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Corn Trait Purity Testing Standards

Indiana Crop Customer Seminar
October 7, 2011



- The Agrisure® corn traits product line is comprised of top-performing traits available in elite genetics, developed to provide exceptional herbicide tolerance and best in class insect control in corn.
- All hybrid seed lots must meet trait purity specifications prior to commercial sale.
- Agrisure trait purity specifications are detailed in Syngenta's commercial license agreements.
- A Syngenta-approved lab must be used for all trait purity testing. A list of approved labs is provided on <http://www.myagrisure.com>.
- Seed companies are responsible for maintaining copies of all trait purity tests; data from such testing must be available to Syngenta upon request.
- This discussion covers hybrid trait purity testing standards only. For all other information on Agrisure Technology Stewardship (e.g. IRM, refuge requirements and grain marketing), please refer to Agrisure Traits Stewardship Guide available on <http://www.myagrisure.com>.



Traits	Syngenta Trademark(s)
Bt11 Cry1Ab (ECB resistance) Pat (Glufosinate tolerance)	
MIR604 CRW resistance	
GA21 Glyphosate tolerance	
MIR162 Broad spectrum Lepidoptera resistance	
Stacks* Broader control, flexible herbicide use	 <small>311</small>

*Multiple trait combinations are possible, but not all listed here.

Trait Testing Methods

❑ Bio Assays using a Herbicide

- Towel
- Kimpac
- Spray

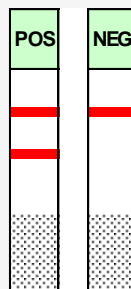


❑ Qualitative ELISA (+/-)

Plate ELISA



Test Strips



TYPE OF TESTS REQUIRED

Agrisure [®] CB/LL (Bt11)	Glufosinate -Liberty or Ignite	<ul style="list-style-type: none"> • Lab bioassays • Over the top sprays
Agrisure [®] GT (GA21)	Glyphosate	<ul style="list-style-type: none"> • Lab bioassays • Over the top sprays
Agrisure [®] RW (MIR604)	mCry3A specific (+/-) ELISA	<ul style="list-style-type: none"> • Test Strips or Plate ELISA on leaves or embryos only, not seed
Agrisure Viptera [®] (MIR162)	VIP3A specific (+/-) ELISA	<ul style="list-style-type: none"> • Test Strips or Plate ELISA on leaves or embryos only, not seed

Trait Testing Standards

Trait	Trait Purity Required (%)
Agrisure® CB/LL (Bt11)	96
Agrisure® GT (GA21)-Female donated	98
Agrisure® GT (GA21)-Male donated	96
Agrisure® RW (MIR604)	96
Agrisure Viptera™ (MIR162)	96

SAMPLE SIZE FOR TRAIT PURITY TESTING

Trait	Sheller Samples (prior to conditioning)	Finished Seed Lots (Sheller samples previously tested)	Finished Seed Lots (Sheller samples previously <u>NOT</u> Tested)
Agrisure® GT (GA21)	400	100	400
Agrisure® CB/LL (Bt11)	400	100	400
Agrisure® RW (MIR604)	90	30	90
Agrisure Viptera™ (MIR162)	90	30	90

In case the test results do not meet the required purity standard on the first run, see the decision tree provided for additional and subsequent options available, and/or consult Syngenta Contact.

“Bulk/sheller run tests do not replace finished lot tests”

Agrisure® Hybrid QA Requirements



- Test all sizes of the sheller samples if the trait is male donated, and test two predominant sizes, if the trait is female donated.
- Every new lot and also lots created by blending require testing.
- Agrisure® Hybrids stacked with multiple traits must be tested for all traits.



Contacts

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Legal

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