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## Fungicide applications to corn

By Bryan D. Young

Each year during the first week of July the Burrus agronomists will start receiving calls about fungicide applications to the corn crop. The typical question is "I have disease in my corn crop and should I be spraying a fungicide?" This is a simple question with not an easy answer.

Over the last four years the Burrus research department has conducted an extensive testing program to understand the response of fungicide application to our hybrid lineup to help answer these questions. During this time frame we have tested numerous hybrids in different crop rotations at different planting dates to understand the hybrids' responses to fungicide application. In a general statement, fungicide application will improve overall plant health, plant intactness, and slightly improve stalk quality, while also increasing the grain moisture at harvest. These observations are consistent even when disease pressure is low. Our results have shown in low disease environments we typically see an increase in grain yield from fungicide application range from 3 to 5 bushels an acre when averaged across all hybrids in the trial. In a more moderate disease pressure yields the average yield advantage across all hybrids ranged from a 6 to 8 bushel an acre yield. When disease pressure is high, we have seen the average yield advantage across all hybrids range from 9 to 16 bushels an acre. Within these averages for a particular envi-

ronment we can see hybrids within the trial have very little or no yield response while other hybrids have a significant yield advantage to fungicide application.

For the growers who want to make a decision on fungicide application before planting we have developed a guideline. In table 1 our hybrids are grouped into low, moderate, and high probability of a yield response to fungicide application. To use this information effectively we also recommend using figure 1 that applies economics to the decision process. Figure 1 takes into account the yield response, expense of drying higher moisture grain, cost of fungicide application, price of the grain, and the probability of yield response groups. These two tools can help growers make more accurate decisions when planning July fungicide applications in the winter or early spring.

Our best recommendations for fungicide application are to wait and scout your fields for disease at or just before pollination. By scouting, growers can help eliminate unnecessary fungicide application when disease pressure is low or the environment has been unfavorable for disease development. When scouting pay close attention to which diseases are present and the location of the lesions within the canopy. When disease is found in the canopy at the ear leaf or above become concerned or also when a large amount of lesions are present below

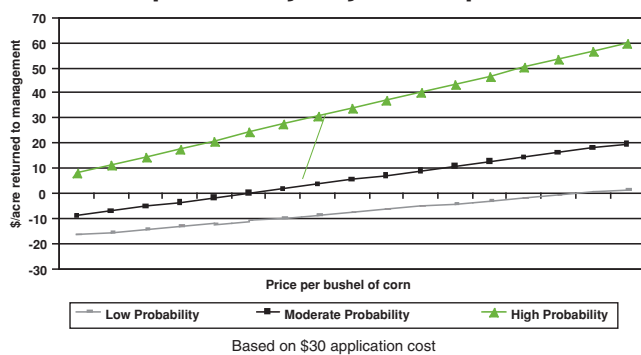
the ear leaf at or during pollination. Scouting decisions are made on a field by field basis. There have been instances in the past where Burrus agronomists have scouted fields and recommended fungicide application to hybrids that have a low probability of a yield response. In these fields disease pressure was high and the disease was progressing into the upper canopy. There have also been cases where Burrus agronomists have found higher amounts of disease in corn following soybean while down the road disease pressure was less in continuous corn. This variability in field by field is likely due to the effect of environment, the initial amount of the pathogen present in the field, and the particular hybrid's response to the disease complex.

Fungicide application is a newer tool growers are using to aid in disease management. Relying completely on a single fungicide application to control disease and only selecting hybrids with a weak disease package will not lead to long term success. It is still important to select a diverse hybrid package that includes hybrids that have a good disease package. The Burrus, Hoblit, Hughes, and Power Plus® Hybrids offer a diverse genetic background that will lead to long term success and higher corn yields for your farming operation.

Table 1. Probability of Yield Response to Fungicide Application

High	Moderate		Low	
Burrus 4J63 645	Burrus 571R 573T	Power Plus® 2A16AM1™* 2M17AMRW™*	Burrus 591L 811T	Power Plus® 4A30AM1™* 4M31AMRW™*
Hoblit 5317VT3 5557VT3 5827VT3 Hughes 3118GT	750 798BW Hughes 1285GCL 2240GT3 3310GT	3C98™* 4N49™* 4K74™* 5N48™* 5R65™* 5R66™*	Hoblit 5566GT3 Hughes 2450GT 2795GT3 2884	5G42™* 5A45AM1™* 5M46AMRW™* 5P55™* 6Y10™* 6A12AM1™*
4592VT3 6347VT3 Power Plus® 6H22™*	3309GT3 3639 4913LL 5594GT3 5874 6435GT3	5R68™* 7U17™* 7A18AM1™* 7D51™*	2544GT3 4125GT3 4370 5627VT3 5124GT 7383GT3	6B50™* 6B51™* 6B52™*

Figure 1. Fungicide return by probability of yield response



Horizon 71S08Z	198.0	18	16.1	58.0
Dairyland 9414	224.8	1	19.4	56.0
Channel Bio 216-63	204.6	9	20.6	56.5
Becks 6733HXR	201.6	15	20.1	58.0
✓Check	203.0		17.4	57.0
Pioneer 1395XR	212.4	4	18.6	57.0
Stone 6413 VT3	199.2	19	19.5	57.0
LG Seeds 2549VT3	208.9	5	18.3	55.0
Wyffels 8681	216.4	3	21.1	55.5
AgriGold A6458 VT3	207.4	8	18.3	56.5
✓Check	208.6		17.4	55.5
Plot Average	202.9		17.6	56.9
Check Average	207.1		16.8	

### Rod Becker Jacksonville, IL

Planted: In 30" rows. Harvested: September 25. Previous Crop: Soybeans. Corn Borer Rating: Light. Soil: Heavy loam. Weather: May/June/July/August-wet. Remarks: Power Plus® Brand Seed Corn distributed by Burrus.

Brand/Product	Bu. Per Acre	% Moisture	Adj. Test Wt.
POWER PLUS 7D51™*	221.1	16.0	62.0
POWER PLUS 6B50™*	210.3	14.5	58.0
Hoblit 5827VT3	199.9	15.4	58.0
BURRUS 811T	190.6	14.4	60.0
POWER PLUS 5R68™*	168.1	14.4	59.0
POWER PLUS 8G23™*	166.8	14.0	58.0
Average	192.8	14.7	59.1

## MORGAN

New products prevail!

Burrus Seed Farms Inc.  
Arenzville, IL



Planted: April 15 in 30" rows. Harvested: September 1. Previous Crop: Corn. Fertilizer: 180N. Herbicide: Bicep Lite, Impact, AAtrex. Insecticide: Aztec. Seed Treatment: Poncho. Corn Borer Rating: light. Soil: Worthen silt loam. Weather: May/June/July/August-wet. Remarks: Power Plus® Brand Seed Corn distributed by Burrus.

Brand/Product	Bu. Per Acre	% Moisture	% Erect	1000 Plants/Acre
POWER PLUS X5A45™*	236.7	22.5	100	32
POWER PLUS X5G42™*	236.5	21.1	100	32
Hughes 7383GT3	235.6	20.9	96	32
POWER PLUS 7D51™*	228.0	24.6	100	31
BURRUS 750	226.6	23.3	96	30
Hoblit 5557VT3	219.3	23.3	100	34
POWER PLUS 8G23™*	218.8	24.0	100	32
Hughes 4125GT3	217.6	17.8	100	31
BURRUS 4J63	217.2	20.3	100	34
Hoblit 5566GT3	216.8	23.1	100	36
Hughes 3639	212.8	16.3	100	30
POWER PLUS 5R66™*	211.4	20.8	100	34
Hughes 6435GT3	209.4	19.0	100	36
Hughes 5594GT3	208.1	18.5	100	32
POWER PLUS 6H22™*	207.2	21.4	100	36
Hughes 5124GT	205.7	19.0	100	32
Hughes 4592VT3	204.2	17.2	100	34
POWER PLUS 6B52™*	203.4	22.2	100	30
Hughes 5627VT3	200.6	19.0	100	32
POWER PLUS X4A30™*	200.3	22.0	100	35
BURRUS 591L	200.1	20.8	100	32
Hughes 5874	199.9	17.8	100	34
POWER PLUS 5R65™*	199.6	19.4	100	34
Hughes 2450GT	198.9	17.3	100	34
POWER PLUS X2A16™*	198.2	18.8	100	34
POWER PLUS X7A18™*	196.7	23.4	100	35
Hughes 3309GT3	196.3	16.8	96	33
BURRUS 573T	196.2	21.9	100	35
POWER PLUS 5N48™*	196.0	19.9	100	34
POWER PLUS 4N49™*	191.6	22.2	100	29
POWER PLUS 7U17™*	190.1	23.7	100	34

## MONTGOMERY



Young Leaders  
Raymond, IL

Planted: April 12 in 30" rows. Harvested: September 7. Previous Crop: Corn. Planting Population: 34,000. Herbicide: Dual/Atrazine,

## ILLINOIS

Callisto. ✓Check Hybrid: Horizon 73PV36R. Remarks: Power Plus® Brand Seed Corn distributed by Burrus.

Brand/Product	Bu. Per Acre	Rank	% Moisture	Adj. Test Wt.
✓Check	209.8		16.8	56.5
Wyffels W7071VT3	195.3	26	14.2	56.0
Horizon 7318R	206.6	13	17.0	60.0
Stone T6N52VT3	209.5	7	15.9	58.0
Golden Harv 8969	195.6	25	16.3	56.0
BoJac 9643	200.0	22	19.7	57.5
✓Check	205.7		15.5	57.0
Channel Bio 209-77	195.0	23	16.7	56.0
Pioneer P1184XR	203.5	11	16.4	60.5
Becks 5442VT3	192.3	24	16.3	57.5

Dynagro 57V44VT3	180.2	28	16.8	55.0
LG Seeds 2620VT3	205.8	6	18.3	56.0
✓Check	201.9		17.6	56.0
AgriGold 6533 VT3	203.7	17	18.6	56.0
POWER PLUS 7D51™*	208.2	12	19.9	57.5
Dairyland 9313	201.6	21	16.4	56.5
FS 65BV3	225.5	2	19.5	55.0
Stine 9608 SS	181.8	29	14.5	60.0
✓Check	215.5		16.5	56.0
Dynagro 57V40	205.6	16	16.7	56.5
FS 64JV3	208.7	14	16.7	56.5
Stine 9726VT3	191.0	27	20.0	57.5
POWER PLUS X5A45™*	203.6	20	17.9	60.5
Gateway 8816VT3	170.0	30	17.2	55.5
✓Check	205.1		16.3	57.0
Golden Harv 91383	204.3	10	18.3	57.0