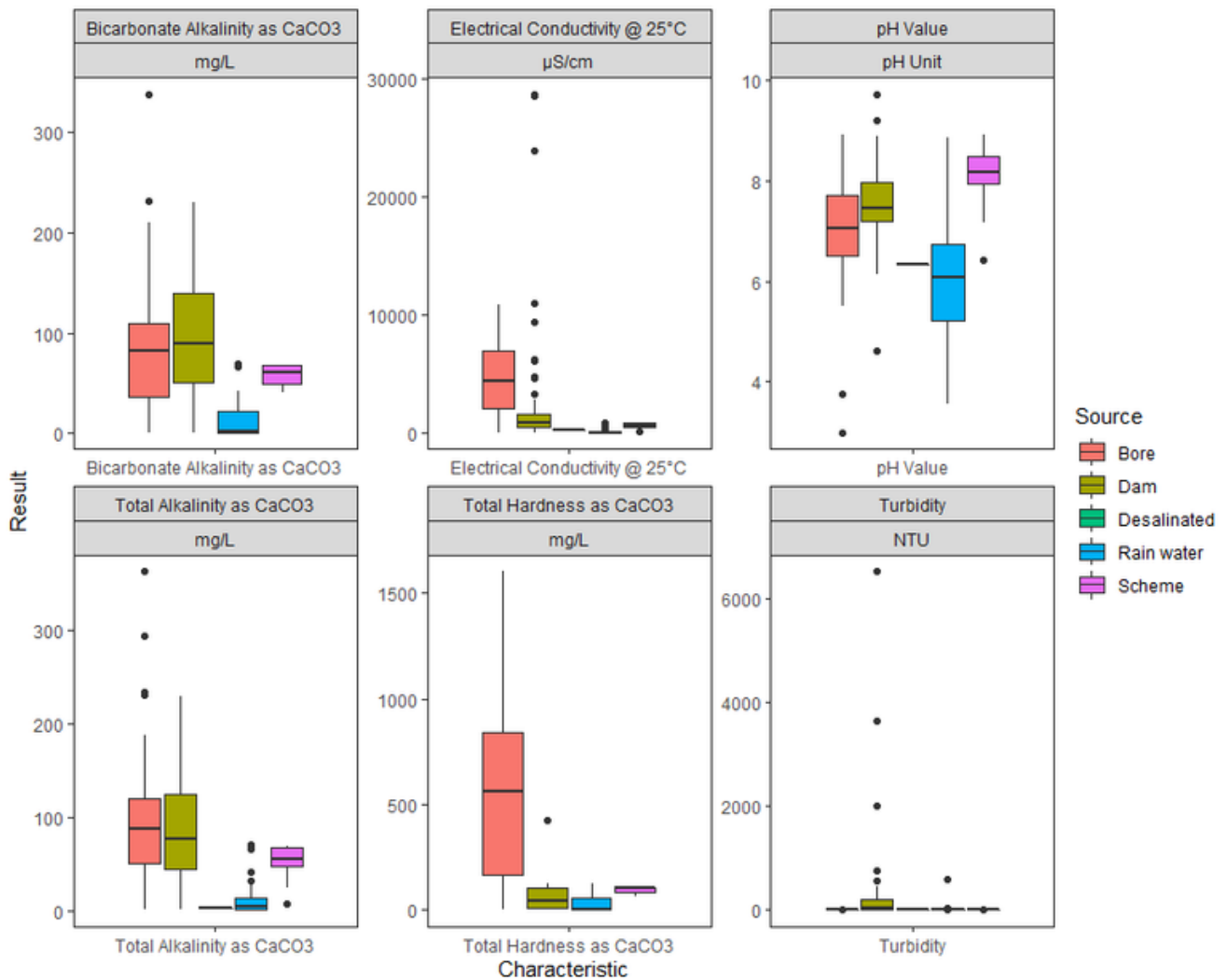


Figure 2 Boxplot results for a water quality survey taken place in September 2022 and April/May 2023. 182 water samples from multiple sources which farmers use for herbicide applications were collected from the WA wheatbelt. The results show variability in the quality of water according to its sources with some of those samples being inadequate for herbicide applications. Table 1 demonstrates examples of how different products can be affected by water quality.

Download more detailed information on water quality effects by scanning this QR code with your camera.

