

2022 Hyola innovation systems plant population agronomy trial results



Tammin WA

22STAGVL6_TMN

Trial	22STAGVL6_TMN
Location	Bolton Road, Tammin
Sowing date	26 April 2022
Target populations (plants/m ²)	15, 25, 40
Previous crop rotations (2019, 2020, 2021)	Clover, wheat, wheat
GSR (mm) (nearest BOM)	264.2
Soil pH (H ₂ O / CaCl ₂)	6.0 / 5.2

This trial is 1 of 3 sites conducted across Western Australia's central wheatbelt in 2022. Consider multi environment trial (MET) results for an overall view but interpret single sites cautiously.

Environmental influence dominates yield determination at 77% (Table 1). Variety and population have an increasing influence on a single site basis, their impact will vary yearly and site-to-site.

ANALYSIS FACTOR	Trials - % variance accounted for by factor on yield			
	MET (overall)	Lake Hinds	Corrigin	Tammin
Environment (E)	77.41%			
Population (P)	0.38%	3.81%	11.24%	1.74%
E x P	0.0%			
Variety (V)	11.3%	86.35%	59.47%	49.04%
V x P	0.55%	9.85%	29.29%	49.22%
V x E	4.84%			
V x P x E	5.52%			

Table 1: MET analysis % variance for 3 Hyola Systems population trials conducted at Lake Hinds, Tammin, and Corrigin in 2022.

At the Tammin site 2022, variety dictated 49% yield variance, variety by population effect was equal at 49% (Table 1), in contrast to the other sites.

Prioritise selecting the right herbicide technology and maturity based on your rotation, since the highest yields and gross margins within each group show no significant differences (Table 2). Opt for target populations that enhance yield potential, weed competition, and safeguard against losses due to diseases, insects, or harsh soil conditions.

	Variety Technology Entry	Population Target Plants per m2	Mean Yield (t/ha) TMN	Mean Oil %		Variety Technology Entry	Population Target Plants per m2	Gross Return (\$/ha) TMN
CLEARFIELD TECHNOLOGY	44Y94	15	1.947	48.92		44Y94	15	\$1,734
	44Y94	25	1.848	48.98		44Y94	25	\$1,623
	44Y94	40	2.095	48.88		44Y94	40	\$1,812
	45Y95	15	1.729	47.65		45Y95	15	\$1,517
	45Y95	25	2.274	47.85		45Y95	25	\$1,988
	45Y95	40	2.540	48.63		45Y95	40	\$2,211
	Hyola Continuum CL	15	1.784	50.48		Hyola Continuum CL	15	\$1,610
	Hyola Continuum CL	25	1.891	50.62		Hyola Continuum CL	25	\$1,688
	Hyola Continuum CL	40	2.112	50.40		Hyola Continuum CL	40	\$1,855
	Hyola Solstice CL	15	2.115	50.18		Hyola Solstice CL	15	\$1,909
	Hyola Solstice CL	25	2.229	48.53		Hyola Solstice CL	25	\$1,960
	Hyola Solstice CL	40	2.372	49.65		Hyola Solstice CL	40	\$2,080
TRIFLEX OR TRUFLEX + CLEARFIELD TECHNOLOGY	Condor TF	15	1.488	52.23		Condor TF	15	\$1,268
	Condor TF	25	2.181	51.38		Condor TF	25	\$1,836
	Condor TF	40	2.320	51.13		Condor TF	40	\$1,912
	InVigor R 4520P	15	1.949	49.38		InVigor R 4520P	15	\$1,630
	InVigor R 4520P	25	1.695	48.58		InVigor R 4520P	25	\$1,373
	InVigor R 4520P	40	1.535	48.74		InVigor R 4520P	40	\$1,197
	XC210034	15	1.723	51.27		XC210034	15	\$1,463
	XC210034	25	1.999	50.07		XC210034	25	\$1,656
	XC210034	40	2.113	49.65		XC210034	40	\$1,706
	Emu TF	15	1.674	49.68		Emu TF	15	\$1,398
	Emu TF	25	1.729	50.14		Emu TF	25	\$1,424
	Emu TF	40	2.112	48.67		Emu TF	40	\$1,688
TRIAZINE, CLEARFIELD + TRIAZINE OR LIBERTY + TRIAZINE TECHNOLOGY	Hyola Blazer TT	15	1.744	49.54		Hyola Blazer TT	15	\$1,559
	Hyola Blazer TT	25	1.819	49.41		Hyola Blazer TT	25	\$1,602
	Hyola Blazer TT	40	2.062	50.17		Hyola Blazer TT	40	\$1,805
	Hyola Defender CT	15	1.658	48.50		Hyola Defender CT	15	\$1,465
	Hyola Defender CT	25	1.884	49.14		Hyola Defender CT	25	\$1,658
	Hyola Defender CT	40	2.095	49.38		Hyola Defender CT	40	\$1,821
	Hyola Enforcer CT	15	2.130	47.61		Hyola Enforcer CT	15	\$1,877
	Hyola Enforcer CT	25	1.785	48.36		Hyola Enforcer CT	25	\$1,556
	Hyola Enforcer CT	40	1.454	47.00		Hyola Enforcer CT	40	\$1,206
	HyTTec Trident TT	15	1.615	47.83		HyTTec Trident TT	15	\$1,414
	HyTTec Trident TT	25	1.806	48.04		HyTTec Trident TT	25	\$1,569
	HyTTec Trident TT	40	1.981	48.26		HyTTec Trident TT	40	\$1,699
	HyTTec Trifecta TT	15	2.147	49.29		HyTTec Trifecta TT	15	\$1,916
	HyTTec Trifecta TT	25	2.059	47.77		HyTTec Trifecta TT	25	\$1,791
	HyTTec Trifecta TT	40	1.770	47.81		HyTTec Trifecta TT	40	\$1,503
	InVigor LT 4530P	15	1.810	46.71		InVigor LT 4530P	15	\$1,481
	InVigor LT 4530P	25	1.957	47.99		InVigor LT 4530P	25	\$1,601
	InVigor LT 4530P	40	1.988	48.25		InVigor LT 4530P	40	\$1,599
	ATR Bonito	15	1.135	49.25		ATR Bonito	15	\$1,009
	ATR Bonito	25	1.306	49.95		ATR Bonito	25	\$1,160
	ATR Bonito	40	1.516	49.05		ATR Bonito	40	\$1,321
	DG Bidgee	15	1.321	46.00		DG Bidgee	15	\$1,141
	DG Bidgee	25	1.434	45.43		DG Bidgee	25	\$1,222
	DG Bidgee	40	1.266	45.26		DG Bidgee	40	\$1,054
Mean Analysed Yield (t/ha) and Oil %			2.610	48.91	Mean Gross Return (\$/ha)			\$1,595
ASReml	CV%	5.8		1.113	Oil Bonification / Deduction			1.5% for every 1% Gross Price
Statistical	AVSED	0.106088		0.689	Gross Price Assumption per MT			\$850 - nonGM & \$800 for GM
Analysis	LSD (5%)	0.213304		1.109	Effective Sowing Rates			1.1kg/ha, 1.8kg/ha & 2.85kg/ha

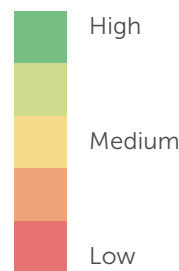


Table 2: Single site results for Tammin 2022 Hyola systems population trial, grain yield, oil % and gross margin

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