



The best canola varieties and when to use TT hybrids or RR hybrids

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1. Variety
2. TT OP or TT hybrid or RR hybrid
3. Retained seed

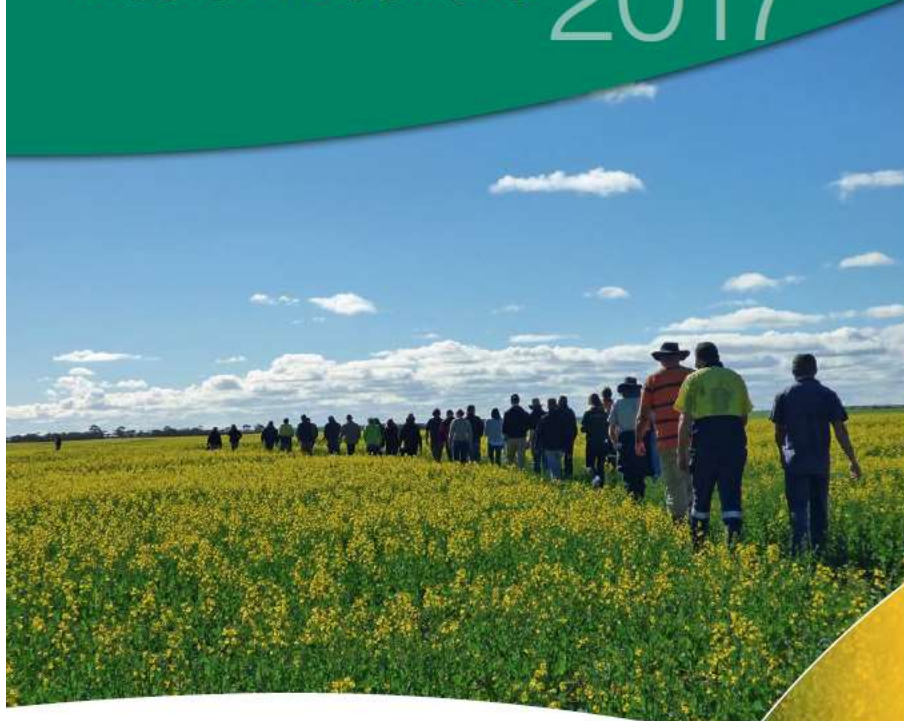


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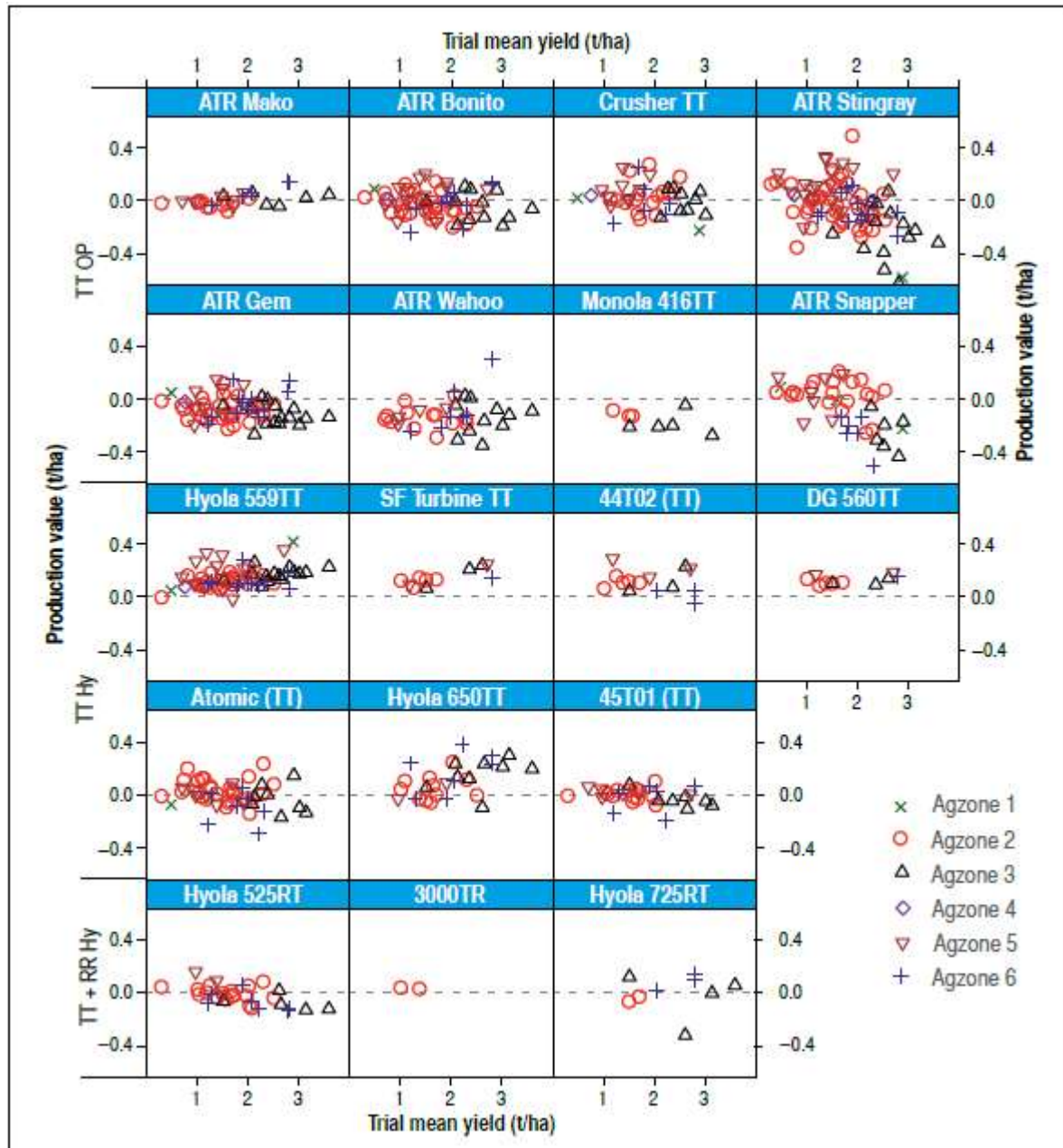


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Canola variety guide for Western Australia 2017



TT WA NVT Trials 2011-2015



TT canola from variety guide

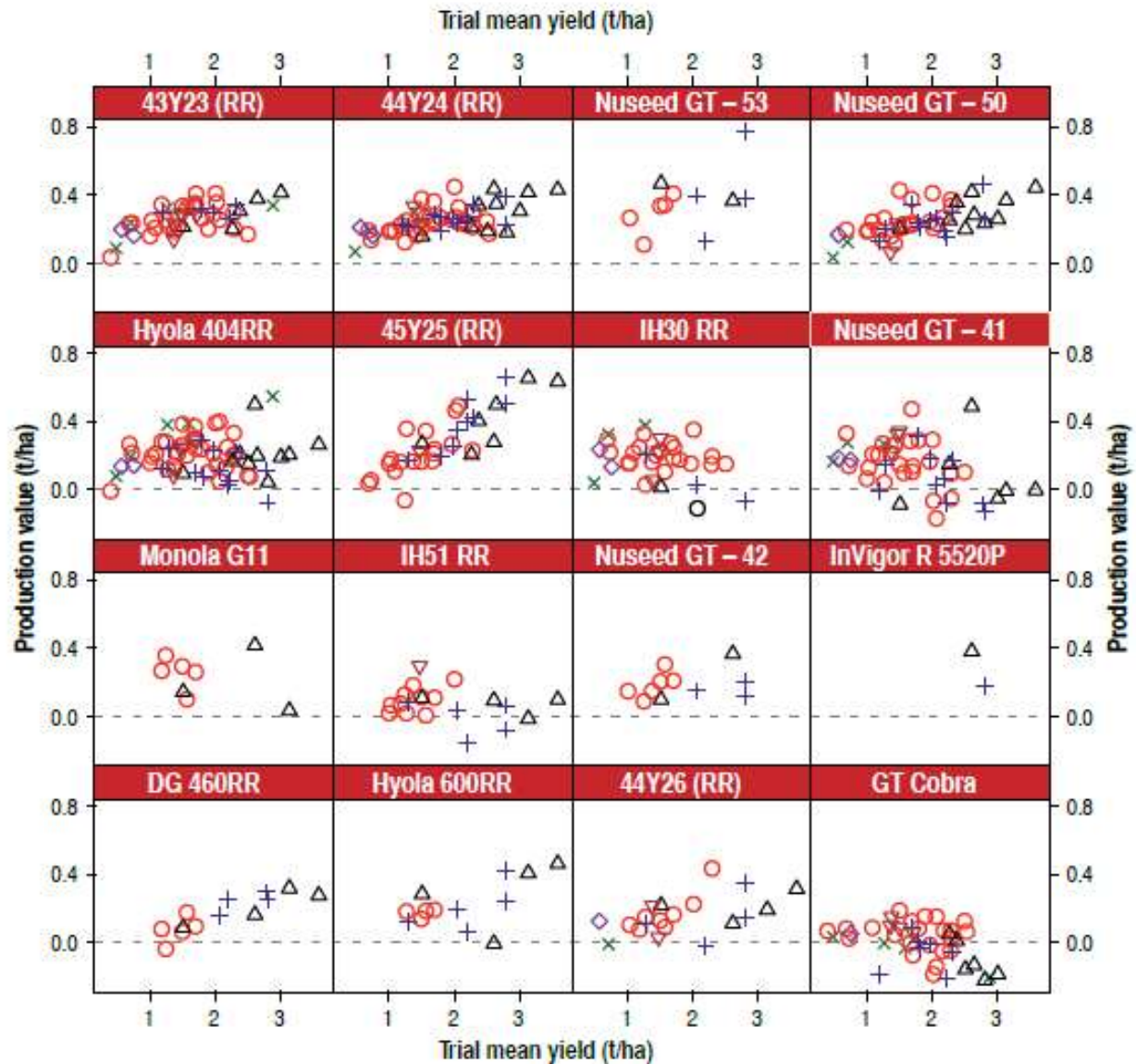
Yield range (t/ha)*		Long term MET yield (% of group mean)						Oil variation to mean (43.99%)	
		0.5 - 1.0	1.0 - 1.5		1.5 - 2.0		2.0 - 2.5		2.5 - 3.0
NVT Trial series^		Early	Early	Mid	Early	Mid	Mid	Mid	
Group mean (t/ha)		0.81	1.33	1.23	1.8	1.71	2.18	2.68	
Number of trials		9	12	13	8	15	17	9	
TT	ATR Mako	99	104	100	103	101	101	102	-0.68
OP	ATR Bonito	91	103	101	104	101	100	100	1.02
	Crusher TT	102	103	98	105	100	101	102	-1.27
	ATR Stingray	93	106	97	107	98	95	91	0.23
	ATR Gem	87	98	93	101	95	97	98	0.78
	ATR Wahoo	77	87	89	91	93	97	100	0.24
	Monola [®] 416TT	83	97	94	95	95	93	91	0.69
	ATR Snapper	77	95	88	95	87	84	89	2.36
TT	Hyola [®] 559TT	110	111	108	112	107	106	106	0.8
Hy	SF Turbine TT	118	106	110	106	108	107	104	-1.33
	44T02 TT	115	109	110	106	107	103	102	-0.96
	DG 560TT	119	106	108	104	106	104	104	-0.48
	Atomic TT	110	100	102	100	100	100	103	-1.13
	Hyola [®] 650TT	101	97	97	98	101	105	104	-0.15
	45T01 TT	105	96	102	99	100	100	102	0.68
TT+RR	Hyola [®] 525RT [®]	96	102	99	105	99	97	97	1.07
Hy	3000 TR	105	103	-	103	-	-	-	-0.25
	Hyola [®] 725RT [®]	-	-	91	-	94	99	104	0.82

Value of yield and oil (\$/ha)

		Long term MET value of yield and oil (\$/ha)						
Yield range (t/ha)*		0.5 - 1.0	1.0 - 1.5		1.5 - 2.0		2.0 - 2.5	2.5 - 3.0
NVT Trial series^		Early	Early	Mid	Early	Mid	Mid	Mid
Group mean (t/ha)		0.81	1.33	1.23	1.8	1.71	2.18	2.68
Number of trials		9	12	13	8	15	17	9
TT	ATR Mako	409	797	709	1068	995	1268	1575
OP	ATR Bonito	385	809	734	1105	1020	1287	1583
	Crusher TT	418	782	688	1079	977	1257	1561
	ATR Stingray	389	823	697	1124	978	1209	1424
	ATR Gem	367	767	673	1070	956	1244	1546
	ATR Wahoo	322	676	639	956	929	1235	1565
	Monola [®] 416TT	350	758	680	1005	955	1192	1433
	ATR Snapper	332	760	651	1029	895	1102	1436
TT	Hyola [®] 559TT	464	869	782	1187	1077	1360	1672
Hy	SF Turbine TT	483	804	772	1089	1054	1331	1590
	44T02 TT	473	832	776	1095	1050	1288	1568
	DG 560TT	493	815	768	1082	1047	1310	1610
	Atomic TT	451	761	718	1030	979	1248	1580
	Hyola [®] 650TT	420	749	693	1024	1003	1329	1618
	45T01 TT	442	750	737	1047	1005	1281	1606
TT+RR	Hyola [®] 525RT [®]	407	802	720	1117	1000	1250	1536
Hy	3000 TR	436	794		1075			
	Hyola [®] 725RT [®]			659		946	1271	1641

Recommendations don't change

RR WA NVT Trials 2011-2015



RR canola from variety guide

Yield range (t/ha)*		Long term MET yield (% of group mean)						Oil variation to mean (44.48%)	
		0.5 – 1.0	1.0 - 1.5		1.5 - 2.0		2.0 - 2.5		2.5 - 3.0
NVT Trial series^		Early	Early	Mid	Early	Mid	Mid	Mid	
Group mean (t/ha)		0.72	1.38	1.24	1.8	1.72	2.18	2.67	
Number of trials		6	8	9	6	11	13	7	
Hy	43Y23 (RR)	128	117	123	118	117	113	111	-0.97
	44Y24 (RR)	125	117	118	120	115	112	110	-0.77
	Nuseed GT-53	-	-	121	-	118	118	121	-0.64
	Nuseed GT- 50	121	114	118	118	115	112	111	-0.33
	Hyola® 404RR	126	115	119	116	113	108	106	1.56
	45Y25 (RR)	121	113	115	115	115	116	116	0.5
	IH30 RR	133	115	116	109	109	104	101	-0.28
	Nuseed GT- 41	124	118	114	115	109	104	99	-0.31
	Monola® G11	-	-	117	-	110	105	104	1.86
	IH51 RR+	107	115	105	119	103	102	103	-1.02
	Nuseed GT- 42	123	113	115	112	112	110	108	-0.59
	InVigor R 5520P	-	-	113	-	111	108	105	-1.64
	DG 460RR	-	-	107	-	108	108	107	0.99
	Hyola® 600RR	-	-	106	N/A	106	108	112	1.69
	44Y26 (RR)	107	101	108	107	107	107	109	0.3
	OP	GT Cobra	108	106	100	105	99	99	98

Value of yield and oil (\$/ha)

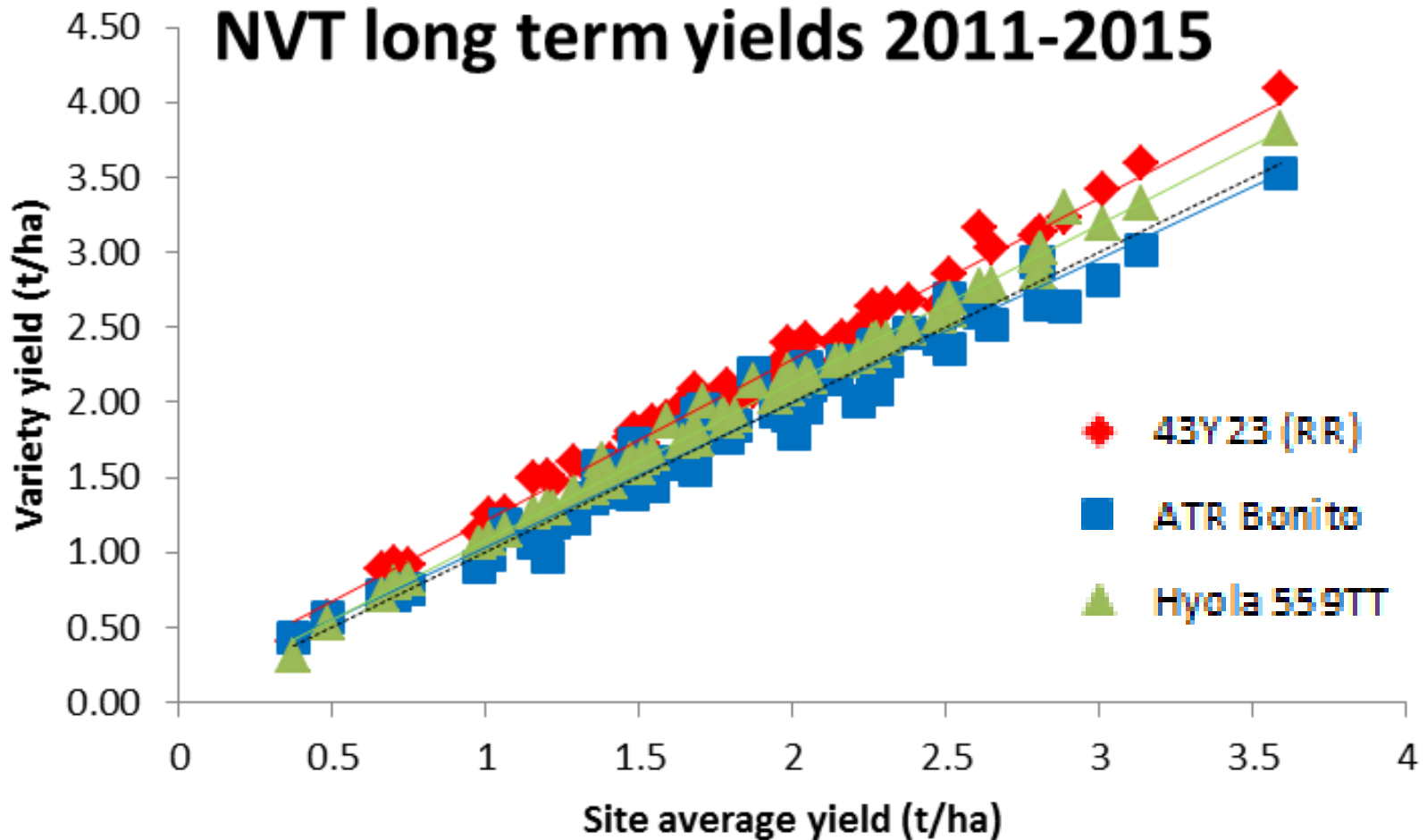
Little changes in top varieties

		Long term MET value of yield and oil (\$/ha)						
Yield range (t/ha)*		0.5 – 1.0	1.0 - 1.5		1.5 - 2.0		2.0 - 2.5	2.5 - 3.0
NVT Trial series^		Early	Early	Mid	Early	Mid	Mid	Mid
Group mean (t/ha)		0.72	1.38	1.24	1.8	1.72	2.18	2.67
Number of trials		6	8	9	6	11	13	7
Hy	43Y23 (RR)	495	867	819	1140	1080	1323	1591
	44Y24 (RR)	485	869	788	1163	1065	1315	1581
	Nuseed GT-53			809		1095	1388	1743
	Nuseed GT- 50	472	853	793	1151	1072	1323	1606
	Hyola® 404RR	505	884	822	1163	1082	1311	1576
	45Y25 (RR)	478	855	782	1135	1085	1387	1699
	IH30 RR	519	861	780	1064	1017	1230	1462
	Nuseed GT- 41	484	883	766	1122	1016	1229	1433
	Monola® G11			811		1058	1280	1553
	IH51 RR+	413	851	699	1149	950	1193	1475
	Nuseed GT- 42	478	842	770	1088	1040	1295	1557
	InVigor R 5520P			745		1015	1252	1490
	DG 460RR			733		1026	1300	1578
	Hyola® 600RR			733		1017	1313	1668
	44Y26 (RR)	421	762	732	1053	1007	1276	1592
OP	GT Cobra	423	795	674	1028	926	1174	1423

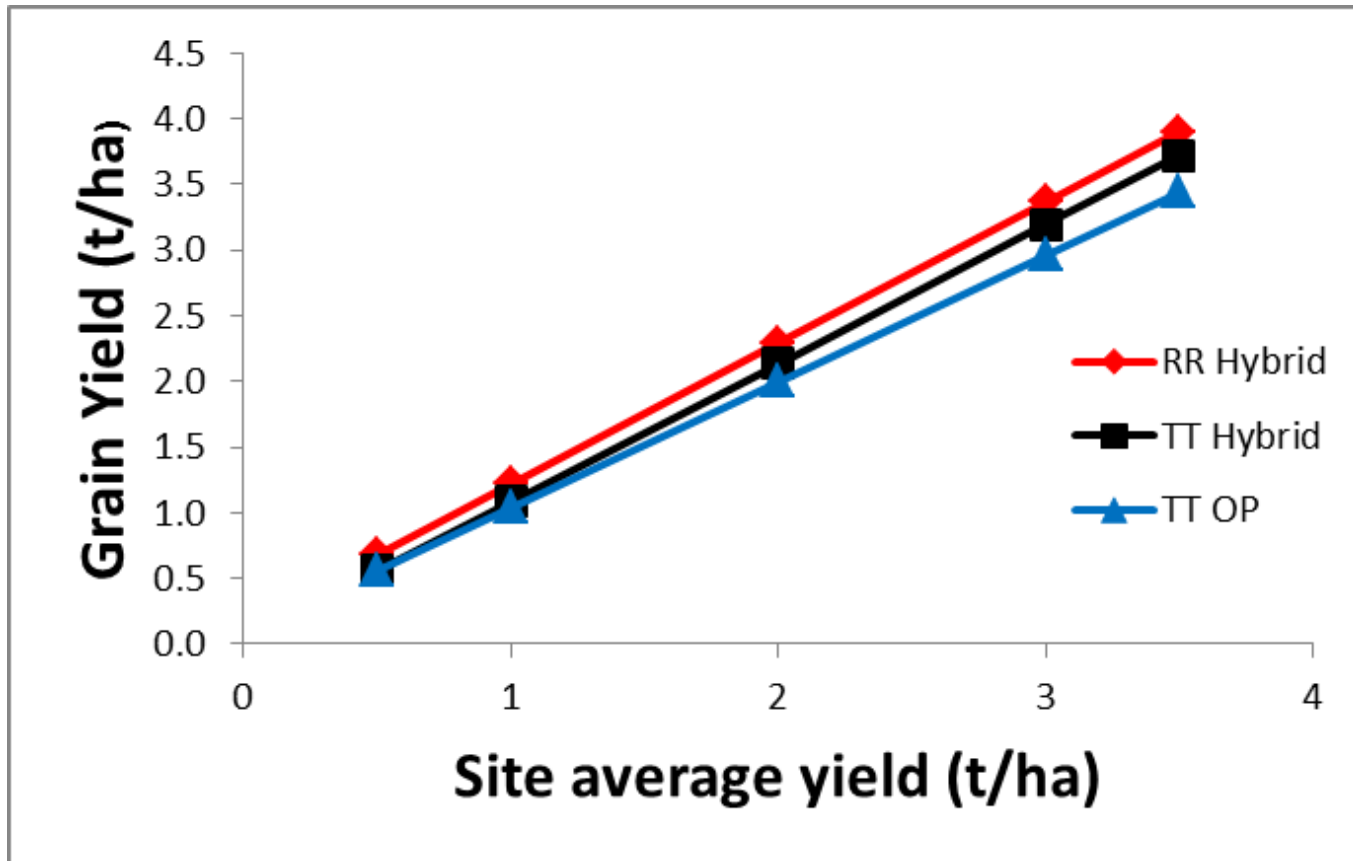


Corrigin NVT 2016

NVT long term yields 2011-2015

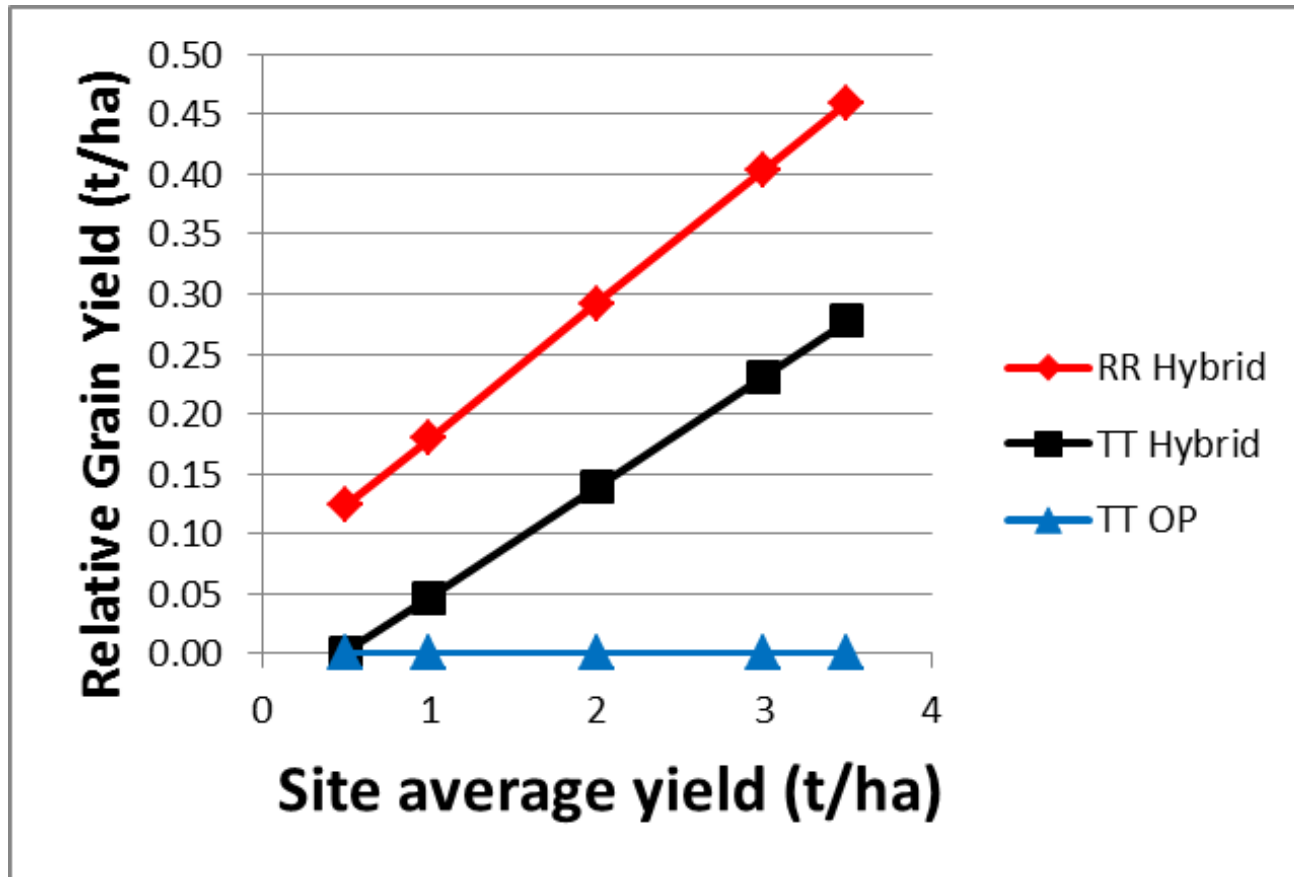


NVT long term yields 2011-2015



NVT long term yields 2011-2015

Yields relative to open pollinated TT



Seed costs

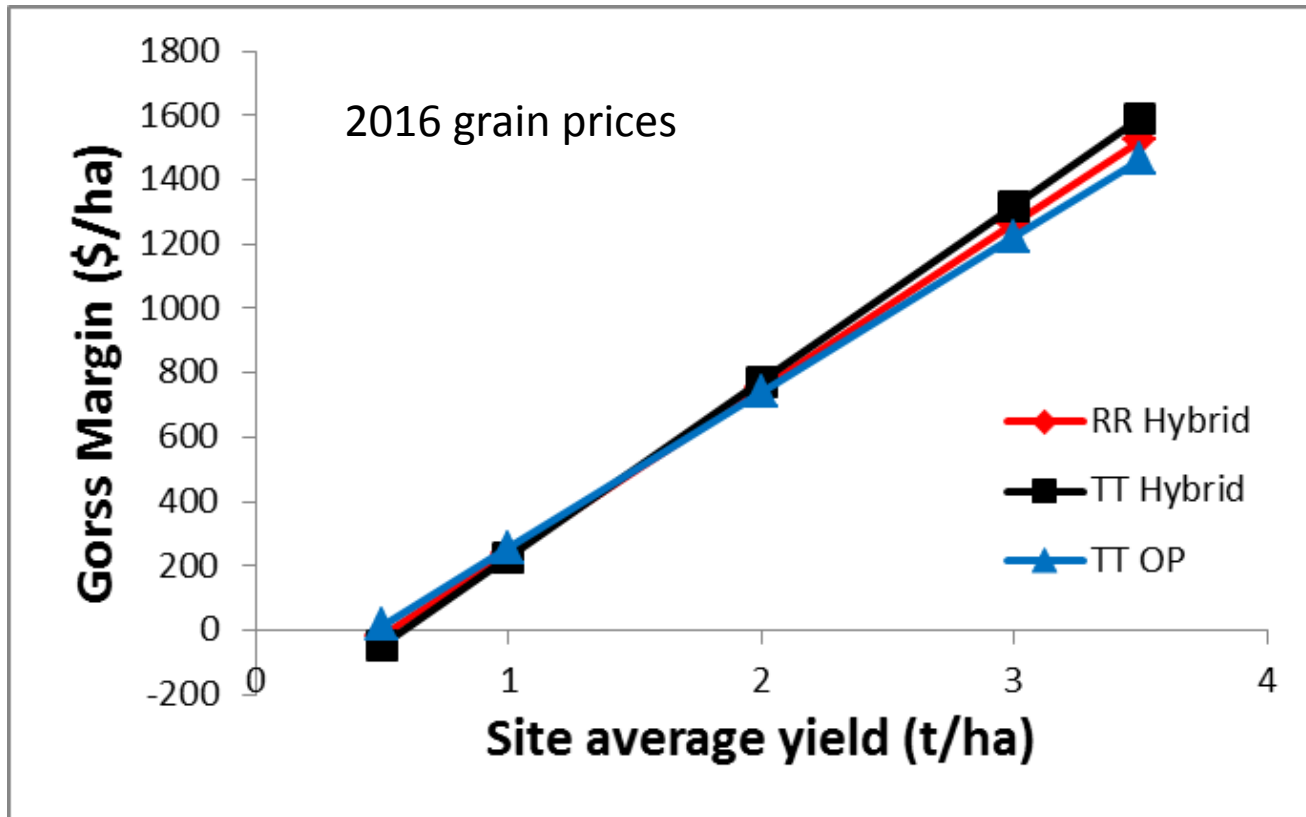
	RR Hy	TT Hy	TT OP
Seed cost \$/kg	\$38.85	\$29.50	\$2
Seeding rate (kg/ha)	2.5	2.5	4
Seed cost (\$/ha)	\$97.13	\$73.75	\$8.00

Seed costs

	RR Hy	TT Hy	TT OP
Seed cost \$/kg	\$38.85	\$29.50	\$2
Seeding rate (kg/ha)	2.5	2.5	4
Seed cost (\$/ha)	\$97.13	\$73.75	\$8.00

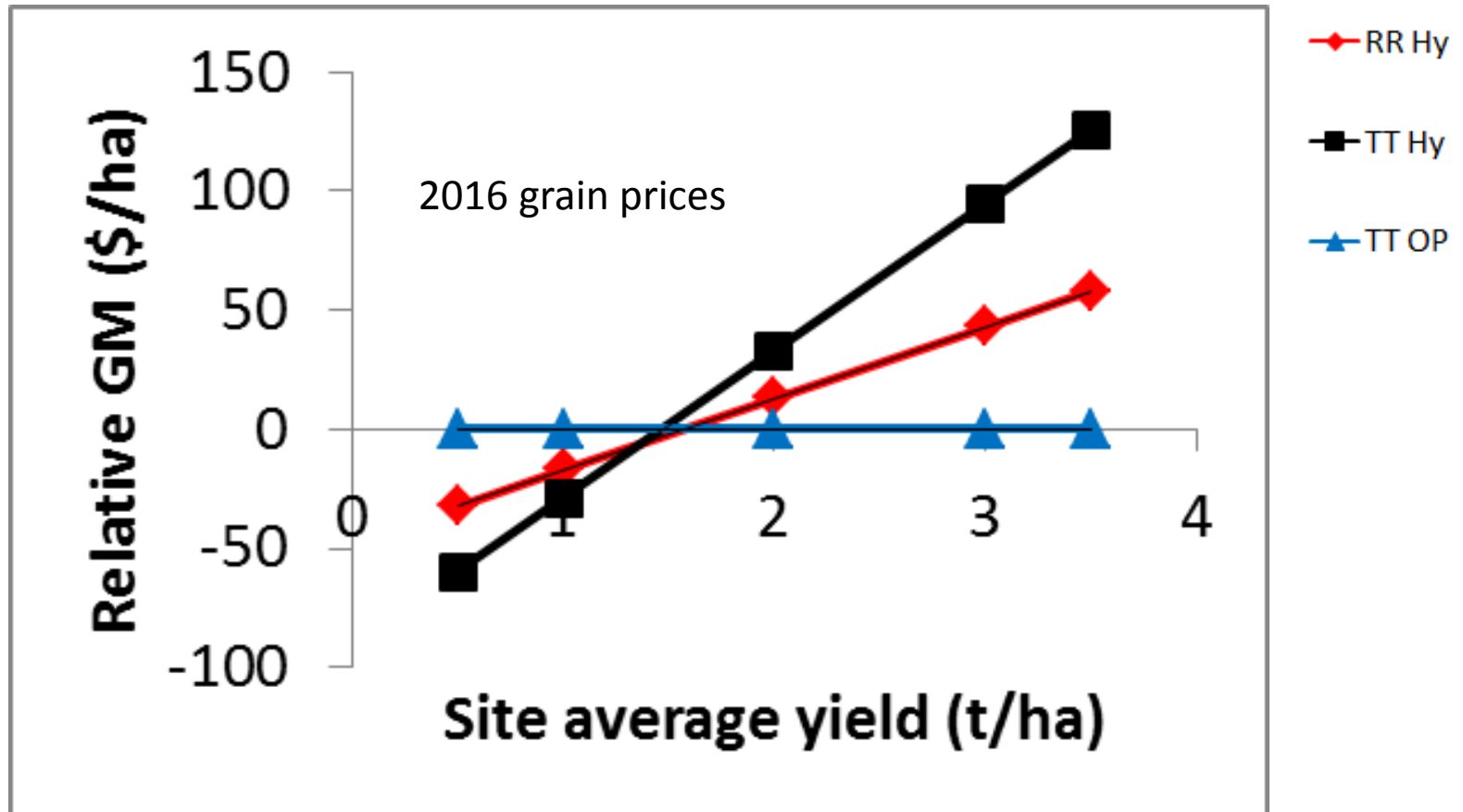
Costs	43Y23RR	Hyola 559TT	ATR Bonito
Seed cost (\$/ha)	97.125	73.75	8
Herbicide (\$/ha)	54	63	63
Fert not N	34	34	34
Insect/fung	17	17	17
Fixed	146	146	146
cost -N	348.125	333.75	268

Simplified Gross Margin



NVT long term yields 2011-2015

Gross margin compared with OP TT

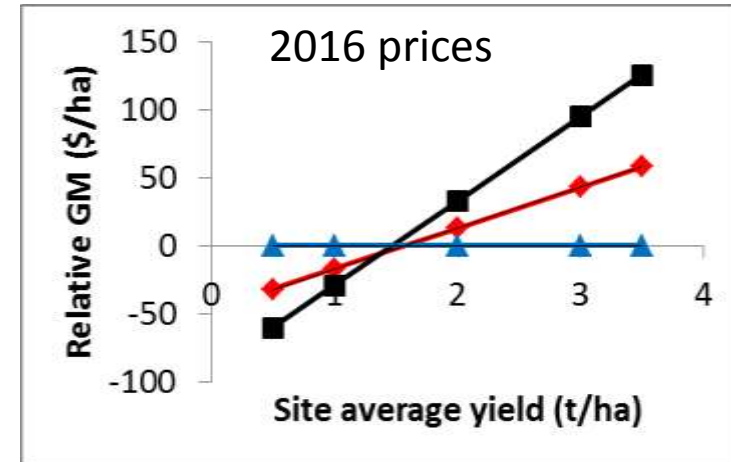


Canola prices

	RR Hy	TT Hy	TT OP
2014 CBH cash price	490	510	505
2015 CBH cash price	505	560	555
2016 CBH cash price	525	565	560

GM relative to OP TT

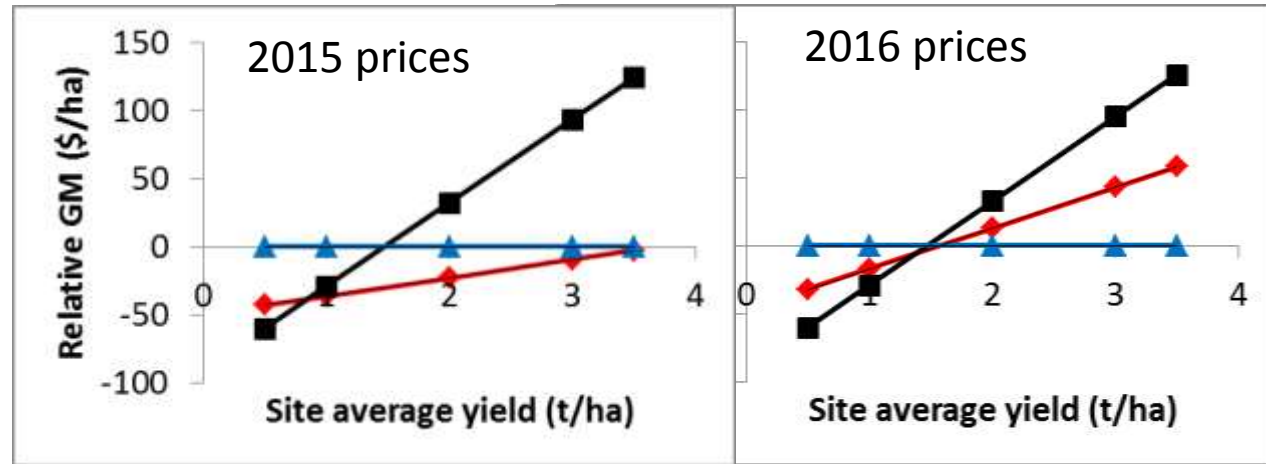
- RR Hy
- TT Hy
- TT OP



Bucat WA NVT long term predictions of only 3 varieties where co-located (61 trials)

GM relative to OP TT

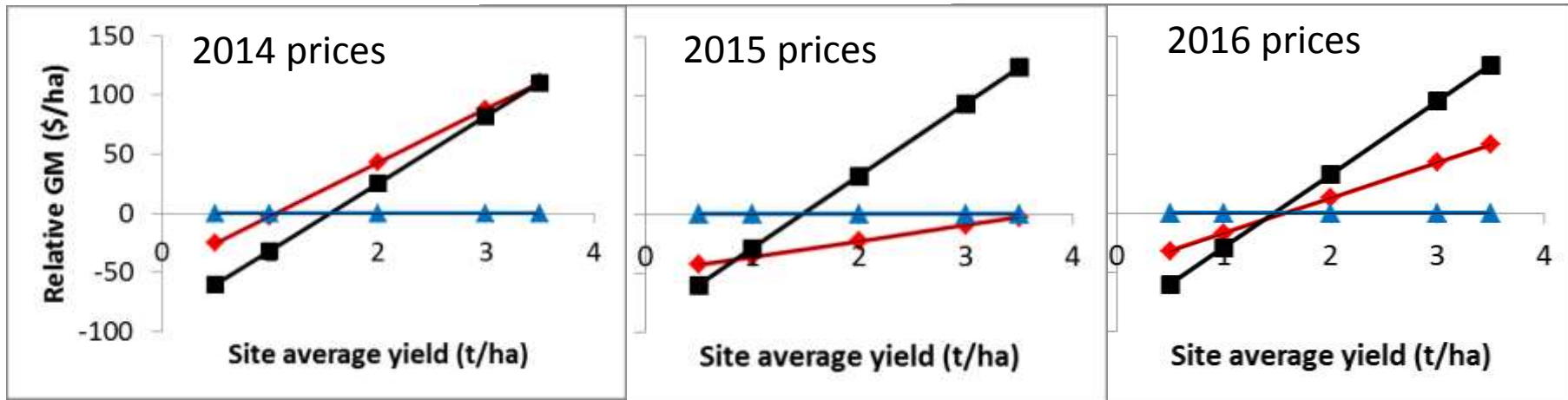
- RR Hy
- TT Hy
- TT OP



Bucat WA NVT long term predictions of only 3 varieties where co-located (61 trials)

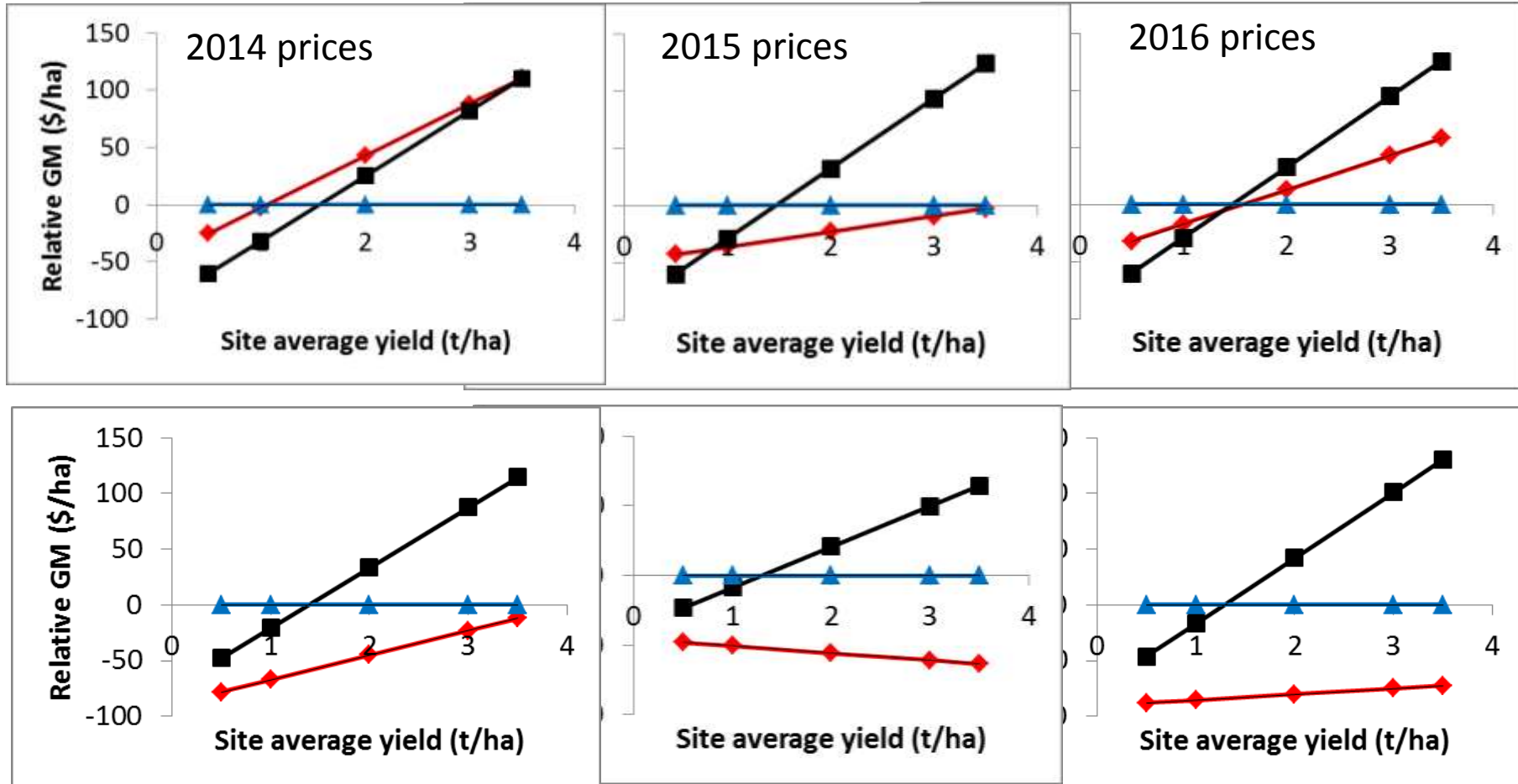
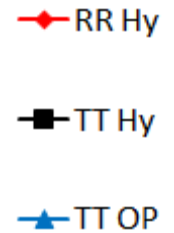
GM relative to OP TT

- RR Hy
- TT Hy
- TT OP



Bucat WA NVT long term predictions of only 3 varieties where co-located (61 trials)

GM relative to OP TT

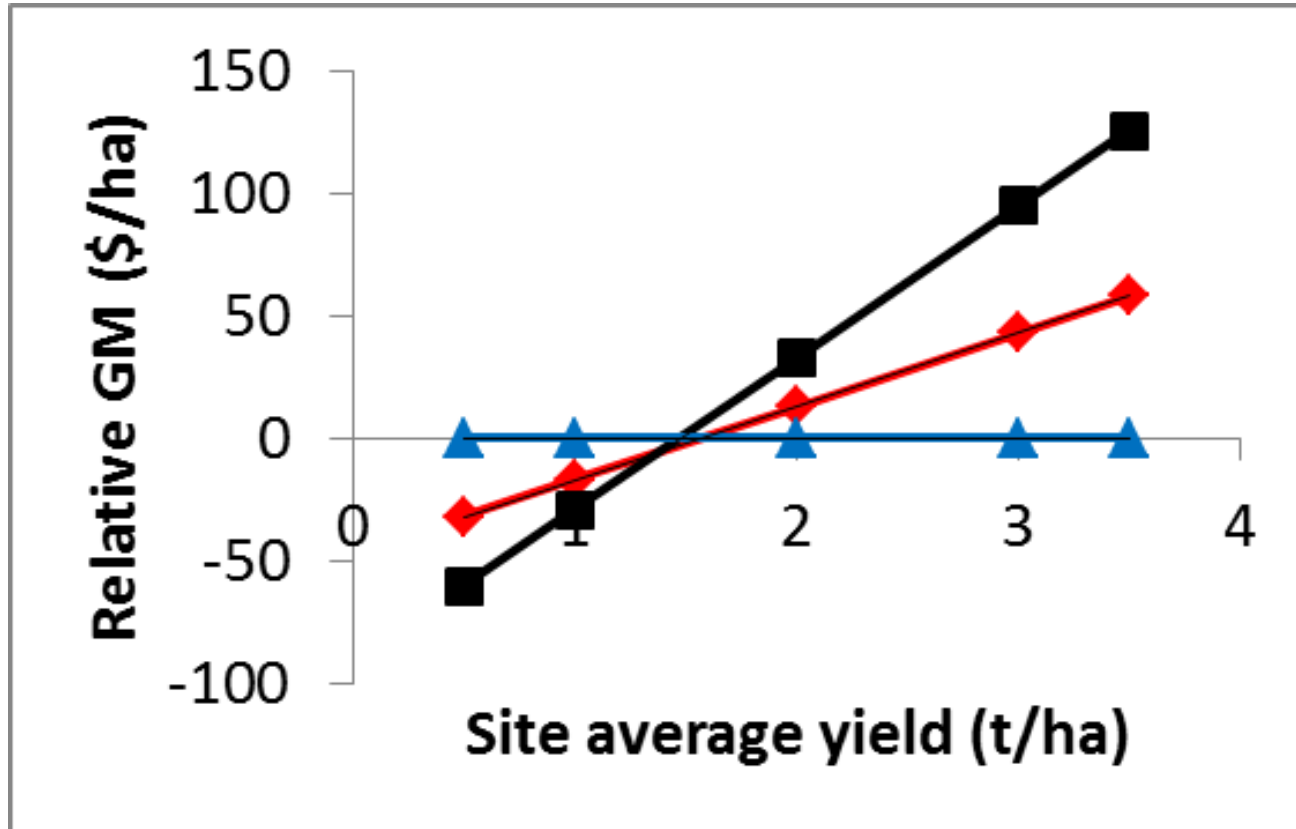


Top row -Bucat WA NVT long term predictions of only 3 varieties where co-located (61 trials)
 Bottom row- Zhang National NVT and CSIRO trials of all varieties in more than 20 trials

Return to make it worth investing in TT hybrids

TT			50% rtn	100% rtn
		OP=Hy	(\$33/ha)	(\$66/ha)
WA NVT	2016	1.5	2	2.5
	2015	1.5	2	2.6
	2014	1.5	2.1	2.7
Aust NVT	2016	1.3	1.8	2.4
	2015	1.3	1.9	2.4
	2014	1.4	2	2.6
Average		1.4	2.0	2.5

2016 prices, WA NVT



Sensitivity of costs

TT			50% rtn	100% rtn
		OP=Hy	(\$33/ha)	(\$66/ha)
+\$20 hy cost		1.8	2.3	2.9
Std		1.47	2	2.5
-\$20 hy cost		1.14	1.7	2.2

Break even TT hybrid canola GM compared with TT OP

Reasonably robust at about 1.4 t/ha

But at this point,

- more risk because investing more \$ for same gain
- more risk from lower seeding rates

Consider growing hybrid TT when yields expected over 2 t/ha (minimum 50% rtn on extra seed costs)

Break even RR hybrid canola GM compared with TT OP

- Who knows?
- Somewhere between 1 t/ha and never
- Continue to grow RR canola where needed for weed management

2015 retained TT seed trials

Retained (F2)
hybrid



Purchased (F1)
hybrid



ATR Bonito (OP)



2015 TT Retained seed trials

- Lower rainfall areas
- Grass Patch, Ballidu, Merredin.
- Yields under 1.6 t/ha

2015 TT Retained seed trials

	Hybrid vs retained hybrid	OP vs hybrid	OP vs retained hybrid
Grain Yield (kg/ha)	-100 kg	-200 kg	-300 kg
Oil %	-1%	-1.5%	-2.5%
Gross Margin (\$/ha)	-\$ 17	-\$ 150	-\$ 167

Overall summary

Canola system	TT OP	TT OP or hybrid	TT Hybrid	RR Hybrid	Retained Hybrid
When to grow	< 2 t/ha	2.0 - 2.5 t/ha average 50% return on hybrid seed at 2 t/ha	over 2.5 t/ha average 100% return on seed	When extra weed control needed	–



Thank you

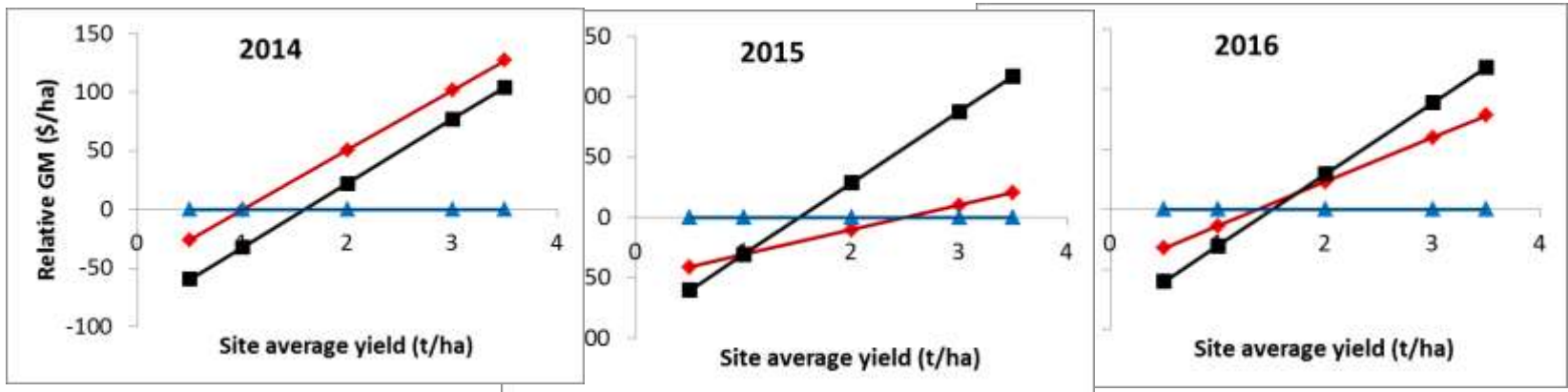
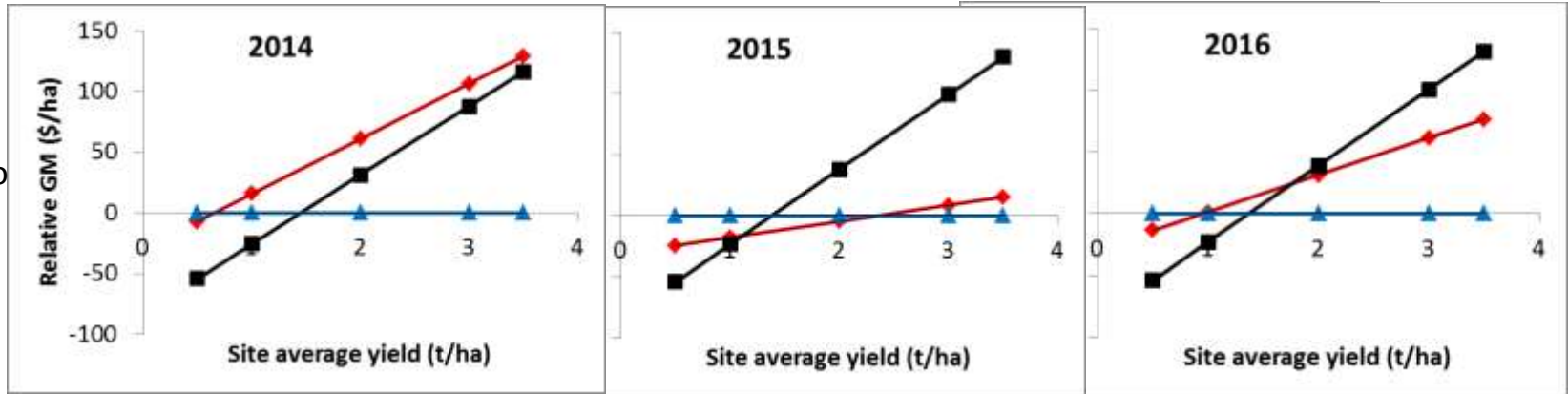
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◆ RR Hy
■ TT Hy
▲ TT OP

43Y23
 Hyola 559
 ATR Bonito



Top row NVT long term predictions of only 3 varieties where co-located (61 trials)

Bottom row- Single site trial data of all varieties where all groups co-located (60 trials)