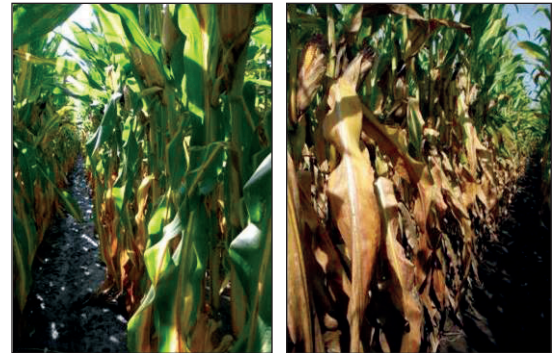


## Hybrid Response to Foliar Corn Fungicides

Syngenta Agronomy Research annually evaluates and rates every Garst® brand hybrid for their response to Quilt Xcel™ fungicide in low disease environments. Table 1 illustrates frequency and size of yield response observed in trials conducted with low disease pressure. Yield response varied greatly depending on the hybrid response category.

- ★ or ● rated hybrids showed a positive yield response at least 80% of the time resulting in 10 and 8.9 Bu/A increases, respectively
- ▼ rated hybrids resulted in a yield increase 74% of the time, averaging a 4 Bu/A increase
- ✘ rated hybrids, with low disease presence, had less frequent yield increases
- ▼ or ✘ rated hybrids, may show increased yield responses when diseases such as Gray Leaf Spot or others are present



Quilt Treated

Untreated

### Yield Response and Economic Return by Hybrid Rating Category Using Quilt® or Quilt Xcel Fungicide\*

40 Site Years, 2006-2010

Hybrid Response Ratings	Number of Comparisons	Yield Response (% of time)	Average Yield Increase (Bu/A)	Positive Economic Return** (% of time)
★	104	83%	10.0	77%
●	151	80%	8.9	60%
▼	170	74%	4.0	42%
✘	81	52%	0.2	17%
<b>All Data</b>	<b>506</b>	<b>74%</b>	<b>6.1</b>	<b>51%</b>

\*Data across multiple environments and locations where disease pressure was none to moderate.

\*\*Economic Return on Investment (ROI) based on \$26/A fungicide application cost and \$4.50/Bu corn price.

Table 1

## Improved Silage

A recent study by Syngenta Agronomy Research showed increased silage tonnage and quality with Quilt Xcel fungicide application.

- 3.9% increase in tonnage due to Quilt Xcel
- 6.4% increase in milk production (lbs/A)
- For more information consult 2011 Corn Silage Hybrid Selection Guide



Healthier stalk on the left shows the benefits of fungicide treatment versus untreated stalk on right when disease present.

## Improved Standability

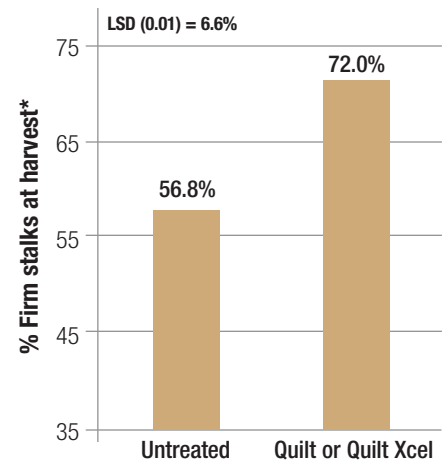
Late season stalk integrity was evaluated at harvest in replicated trials to understand the affect Quilt Xcel fungicide has on stalk quality. In these trials over 2000 stalks were evaluated for stalk firmness (Graph 1). Stalks that did not collapse when pinched at the first internode above the brace roots were classified as “firm,” indicating good stalk strength.

Graph 1 indicates that utilizing Quilt Xcel can:

- Significantly improve stalk integrity
- Improve agronomics of high yielding hybrids
- Reduce stalk lodging
- Decrease harvest losses
- Reduce harvest time

### Influence of Quilt or Quilt Xcel on Late Season Stalk Integrity

4 Site Years, 13 hybrids



\*Percent firm stalks at harvest determined from the sum of stalks collapsing when pinched at the first internode above the brace roots.

Graph 1



## Utilizing Garst® Brand Hybrids and Quilt Xcel Plant Performance™

1. Select best suited hybrid for field based on adaptability, agronomics and relative maturity.
2. Utilize Hybrid Response chart below based on the situation appropriate for your farm.

Low  
Disease  
Risk



High  
Disease  
Risk

### Enhance Hybrid Yield Potential

- Utilize hybrid response ratings to Quilt Xcel fungicide at the anticipated corn marketing price in below chart.
- ★ or ● indicate a high probability of economic returns from a Quilt Xcel fungicide application.
- ▼ or ✕ indicate a lower probability for yield increases under very low disease pressure, although may respond with improved stalk quality.

### Manage Foliar Disease

- Disease is observed or anticipated (continuous corn or moderate temperatures and high humidity).
- Determine if hybrid is susceptible to diseases common to your area with disease ratings in gray shaded areas.
- Apply Quilt Xcel fungicide at R1 (early silk) crop stage based on hybrid susceptibility.

### Garst Brand Hybrid Response to Quilt Xcel Fungicide in Low Disease Environments and Relative Disease Ratings

Hybrid Series	RM	Corn Price \$/Bu			Disease Resistance*				Hybrid Series	RM	Corn Price \$/Bu			Disease Resistance*			
		\$3.50	\$4.50	\$5.50	ES	NLB	SLB	GLS			\$3.50	\$4.50	\$5.50	ES	NLB	SLB	GLS
89N10	77	▼	▼	▼	-	-	-	-	86M39	105	✕	▼	▼	4	4	6	4
89V30	83	✕	✕	✕	3	3	-	-	86G35	105	✕	▼	▼	4	5	6	6
89S28	83	✕	✕	✕	6	4	-	-	85K93	106	▼	▼	▼	4	4	3	5
89S01	85	✕	✕	✕	5	4	-	-	85V88	107	✕	✕	✕	5	3	-	5
89A33	85	✕	✕	✕	3	3	-	-	85R08	108	●	●	●	-	3	4	5
89J14	86	✕	✕	✕	2	2	-	-	85E98	109	▼	▼	▼	6	3	4	3
89K65	88	✕	✕	▼	4	6	-	-	85Z64	110	✕	▼	▼	-	5	4	4
89G13	90	▼	▼	▼	5	4	-	-	85K17	110	✕	✕	▼	-	6	5	4
89X34	91	✕	✕	✕	5	7	-	-	84Y14	111	✕	▼	●	5	4	4	5
89T43	92	✕	▼	●	3	3	-	-	84U58	111	▼	▼	●	-	3	2	7
88L03	93	✕	✕	▼	6	3	-	-	84Z02	112	▼	▼	▼	4	4	3	4
88R16	94	▼	▼	▼	6	6	-	-	84Q55	112	✕	▼	▼	-	4	7	5
88K05	96	▼	▼	▼	5	4	-	-	84J30	112	▼	●	●	3	5	3	2
88E24	96	●	●	●	5	4	-	-	84G70	112	✕	✕	✕	-	3	4	1
88W22	97	●	★	★	3	3	-	-	83T94	112	●	★	★	5	3	4	3
88R89	97	✕	▼	●	4	4	-	4	84U96	113	▼	▼	●	-	5	4	4
88F75	97	●	★	★	5	4	-	5	84N18	113	●	●	★	6	4	2	6
88A27	97	●	●	●	5	3	-	4	83S06	113	✕	▼	▼	-	3	3	2
88M51	98	●	●	●	5	5	-	6	83L67	113	▼	▼	●	-	4	6	5
88B37	99	✕	✕	✕	5	2	-	3	83E90	113	★	★	★	-	3	3	6
87G94	100	▼	●	★	5	4	-	4	83X61	114	●	★	★	-	3	4	3
87V47	101	✕	✕	▼	5	3	-	6	83R38	114	✕	✕	✕	-	4	4	5
87Q79	101	✕	✕	✕	5	4	-	4	83C55	114	▼	▼	▼	5	3	3	6
87F33	101	●	★	★	3	3	-	-	83A24	114	●	★	★	5	4	4	5
87Y27	102	▼	▼	▼	6	3	-	5	83P07	115	✕	▼	▼	5	4	4	2
87T18	102	●	●	●	4	3	-	5	83M47	115	●	★	★	-	3	5	3
87W95	103	▼	●	●	5	3	5	5	82R05	115	★	★	★	-	2	5	3
87D54	103	✕	✕	✕	5	2	-	3	82K01	116	★	★	★	5	4	3	5
86J49	103	✕	✕	✕	4	6	4	4	82R44	117	●	●	●	-	6	5	6
86X11	104	●	●	●	3	3	6	5	82H82	118	▼	▼	●	-	7	5	6
86T82	105	▼	●	●	4	5	4	4									

\*Disease Resistance rating scale; 1-2 = Highly Resistant, 3-4 = Resistant, 5-6 = Moderately Resistant, 7-8 = Moderately Susceptible, 9 = Susceptible, - = No data available

ES = Eyespot; NLB = Northern Leaf Blight; SLB = Southern Leaf Blight; GLS = Gray Leaf Spot

Economic response ratings based on statistically analyzed results of fungicide studies conducted by Syngenta Agronomy Research. Ratings apply to all hybrids with similar genetics.

### Hybrid Response Ratings

- ★ = Best opportunity to achieve an economic return at given commodity price (\$/Bu).
- = Hybrid has potential to achieve an economic return from a fungicide application.
- ▼ = Economic return not likely from fungicide application unless disease is present.
- ✕ = Not likely to respond to a foliar fungicide unless disease is present.

For more information, contact your Garst Dealer or call 1-888-GO-GARST.  
Visit us at [www.garstseed.com](http://www.garstseed.com)



This bulletin was developed by Syngenta Agronomy Research. Syngenta Agronomy Research studies and evaluates environmental and cultural practices that impact yield in both corn and soybean production to provide answers to the critical issues facing growers. In 2010, 27 research trials were conducted at 10 Syngenta Agronomy Research locations.