

Stacked CT[®] technology 2023-24 Eastern Australia Product guide



6 Big reasons

Why Australian farmers are growing CT stacked technology



CT TECHNOLOGY WITH HIGH IMI SOIL CARRYOVER

01 IMI herbicide soil carryover crop protection benefits
Over single trait OP TT technology^
Increased grain yield 160 kg/ha - 1570 kg/ha
Increased gross returns \$110 /ha - \$1018 /ha

02 Delivering competitive grain yields compared to TT hybrids
Often no significant difference with some popular Triazine Tolerant hybrids in GRDC NVT trial sites

03 Delivering higher yields & gross returns over single trait OP TT
Increased grain yield 270 kg/ha - 880 kg/ha^
Increased gross returns \$162 /ha - \$528 /ha^

TT TECHNOLOGY WITH HIGH IMI SOIL CARRYOVER

04 Increased ryegrass weed control efficacy
Over single trait OP TT technology^
Increased ryegrass weed control – up to 17%
Increased ryegrass spikelet control – up to 45%

05 IWM resistance management and rotation flexibility
Use as “either or both” spray strategy; TT or CL or combined CT to implement a “mix and rotate” strategy assisted by HWSC methods

06 IWM boom spray contamination benefits and crop protection
Increased grain yield 40 kg/ha - 183 kg/ha^
Increased gross returns \$26 /ha - \$106 /ha^

^2019 and 2020 Pacific Seeds IWM and IMI residue replicated trials. Available on <https://www.pacificseeds.com.au/agronomy-hub/>

2023-24 product features



| HYOLA DEFENDER CT | HYOLA ENFORCER CT | AGRONOMIC ATTRIBUTES |
|-------------------|-------------------|----------------------|
| 1.5 - 5.5 t/ha | 1.0 - 2.5 t/ha | Yield adaptability |
| RMR | R | Blackleg rating |
| ADF | ADF | Blackleg groups |
| High | High - Very high | Oil potential |
| CL + TT | CL + TT | Herbicide tolerance |
| Mid - Early | Early - Mid | Maturity |
| 7.5 | 7.0 - 7.5 | # Plant vigour |
| Medium | Medium | # Plant height |
| MRZ - VHRZ | LRZ - MRZ | Growing zones |

Visual ratings from Pacific Seeds replicated Research & Development trials

Early trials yield performance

NSW, VIC, SA (2018 - 2022)



| GRDC NVT TRIALS NSW, VIC, SA CANOLA VARIETY | Group Mean Yield Trials | 2018 1.15 t/ha 8 | 2019 1.43 t/ha 10 | 2020 2.02 t/ha 9 | 2021 2.41 t/ha 5 | 2022 2.56 t/ha 10 |
|---|-------------------------------|------------------------|-------------------------|------------------------|------------------------|-------------------------|
| Hyola Blazer TT | 16 | | 107 | 115 | 110 | 116 |
| Hyola Defender CT | 10 | | | | | 112 |
| InVigor LT 4530P | 18 | | | 105 | 105 | 109 |
| HyTTec Trophy | 40 | 109 | 106 | 109 | 108 | 109 |
| InVigor T 4511 | 15 | | | | 104 | 103 |
| Hyola Enforcer CT | 28 | | 100 | 102 | 102 | 100 |
| Bandit TT | 15 | | | | 98 | 96 |
| ATR Bonito | 40 | 93 | 97 | 92 | 93 | 92 |

Selected varieties have been used for specific grain yield performance comparisons above.

Visit the GRDC NVT website, <https://app.nvt.grdc.com.au/lty/table/canola/> for full sets of results.

Mid trials yield performance

NSW, VIC, SA (yield groups)



| GRDC NVT TRIALS | Group | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 |
|-------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| NSW, VIC, SA | Mean Yield | 0.28 t/ha | 0.72 t/ha | 1.29 t/ha | 1.77 t/ha | 2.28 t/ha | 2.74 t/ha | 3.18 t/ha | 3.69 t/ha |
| CANOLA VARIETY | Trials | 2 | 9 | 15 | 12 | 17 | 41 | 13 | 9 |
| Hyola Blazer TT | 79 | | | 114 | 119 | 119 | 117 | 117 | 120 |
| Hyola Defender CT | 25 | | | | 111 | 118 | 114 | 114 | 120 |
| HyTTec Trifecta | 101 | 128 | 131 | 119 | 122 | 117 | 117 | 117 | 118 |
| PY520TC | 37 | | | | 113 | 116 | 114 | 114 | 118 |
| InVigor LT 4530P | 56 | | | | 109 | 106 | 104 | 102 | 101 |
| Hyola Enforcer CT | 86 | 122 | 118 | 109 | 108 | 101 | 103 | 103 | 101 |
| ATR Bonito | 74 | 85 | 83 | 92 | 89 | 93 | 93 | 92 | 91 |

Selected varieties have been used for specific grain yield performance comparisons above.

Visit the GRDC NVT website, <https://app.nvt.grdc.com.au/lty/table/canola/> for full sets of results.

Hyola Defender CT

NSW, VIC & SA NVT results

| GRDC NVT MID TRIALS NSW LONG TERM CANOLA VARIETY | Group Mean Yield Trials | 2018 0.99 t/ha 9 | 2019 1.08 t/ha 7 | 2020 2.82 t/ha 11 | 2021 2.97 t/ha 10 | 2022 2.43 t/ha 10 |
|--|-------------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| Hyola Blazer TT | 32 | | 118 | 117 | 116 | 125 |
| Hyola Defender CT | 10 | | | | | 124 |
| HyTTec Trifecta | 39 | 127 | 126 | 117 | 119 | 123 |
| PY520TC | 13 | | | | 112 | 122 |
| Hyola Enforcer CT | 30 | | 116 | 104 | 107 | 102 |
| InVigor LT 4530P | 23 | | | 105 | 103 | 102 |
| ATR Bonito | 39 | 85 | 88 | 93 | 90 | 90 |
| Bandit TT | 5 | | | | 93 | |

| GRDC NVT MID TRIALS VIC LONG TERM CANOLA VARIETY | Group Mean Yield Trials | 2018 1.71 t/ha 7 | 2019 1.96 t/ha 9 | 2020 2.95 t/ha 8 | 2021 3.00 t/ha 10 | 2022 2.93 t/ha 9 |
|--|-------------------------------|------------------------|------------------------|------------------------|-------------------------|------------------------|
| Hyola Defender CT | 9 | | | | | 127 |
| Hyola Blazer TT | 28 | | 115 | 116 | 117 | 123 |
| PY520TC | 13 | | | | 115 | 121 |
| HyTTec Trifecta | 36 | 117 | 115 | 115 | 118 | 118 |
| InVigor LT 4530P | 25 | | | 104 | 98 | 104 |
| Hyola Enforcer CT | 31 | | 104 | 101 | 104 | 96 |
| ATR Bonito | 23 | 92 | 95 | 94 | 90 | 94 |
| Bandit TT | 5 | | | | 92 | |

| GRDC NVT MID TRIALS SA LONG TERM CANOLA VARIETY | Group Mean Yield Trials | 2018 1.59 t/ha 3 | 2019 1.78 t/ha 6 | 2020 2.19 t/ha 6 | 2021 2.42 t/ha 7 | 2022 2.91 t/ha 6 |
|---|-------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Hyola Blazer TT | 19 | | | 116 | 116 | 118 |
| Hyola Defender CT | 6 | | | | | 118 |
| HyTTec Trifecta | 26 | 115 | 118 | 116 | 117 | 115 |
| PY520TC | 11 | | | | 112 | 115 |
| InVigor LT 4530P | 8 | | | | 100 | 105 |
| Hyola Enforcer CT | 25 | | 109 | 101 | 105 | 99 |
| ATR Bonito | 12 | 92 | | 96 | | 94 |
| Bandit TT | 4 | | | | 94 | |

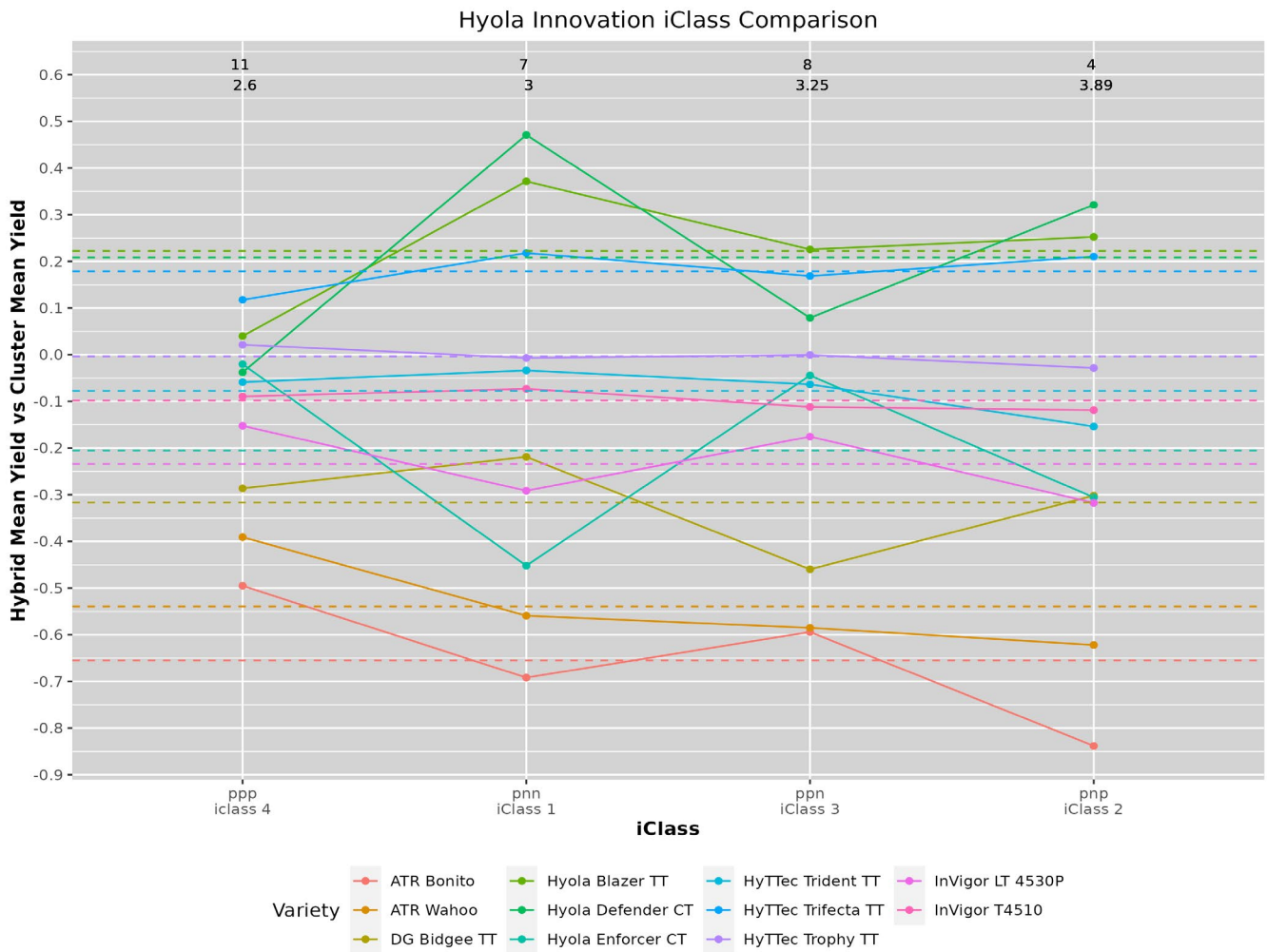
Selected varieties have been used for specific grain yield performance comparisons above.

Visit the GRDC NVT website, <https://app.nvt.grdc.com.au/ty/table/canola/> for full sets of results.

INDUSTRY LEADING NVT MET YIELD PERFORMANCE



Highlighting high yield performance



Industry leading trial design and analysis across all technologies shows Hyola Defender CT performance as up the top with leading TT hybrids

Pacific Seeds runs a Factor Analytic (FA) linear mixed model for MET analysis using ASREML with iClasses, where iClasses are groups of trials that capture patterns of variety by environment interaction. The iClasses are an extension of a normal MET analysis where you normally cluster trials based on a dendrogram of trial relatedness.

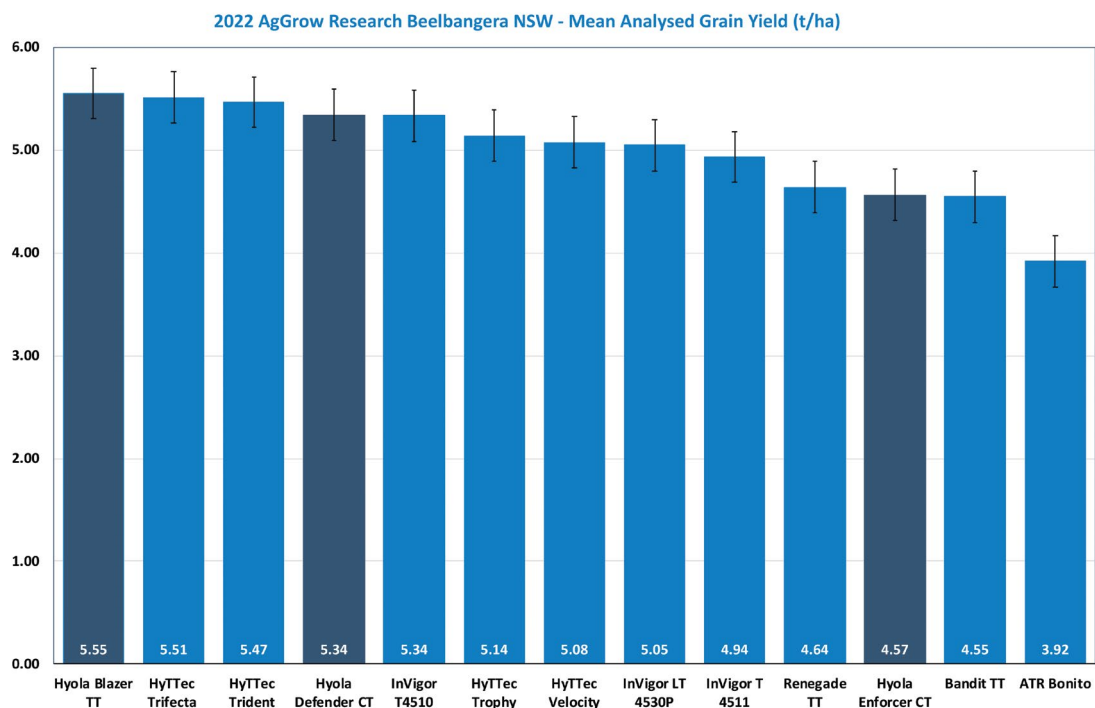
Trial data across two years and 30 trial sites for Hyola Defender CT demonstrates wide adaptation to a range of growing environments across Australia, providing Australian growers with a high level of confidence in Hyola Defender CT's performance. Hyola Defender CT also exhibits very high oil and a triple-gene blackleg resistance rating of "RMR".



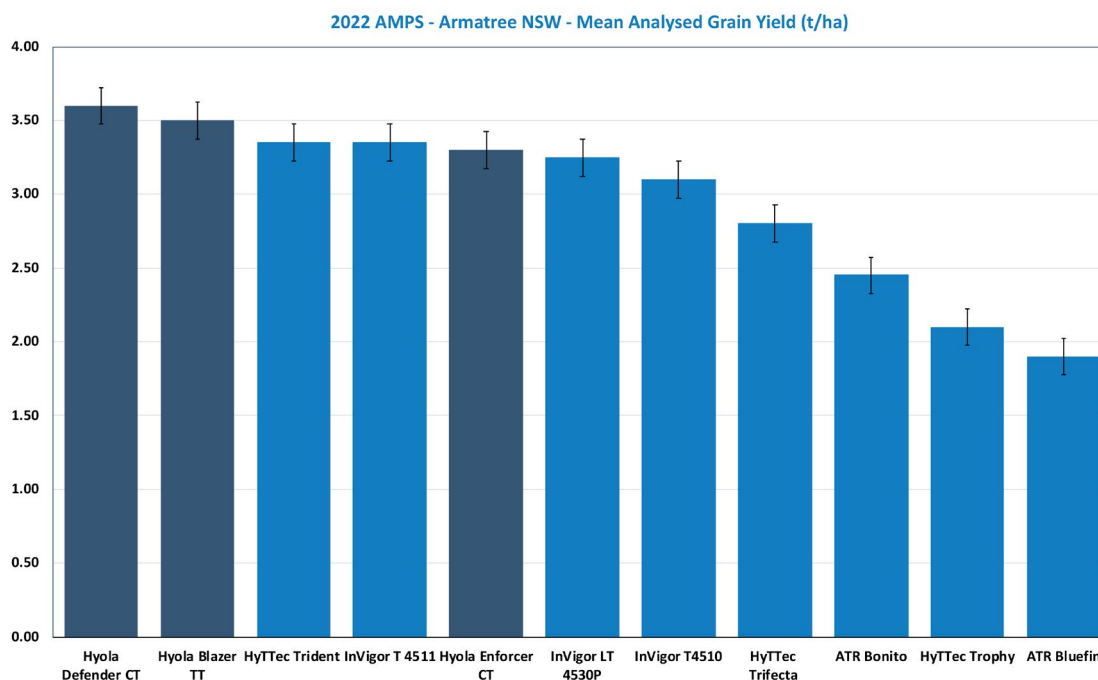
INDUSTRY LEADING NVT MET YIELD PERFORMANCE

INDEPENDENT INDUSTRY TRIAL RESULTS

Highlighting high yield performance



Data supplied and courtesy of AgGrow



Data supplied and courtesy of AMPS

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Ask us about how our products can add value to your business and customers.



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Talk to us about technical and agronomic advice to maximise product performance.



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