PuraMaize™ in the Field

2012-2013 Blue River Hybrids Product Guide

HAROLD WILKEN
organic farmer, Danforth, IL
58PM36 PuraMaize Corn Hybrid

ALAN WARD
organic farmer, Viborg, SD
58PM36 PuraMaize Corn Hybrid

USDA ORGANIC

PLANT ORGANIC. FARM BETTER.

blue river hybrids

CORN • SOYBEANS • ALFALFA • RED CLOVER • SUDANGRASS • SORGHUM • SUNFLOWERS

PuraMaize – The First Year in the Field

After many years of developmental work, Blue River Hybrids offered for 2012 planting, a powerful new tool to combat GMO contamination in corn—PuraMaize! Developed through traditional selective breeding, the PuraMaize gene blocking system impedes GMO fertilization by strongly favoring its own PuraMaize pollen. Highly effective in protecting corn from GMO field drift, PuraMaize preserves the non-GMO status of your grain.

We are following the stories of several farmers who planted PuraMaize in 2012 and are willing to share their observations during the growing season. In this product guide, you can read the reasons why they chose to plant PuraMaize. I think their experiences will resonate with organic farmers across the country.

At Blue River Hybrids, we offer new and innovative products and customer service across all the major organic production areas with our dealer network and regional sales managers. You may notice the name of a dealer in your area printed on the cover of this product guide. Please contact this dealer or regional sales manager for answers to your questions and friendly, courteous service.

Thank you for supporting Blue River Hybrids product development with your order.

We appreciate the privilege of providing seed for your farm.

Maury Johnson

2012-2013
Early Order Customer Discounts

Products	SEPT 2012 Orders	OCT & NOV 2012 Orders
Corn, Red Clover, Alfalfa, Sunflowers	$ 4.00 less per bag	$ 2.00 less per bag
Soybeans, Sorghum	$ .50 less per bag	$ .50 less per bag

2012-2013
Early Payment Customer Discounts

Month	Cash Discount %
September 2012	8%
October 2012	7%
November 2012	6%
December 2012	5%
January 2013	4%
February 2013	3%
March 2013	2%
April 2013	1%
May 2013	1%

REGIONAL SALES MANAGERS

BACK ROW

David Burns, Northern Region Manager; Luke Howard, Eastern Region Manager; Joe Fries, Central Region Manager

FRONT ROW

Maury Johnson, Director of Sales & Production; Scott Ausborn, North Central Region Manager

BLUE RIVER HYBRIDS

BACK ROW

Sandra Kowalik, Gary Miller, Maury Johnson, Scott Ausborn, Jeff Frantz, Amy Swain

FRONT ROW

Yolanda Sanchez, Dale Clark, Neilie Hoskins, Cheri Johnson, Jesus Romero

To locate a dealer in your area call 800.370.7979 or go to www.blueriverorgseed.com and click on dealer locator.

Organic crops start with the seed. PLANT ORGANIC. FARM BETTER.

ORGANIC CORN

77-87 DAY

07M91 - 77 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Husks open to allow early dry-down
- Very good stress tolerance
- Excellent roots, combines well
- Very early dual purpose hybrid

12T91cnv - 81 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Excellent northern adaptation
- Excellent plant health and stalk strength
- Very good ear flex
- Conventional untreated seed

14A91 - 82 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Very good yield potential in all northern environments
- Very good dry-down
- Very good stalks and roots in its maturity zone
- Good performance south of maturity zone

21B50 - 85 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Medium tall plants with wide leaves for very good canopy
- Plant at moderate populations
- Well suited to all soil types
- Good choice for either grain or silage use

23A71 - 86 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Responds positively to higher fertility
- Plant at higher population
- Very good early vigor
- Excellent ear flex

NEW

23L99 Leafy Silage - 86 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
ROOT STRENGTH				
TONNAGE POTENTIAL				
NDFD (cell wall digestibility)				
DRY MATTER DIGESTIBILITY				
MILK/ACRE				

- Tall leafy silage hybrid with more young leaves above the ear
- Flexible stalks (contain less lignin)
- Earliest leafy silage hybrid
- Highest silage tons/acre and milk/acre in 2011 Vermont Organic Corn Silage Trial

25A16cnv - 87 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Well suited to northern environments
- Strong yield potential
- Strong stalks
- Good performance under heat stress
- Conventional untreated seed

25M75 - 87 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Plant at moderate populations, has good ear flex
- Well suited to all soil types
- Good choice for either grain or silage use
- Strong drought and heat tolerance

KELVIN MARTIN

BRH Customer, Brooten, MN

Kelvin Martin & son

For additional information about Blue River Hybrids and its products, go to **www.blueriverorgseed.com**.

ORGANIC CORN

88 - 102 DAY

DALE BRAUNSCHWEIG

BRH Customer, Burnett, WI with

DON HANKE

BRH Dealer

"In 2011 45R37 yielded 188 bu/acre. The highest in my test plot with 11 hybrids and 4 brands."

26A17 - 88 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Very good emergence and early growth
- Plant hybrid only in its normal maturity zone
- Excellent dry-down
- Responds to moderate fertility environments
- Silage potential

29B17 - 89 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Very good silage and grain yield potential
- Very good plant health, and stay green in the fall
- Good choice for tougher soils or conditions
- Very good fall dry-down

30A57 - 90 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Similar to 25A16, with better standability
- Very good plant health and fall stay green
- Excellent yield potential

33L90 Leafy Silage - 93 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
ROOT STRENGTH				
TONNAGE POTENTIAL				
NDFD (cell wall digestibility)				
DRY MATTER DIGESTIBILITY				
MILK/ACRE				

- Tall leafy silage hybrid with more young leaves above the ear
- Flexible stalks (contain less lignin)

34C17 - 94 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Strong emergence and early growth, very good ear flex
- Silage potential
- Maintains performance, even with unfavorable conditions
- Very good choice for hand picking
- Top yield for early season in 2011 F.I.R.S.T. Organic trial in southern Minnesota

37A37 - 95 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Good plant health and full canopy, dual purpose potential
- Very good ear flex and test weight
- Plant at moderate populations
- Remains productive in less than ideal environments

39A16 - 96 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Medium tall plants
- Good plant health and stay green
- Best suited for central and eastern regions

42A32 - 96 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Proven hybrid with best results central and west
- Maintains performance in southern environments
- Very good yield potential, even under drought stress

VINCE JAEGER

BRH Customer, Fairfield, IA

"It's (planting PuraMaize) the only way to help prevent the contamination of organic crops. There is no way to stop pollen drift and cross pollination."

40R73 - 97 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Very good yield potential
- Medium tall plants with broad leaves
- Very good seedling vigor

41R00 - 98 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Showy hybrid with very good yield potential
- Excellent fall integity with very good standability
- Tall plants with silage potential
- Good performance in varied growing environments
- Second highest yield for full season in 2011 F.I.R.S.T. Organic Trial in southern Minnesota

42B90cnv - 98 Day NEW

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Medium tall to tall, robust plants with wide leaves
- Above average test weight and grain quality
- Conventional untreated seed

NEW

43L96 Leafy Silage - 98 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
ROOT STRENGTH					
TONNAGE POTENTIAL					
NDFD (cell wall digestibility)					
DRY MATTER DIGESTIBILITY					
MILK/ACRE					

- Tall leafy silage hybrid with more young leaves above the ear
- Flexible stalks (contain less lignin)
- Good husk cover, opening nicely in the fall
- Softer grain texture improves digestibility

45R37 - 99 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Medium height hybrid
- Medium long ear with very good ear flex
- Excellent yield potential
- In 2011 produced 188 bu/acre on WI organic farm

47A30 - 102 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Best suited for central and eastern areas
- Performs best planted at higher populations
- Very good plant health and disease tolerance

PuraMaize

47PM37cnv - 102 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- PuraMaize hybrid, conventional untreated seed
- Very good yield potential
- Standability may be less than average in fields with very high fertility
- Performs best in central and eastern regions

47N93cnv - 102 Day NEW

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Excellent yields in the early 100 day group
- Tall nutritious plants, a good dual-use hybrid
- Superior performance in a variety of environments
- Very good plant health
- Conventional untreated seed

47A36 - 102 Day

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
PLANT HEALTH					
STRESS TOLERANCE					
STANDABILITY					
DRY-DOWN					
YIELD POTENTIAL					

- Very good yield potential, similar to 48B30
- Slightly better stalk and root ratings than 48B30
- Good performance in variety of environments

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ORGANIC CORN
102 - 117 DAY

48B30 - 102 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Top yield for full season in 2011 F.I.R.S.T. Organic Trial
- Tall nutritious plants, a good dual-use hybrid
- Superior performance in a variety of environments
- Very good plant health

51B57 - 103 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Medium tall plants with wide leaves make a dense canopy
- Very good ear flex
- Excellent yield potential, but harvest needs to be timely

53R57 - 104 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Tall plants with silage potential
- Excellent plant health and good stalk quality
- Excellent yield potential
- Out-yielded 48B30

54B36 - 105 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Wide area of adaptation
- Very good stalks and roots - stands well
- Very good early vigor
- Large deep kernels with a girthy ear

56M30 - 106 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Tall hybrid with excellent yield potential
- Very good seedling vigor, plant health, and good roots
- Excellent ear flex, good performance under lower populations
- Widely adapted, with excellent grain and very good silage performance in western areas

57H36 - 107 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- A top-yielder for this maturity
- Very tall hybrid with a good canopy
- Very good stalks and roots
- 2011 yields in NE and OH over 200 bu/acre organic production

57B10cnv - 106 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Fast drying, high quality grain
- Possible food grade grain
- Performs well on a variety of soils and populations
- Conventional untreated seed

PuraMaize.

58PM36 - 107 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- PuraMaize hybrid, organic seed for 2012-2013
- A top-yielder for this maturity
- Very tall hybrid
- Good stalks and very good roots

RANDALL LAURITSEN

BRH Customer, Exira, IA

"I am planting PuraMaize because I don't want to take the risk of GMO contamination."

Organic crops start with the seed. PLANT ORGANIC. FARM BETTER.

CNV indicates Non-GMO seed produced using conventional methods. Not treated with materials prohibited by the NOP rules.

63H30 - 111 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Yields similar to 66H54, but grain is dryer
- Stands better than 66H54
- Good dual purpose hybrid

65T36cnv - 111 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Consistent high yield performance across years
- Deep kernels on semi-flex ears
- Very good late season standability
- Conventional untreated seed

GALEN AND JASON DECKER

organic farmers and BRH Dealers in Scott City, KS

The Deckers are planting 71PM50, the 114 day PuraMaize hybrid. "We want to be able to move corn into the food market without wondering if it will pass the GMO test."

67H19 - 113 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Similar in maturity and yield potential to 66H54
- Tall plants with well spaced ears
- A good companion hybrid to 70R50

70R50 - 114 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Very good yield potential
- Good stalks and roots
- Potential for grain or silage production
- Widely adapted, works well from MD to TX

PuraMaize

71PM50cnv - 114 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- PuraMaize hybrid, conventional untreated seed
- Very good yield potential
- Good stalks and very good roots
- Potential for grain or silage production

71M36 - 114 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- Full season hybrid with good performance in full season areas (Texas, California)
- Flex type ear with good grain quality and test weight
- Excellent heat tolerance
- Big, robust plants

73B33cnv - 115 Day

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

- High yield potential and food grade quality grain
- Broadly adapted with above average stalks and roots
- Good performance on high fertility soils and stress-prone soils
- Highest yielding hybrid in BRH trials for 2 years
- Conventional untreated seed

76H50 - 117 Day NEW

POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR				
PLANT HEALTH				
STRESS TOLERANCE				
STANDABILITY				
DRY-DOWN				
YIELD POTENTIAL				

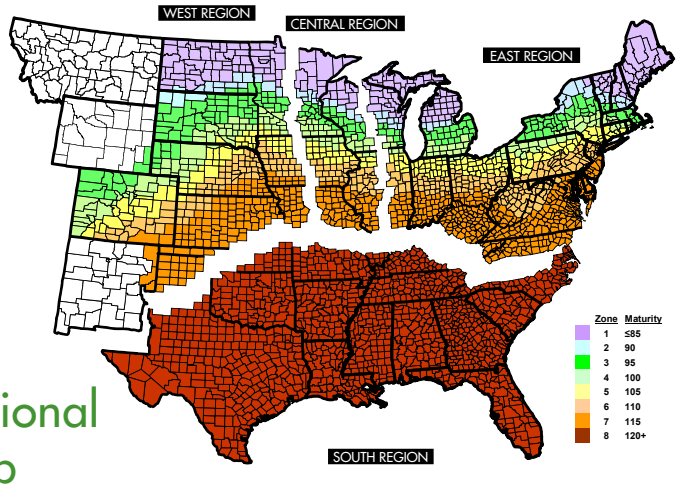
- Full season corn for either grain or silage
- Ranked in the top half of silage hybrids tested in 2011 at Texas A & M
- Very good standability

ORGANIC CORN RATINGS

1 Poor **2** Fair **3** Good **4** Very Good **5** Excellent

	PLACEMENT				AGRONOMIC CHARACTERISTICS							EAR AND GRAIN CHARACTERISTICS								
Brand	Relative Maturity	Region	Plant Health	Stress Tolerance (Heat/Drought)	Seedling Vigor	Canopy	Goss's Wilt	Root Rating	Stalk Rating	Plant Height	Ear Height	Ear Flex	Test Weight	Food Grade	Fall Dry-down	Cob Color	Yield Potential	Silage Potential	Special Features	Hand Picking
07M91	77	All	4	4	4	3	NA	5	4	4	4	3	3	2	4	Red	3	4	New	3
12T91cnv	81	All	5	4	3	3	NA	4	4	4	3	4	4	2	4	Red	4	4	New CNV	4
14A91	82	All	3	4	4	4	NA	4	4	3	3	3	3	3	4	Red	5	3	New	3
21B50	85	All	4	4	3	4	NA	3	3	3	3	4	4	4	3	Red	5	4	New	3
23A71	86	C W	4	4	4	4	NA	3	4	3	3	5	3	3	4	Red	4	4		3
23L99	86	All	4	3	3	5	NA	3	2	5	3	3	2	2	3	Red	5	5	Lfy Silage	2
25A16cnv	87	C W	4	4	3	3	NA	4	3	4	4	3	3	3	4	Red	5	3		3
25M75	87	All	4	4	3	3	NA	3	4	3	4	3	4	4	3	Pink	4	4	New	3
26A17	88	All	3	4	4	4	NA	3	3	4	3	4	3	3	5	Red	4	4		5
29B17	89	All	4	4	4	4	NA	3	3	4	3	4	3	3	4	Red	4	4	New	3
30A57	90	All	4	4	3	3	NA	3	4	4	3	4	4	4	3	Pink	5	3	New	3
33L90	93	All	3	3	3	5	NA	3	2	5	3	3	2	1	3	Red	4	5	Lfy Silage	1
34C17	94	All	3	3	5	4	NA	3	3	3	3	4	3	3	4	Red	3	4		4
37A37	95	All	4	4	4	4	NA	3	3	4	4	4	4	3	3	Red	4	4		3
39A16	96	C E	4	3	3	4	NA	3	3	4	4	3	4	3	3	Red	4	4	New	3
42A32	96	C W	2	4	3	3	NA	4	2	3	3	3	3	3	4	Red	4	2		3
40R73	97	C W	4	4	4	4	NA	3	3	4	3	3	3	3	3	Red	4	4		3
41R00	98	All	5	4	3	4	4	4	5	5	4	3	3	3	3	Red	4	4		2
42B90cnv	98	All	4	4	3	4	NA	4	3	4	3	4	5	4	4	Red	5	4	New CNV	3
43L96	98	All	3	4	4	5	NA	4	2	5	3	3	2	1	3	White	4	5	Lfy Silage	1
45R37	99	All	3	4	3	3	2	4	3	3	3	4	3	3	4	Red	5	4		4
47N93cnv	102	All	4	4	4	4	NA	4	4	4	3	3	4	3	4	Red	5	4	New CNV	3
47A30	102	C E	4	3	3	4	NA	3	3	4	4	2	3	3	3	Red	4	4		2
47PM37cnv	102	C E	4	3	3	4	NA	3	2	4	3	4	3	3	4	Red	4	4	PuraMaize	2
47A36	102	C W	3	4	3	4	NA	3	4	4	3	3	3	3	4	Red	4	3		2
48B30	102	All	4	4	3	4	4	4	3	4	4	4	3	3	3	Red	4	4		2
51B57	103	All	4	4	4	4	4	3	3	4	3	4	3	3	3	Red	5	4	New	3
53R57	104	All	5	3	4	3	5	4	3	5	5	4	3	3	3	Red	5	4		2
54B36	105	All	4	4	4	4	NA	4	3	4	4	4	4	3	3	Red	5	4	New	3
56M30	106	All	4	3	4	3	NA	3	3	4	4	5	3	3	3	Red	5	4		3
57B10cnv	107	All	3	4	3	3	5	3	3	3	3	4	5	4	4	Red	5	3	New CNV	3
57H36	107	All	4	3	3	4	2	4	4	5	4	4	3	3	3	Red	5	3		4
58PM36	107	All	4	3	3	4	NA	4	3	5	4	4	3	3	3	Red	5	3	PuraMaize	4
63H30	111	All	4	3	3	3	NA	4	3	5	4	3	3	3	4	Red	4	4		2
65T36cnv	111	All	4	4	4	3	4	4	4	3	3	4	3	3	3	Red	5	3	New CNV	3
67H19	113	All	4	3	4	4	NA	4	3	5	4	3	3	3	4	Red	4	4	New	2
70R50	114	All	4	3	3	3	NA	4	3	4	4	3	3	3	3	Red	4	4		2
71M36	114	C W	3	5	2	4	NA	4	4	4	3	5	5	4	3	Red	4	4		3
71PM50cnv	114	All	4	3	3	3	NA	4	3	4	4	3	3	3	3	Red	4	4	PuraMaize	2
73B33cnv	115	All	5	4	4	4	NA	4	4	3	3	3	5	4	4	Red	5	4		4
76H50	117	All	4	4	3	4	NA	4	4	4	3	4	3	3	4	Red	4	5	New	3

Regional Map



Corn

Row Width in Inches	Feet	Inches
8	65	4
15	34	10
20	26	2
30	17	5
36	14	6
38	13	9

Length of single row to equal 1/1000th of an acre

Inches Between Each Corn Kernel				
Seeds/Acre (Planted)	30" Row	36" Row	38" Row	Final Population Allowing 15% Stand Loss
15,000	14.0	11.6	11.0	12,750
18,000	11.7	9.7	9.2	15,300
21,000	9.9	8.3	7.8	17,850
24,000	8.7	7.2	6.9	20,400
28,000	7.5	6.2	5.9	23,800
30,000	7.0	5.8	5.5	25,500
32,000	6.6	5.4	5.2	27,200

Alfalfa

Expected Moisture	Lbs of Seed/Acres	Acres Planted/50 lb Bag
Limited Irrigation or Favorable Dryland Direct Seeding	15 –18	3.3 – 2.8
With Companion Crop	12 –15	4.2 – 3.3
Full Irrigation	18 – 20	2.8 – 2.5
Dryland	10 – 12	5.0 – 4.2

Stand Age	Plants/Square Foot
Seeding Year	20 – 30
Second Year	12 – 20
Third Year	8 – 12
Fourth/Subsequent Years	6 – 8

Alfalfa stands should be re-evaluated each year to measure deterioration. The grower may wish to make new seedlings when stands are less than the levels shown below.

Sudangrass

Seeding Rates for Sudangrass Forage			
Row Width	Intended Use	Dryland lbs of Seed/Acre	Irrigated lbs of Seed/Acre
32"-40"	Grazing	4 – 5	8 – 10
20"- 30"	Grazing	6 – 8	10 – 12
Drilled	Grazing	8 – 10	15 – 18
Drilled	Hay	15 – 30	20 – 35
Broadcast	Hay or Grazing	20 – 35	30 – 40

Red Clover

Red Clover Seeding Rate	lbs/Acre
Pasture or Forage Blend	4 – 6
Inter-seed with Small Grains	4 – 8
Pure Red Clover Stand	12 – 15

Sunflowers

Acres Planted with 1 bag of Sunflower Seed

150,000 Seeds per Bag	200,000 Seeds per Bag	Seeds Planted/Acre	Final Stand (85% x Planted)
7.5 Acres	10 Acres	20,000 Seeds	17,000 Plants per Acre
6.8 Acres	9.1 Acres	22,000 Seeds	18,700 Plants per Acre
6.3 Acres	8.3 Acres	24,000 Seeds	20,400 Plants per Acre
5.8 Acres	7.7 Acres	26,000 Seeds	22,100 Plants per Acre
5.4 Acres	7.1 Acres	28,000 Seeds	23,800 Plants per Acre

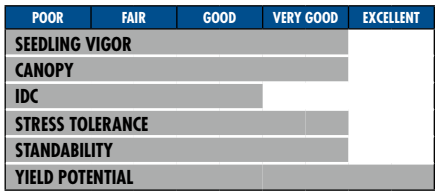
Plant Health is the ability of hybrid to tolerate diseases, and remain healthy throughout the growing season. **Stress Tolerance** is the ability to tolerate times of high heat and or lack of moisture. **Seedling Vigor** refers to the seeds' ability to vigorously grow, even when conditions are not ideal . **Canopy** refers to the hybrid's ability to cover the row and "shade out" or limit the ability of weeds to grow. Hybrids with wider, less vertical leaves will have a better canopy rating. **Root Rating** is the rating given a hybrid for having good roots to anchor the plant. **Stalk Rating** is the plant's ability to maintain good stalk strength, both during the growing season and after. **Ear Flex** is a hybrids ability to produce bigger ears (either in girth or length) when total populations are down, or an individual plant has more room around itself. There are various definitions for "**Food Grade**", but here it means that test weight is higher, and kernels have a harder texture. **Fall dry-down** is the hybrids' ability to dry down quickly after kernel black layer has formed. **Hand picking** is a rating that combines (1) convenient ear height, and (2) shucks that loosen around the ear

IDC = Iron Deficiency Chlorosis
PRR = Phytophthora Root Rot
BSR = Brown Stem Rot
SDS = Sudden Death Syndrome
SCN = Soybean Cyst Nematode

ORGANIC SOYBEANS

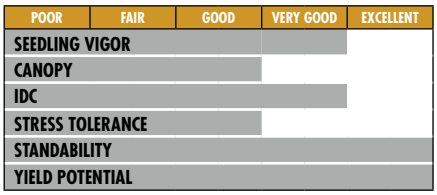
GROUP 0 - 3.8

06F8 Brand - Group 0.6 FOOD GRADE



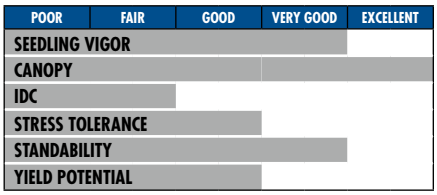
- Excellent combination of yield and food grade potential
- Yellow hilum, possible food use, 34.0% protein
- Taller, bush type bean with very good canopy
- 109% of plot average in Blue River Hybrids trials

12A2 Brand - Group 1.2



- Yields 8 - 10% above location averages
- Very good emergence and standability
- Good tolerance to PRR and BSR

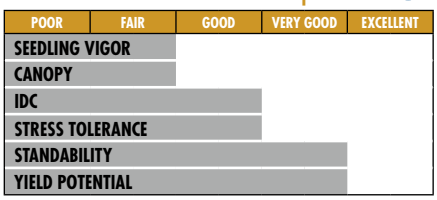
1F44 Brand - Group 1.4 FOOD GRADE



- Proven performer over several years
- Yellow hilum, excellent food/tofu use variety
- Taller plants with excellent canopy
- High protein (39.2%) and more yield than Vinton

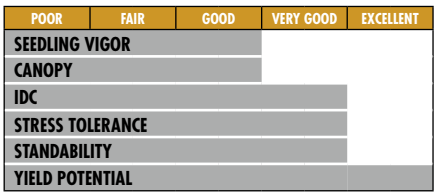
NEW

15AR3 Brand - Group 1.5



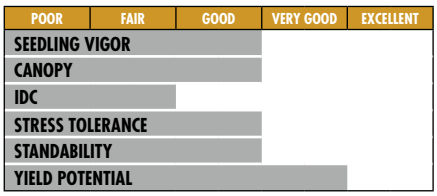
- Mid-Group I aphid resistant variety
- Insures against losses from soybean aphids
- Medium height with excellent standability at harvest
- Earliest aphid resistant variety available

17C2 Brand - Group 1.7



- Improved yield potential
- Yielded 6% over the test average for this maturity
- Very good tolerance to white mold, PRR, BSR, and IDC
- Cyst resistant variety

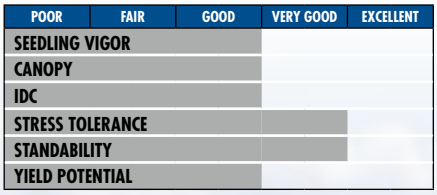
19AR1 Brand - Group 1.9



- Aphid resistant variety, providing peace of mind to growers
- Very good yield potential
- Dark hilum, feed-type variety

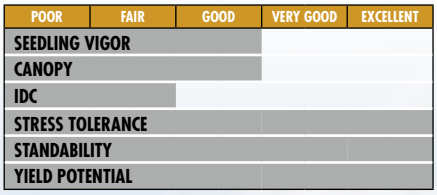
NEW

20F3 Brand - Group 2.0 FOOD GRADE



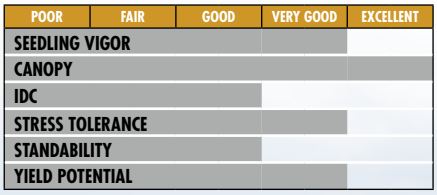
- Yellow hilum, marginal protein level
- Very good stress tolerance
- Moderate size bean for food use

2A12 Brand - Group 2.1



- Reliable performer over several years
- Dark hilum, high yielding feed-type
- Excellent stress tolerance, performs well even on poorer soils

23C2 Brand - Group 2.3



- Cyst resistant variety
- Quick emergence and bushy canopy for weed control
- Adapts to variety of soil types and geography
- Excellent multiple state trial performance in 2009, 2010
- All around good agronomic performance

Protein and oil values are reported on a 13% moisture basis. Environmental conditions may cause protein and oil composition to fluctuate.

Some points about soybean aphid resistant varieties:

- Resistant varieties were developed through conventional breeding, and are not genetically modified.
- Aphid resistant lines will not be totally free of aphids, but aphids will do less damage to the plants.

26F0 Brand - Group 2.6 FOOD GRADE

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Food-type variety with good yield potential
- Good scores for PRR and BSR
- Medium tall plants with medium bush profile
- Protein has been 38.8%

27A3 Brand - Group 2.7 NEW

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Very good IDC scores, and PRR tolerance
- Wide area (east to west) of adaptability
- Good bean to harvest - stands well and resists shattering

2A71 Brand - Group 2.7

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Reliable performer over several years
- Dark hilum, feed use
- Taller plants with good canopy

28C3 Brand - Group 2.8 NEW

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Cyst resistant variety
- Performs on a wide variety of soils and conditions
- Very good plant health
- Out-yielded 2A71 in Blue River tests
- Good tolerance to white mold, PRR, and BSR

29AR9 Brand - Group 2.9

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Aphid resistant, dark hilum variety
- Yield advantage most significant in environments with heavy aphid pressure

30C3 Brand - Group 3.0 NEW

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Strong yields from west to east
- Resistant to BSR and white mold
- Good PRR tolerance
- Cyst resistant variety

34A7 Brand - Group 3.4

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Excellent yields in Group III variety
- Dark hilum, feed type, proven over multiple years
- Great yield stability even in stressed environments

35F1 Brand - Group 3.5 FOOD GRADE

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Very good yield potential, has beaten 34A7
- Yellow hilum, above average protein (37.9%)
- Medium tall and medium bush plants

eMerge 389F.Y Brand - Group 3.8 FOOD GRADE

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Very good yield potential
- Yellow hilum, above average protein (35.8%)
- Yield stability from east to west
- Excellent SDS and SCN scores

For additional information about Blue River Hybrids and its products, go to **www.blueriverorgseed.com**.

ORGANIC SOYBEANS

GROUP 4.3 - 5.1

Protein and oil values are reported on a 13% moisture basis. Environmental conditions may cause protein and oil composition to fluctuate.

43A7 Brand - Group 4.3

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Consistent high yields over a variety of regions
- Medium plant height and medium bushy type plants
- Higher than average protein for a dark hilum variety
- Productive in tough conditions

45C3 Brand - Group 4.5 NEW

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Medium tall plants, semi-bush plant type
- Good variety for MO, southern IL, and east
- Good tolerance to PRR
- Very good standability and shatter resistance at harvest
- Cyst resistant variety

eMerge e5110 Brand - Group 5.1

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
SEEDLING VIGOR					
CANOPY					
IDC					
STRESS TOLERANCE					
STANDABILITY					
YIELD POTENTIAL					

- Very good standability at harvest time
- Excellent stress heat/drought tolerance
- Good yield stability across a variety of environments
- Medium tall and medium bushy plants
- Protein levels above average

GRAIN SORGHUM

55R6 cnv

- 55 days to mid-bloom, red grain color
- Works for a double crop, or for grain in shorter season areas
- Medium height, open head, and good threshability

64B6 cnv

- 64 days to mid-bloom, bronze grain color
- Biotype "E" green bug resistance
- Excellent yield potential

67C6 cnv

- 67 days to mid-bloom, cream grain color
- Very drought tolerant
- Good emergence, standability, and threshability
- Biotype "C" green bug resistance

60W2 cnv

- 60 days to mid-bloom, white grain color
- White, translucent grain threshes easily with high test weight.
- High protein qualifies for sorghum food buyers; produces high quality white flour.

66W2 cnv

- 66 days to mid-bloom, white grain color
- White, translucent grain threshes easily with high test weight.
- Meets needs of sorghum food buyers; produces high quality white flour.
- Performs well under irrigation; can also tolerate drought conditions.

Planting Grain Sorghum

- Grain sorghum seed is untreated.
- Grain sorghum is a warm season crop, and soil temperature should be at least 65 degrees at planting time.
- Plant 1"- 2" deep in moist soil, with good seed-soil contact.
- For dry land acres with limited rainfall, plant 50,000 - 60,000 seeds/acre.
- In areas with adequate rainfall, plant 75,000 - 90,000 seeds/acre.

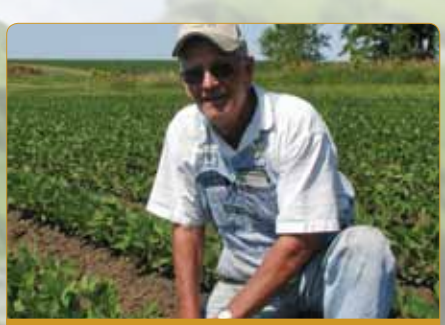
SUNFLOWERS

Daytona Organic Sunflower Seed

Daytona is a medium maturity high oleic oil sunflower hybrid. It is a very uniform, short-statured, modified single-cross hybrid. Daytona's short stature, maturity, and wide adaptation make it a good hybrid in all sunflower production areas.

- High oil content
- Improved root and stalk strength results in less lodging.
- Improved tolerance to Phoma, Phomopsis, and Sclerotinia Head Rot
- Ranked 4th in yield in the 2011 Dryland Oil Sunflower Performance Variety Trial at Akron, Colorado.

High oleic sunflower oil is very high in oleic (monounsaturated) acid. High oleic sunflower oil is usually defined as having a minimum 80% oleic acid. The oil has a very neutral taste, and provides excellent stability without hydrogenation. High oleic sunflower oil offers a trans free oil solution for consumers.
The National Sunflower Association



JOHN ROOSE
New Sharon, IA 34A7 Soybean Grower

Organic crops start with the seed. PLANT ORGANIC. FARM BETTER.

ORGANIC SOYBEAN RATINGS

1 Poor **2** Fair **3** Good **4** Very Good **5** Excellent

	PLACEMENT					AGRONOMIC CHARACTERISTICS								GRAIN CHARACTERISTICS						
	Group - Maturity	Early Growth	Plant Height	Plant Type	Canopy	Plant Health	Phytophthora Tolerance	IDC (Iron Chlorosis)	Aphid Resistance	Cyst Tolerance	Stress Tolerance	Shatter Resistance	Standability	Hilum Color	Feed/Food Use	Seeds / lbs (Est)	Expected Seed Size	Protein % (@13%)	Oil % (@13%)	Yield Potential
06F8	0.6	4	4	4	4	4	3	3	No	2	4	4	4	Y	Food	3,000	Medium	34.0%	18.9%	5
12A2	1.2	4	3	3	3	4	4	4	No	3	3	3	5	D	Feed	3,200	Medium	35.0%	16.9%	5
1F44	1.4	4	4	4	5	3	3	2	No	2	3	4	4	Y	Food	2,200	Large	39.2%	16.7%	3
15AR3	1.5	2	3	3	3	3	3	3	Yes	2	3	3	3	D	Feed	3,000	Medium	35.3%	18.4%	4
17C2	1.7	3	4	3	3	4	4	4	No	4	4	3	4	D	Feed	3,200	Medium	35.0%	17.8%	5
19AR1	1.9	3	3	3	3	3	3	2	Yes	2	3	4	3	D	Feed	2,600	Medium	34.9%	17.8%	4
20F3	2.0	3	3	3	3	3	4	3	No	2	4	4	4	Y	Food	2,300	Medium	35.0%	19.5%	3
2A12	2.1	3	3	3	3	4	3	2	No	2	5	4	5	D	Feed	2,900	Medium	34.6%	17.5%	5
23C2	2.3	4	4	4	5	4	4	3	No	4	4	5	3	D	Feed	2,900	Medium	34.4%	20.2%	4
26F0	2.6	3	4	4	4	4	4	3	No	2	3	4	3	Y	Food	2,000	Large	38.8%	16.6%	3
27A3	2.7	4	3	3	3	3	4	4	No	2	3	4	4	D	Feed	3,000	Medium	33.5%	19.2%	4
2A71	2.7	3	3	3	3	3	4	3	No	2	5	4	5	D	Feed	2,900	Medium	35.9%	16.8%	4
28C3	2.8	3	3	3	3	4	4	3	No	4	3	3	3	D	Feed	3,000	Medium	34.0%	18.9%	5
29AR9	2.9	3	3	3	3	4	3	2	Yes	2	3	3	4	D	Feed	2,800	Medium	33.7%	19.2%	4
30C3	3.0	4	4	4	4	4	4	3	No	4	4	4	3	D	Feed	2,800	Medium	34.4%	18.1%	4
34A7	3.4	3	3	3	3	4	4	3	No	2	5	4	4	D	Feed	2,600	Medium	36.1%	16.8%	5
35F1	3.5	3	4	4	3	3	3	2	No	2	3	4	4	Y	Food	2,500	Medium	37.9%	16.4%	4
389F.Y	3.8	4	3	3	3	4	3	5	No	4	3	3	4	Y	Food	2,800	Medium	35.8%	17.1%	4
43A7	4.3	3	3	4	4	3	3	3	No	2	4	3	4	D	Feed	3,000	Medium	35.6%	16.8%	4
45C3	4.5	4	4	4	4	4	4	3	No	5	3	4	4	D	Feed	3,000	Medium	37.4%	17.5%	4
e5110	5.1	3	3	3	3	4	4	3	No	4	5	3	5	D	Feed	2,700	Medium	38.8%	18.4%	4

Calculating soybean needs

Seeds/Acre	150,000	175,000	200,000
Bags at 140,000 seeds	1.07 bags	1.25 bags	1.43 bags
Bags at 110,000 seeds	1.36 bags	1.59 bags	1.82 bags

Seeds per Foot	150,000	175,000	200,000
15" Row Width	4.3	5.0	5.7
20" Row Width	5.7	6.7	7.7
30" Row Width	8.6	10.0	11.5
36" Row Width	10.3	12.1	13.8

Seeds/lb	Seeds/Unit	Lbs/unit	Size
3300	140,000	42.4	Medium
3200	140,000	43.8	Medium
3100	140,000	45.2	Medium
3000	140,000	46.7	Medium
2900	140,000	48.3	Medium
2800	140,000	50.0	Medium
2700	140,000	51.9	Medium
2600	140,000	53.8	Medium
2500	140,000	56.0	Medium
2400	110,000	45.8	Large
2300	110,000	47.8	Large
2200	110,000	50.0	Large
2100	110,000	52.4	Large
2000	90,000	45.0	X - Large
1900	90,000	47.4	X - Large
1800	90,000	50.0	X - Large

ALFALFA

High Yielding - General Purpose

Roadrunner Organic Alfalfa
- Roadrunner Organic has excellent leaf to stem ratio.
- It has very good disease resistance and excellent winter hardiness.
- The yield is 16% better than vernal in a 2 year Iowa test, ranking 11th of 24 varieties.
- Seed coated with Apex Green is available.

Raven Organic Alfalfa
- Raven organic alfalfa is a general purpose alfalfa with excellent persistence, especially in heavier soils.
- Raven has resistance to wide range of alfalfa diseases.
- Yields are above the plot average.
- This alfalfa has a medium to fine stem with some multi-leaf expression.

Mallard Organic Alfalfa - NEW
- Mallard is a 5 dormant variety, making a late fall harvest possible.
- Mallard has fast recovery; an extra cutting is possible.
- This alfalfa is suitable for a 4 or 5 cut system, high yield environment.
- It has excellent winter-hardiness.
- Mallard has good tolerance to root rots, and will perform well on heavy soil.
- Mallard is well adapted to conditions where Aphanomyces Root Rot is a problem.

Hopper Resistant

Bluejay 3 HR Organic Alfalfa
Improved Resistance from Bluejay 2 HR!

- Bluejay 3 HR combines excellent resistance to potato leafhopper with excellent forage quality.
- Allow time for new seeding to develop resistance - first time growth needs to be 8 - 12" for expression of resistance.
- Bluejay 3 HR has excellent disease resistance and high yields.
- This alfalfa is a good choice for areas where fusarium wilt, phytophthora root rot, and aphanomyces are a problem.
- All seed will be coated with Apex Green coating.

Apex Green Seed Coating

Apex Green seed coating provides protection to ensure seed survivability and to stimulate vigorous early growth. It can increase seed and young plant survivability by 50%. Seed coated with Apex Green results in more live plants per pound of seed, even though there is about one-third less actual seed/lb. Apex Green is a mix of minerals and rhizobia bacteria, and bonds to each seed in a dense, durable coating.

Apex Green seed coating has been approved by OCIA for use on organic farms.

Non-Dormant Alfalfa

Non-dormant varieties are commonly planted in areas where there is little to no risk of a hard freeze. Use of non-dormant varieties in other areas may result in winter kill and poor persistence.

Oriole Organic Alfalfa - NEW
- Oriole is a 6 non-dormant variety that combines good yields with good persistence.
- Oriole has resistance to spotted pea, and blue aphids.
- This organic alfalfa has resistance to both stem and southern root-knot nematode.
- It can be cut 7 to 11 times per year.
- Oriole has good winter survival in higher elevations of CA, AZ, and NM.

Sandpiper Organic Alfalfa - NEW
- Sandpiper is a fall dormant 8 variety that remains active during the winter.
- It has excellent persistence, and is resistant to aphid and nematode pests.
- This organic alfalfa has resistance or tolerance of major root and leaf diseases.
- It has very good tolerance of wheel traffic with excellent standability.
- Sandpiper is capable of producing very high quality hay and can be cut 7 to 11 times a year.

Branch Rooted

Red Falcon BR CNV
- This branch rooted alfalfa stays productive in poorly drained soils.
- It is a multi-leaf variety which produces excellent quality forage.
- High disease resistance (DRI 30/30) means that Red Falcon will remain highly productive against a wide range of diseases and pests.
- For yield, Red Falcon ranked 7th of 20 varieties in a University of Wisconsin trial.
- In a trial of 14 varieties, Red Falcon had the best persistence, and is tolerant of heavy wheel traffic.
- Seed supply is conventional untreated. Organic supply may be available in 2013-2014.

Lower Cost Blend

Goldfinch Organic Blend
- Goldfinch is a blend of several varieties.
- It has good winter hardiness.
- It is priced to meet the needs of shorter crop rotations.

John and Diane Pounder, organic farmers from Delavan, WI, have demonstrated the potential for Roadrunner to produce excellent forage with their entry of Roadrunner and Niva Orchardgrass mix in the World Dairy Expo in WI. They were awarded the World Champion Balage in 2011 and World Champion Forage Anaylsis in 2010.

CNV indicates Non-GMO seed produced using conventional methods.

Not treated with materials prohibited by the NOP rules.

ALFALFA

Winter Hardiness Rating
1 = Most Hardy
6 = Least Hardy

Fall Dormancy based on Fall Growth
1 = Most Dormant
9 = Least Dormant

0 - 5% Resistant Plants
6 - 14% Resistant Plants
15 - 30% Resistant Plants
31 - 50% Resistant Plants
51%+ Resistant Plants
Not Available
Does Not Apply

Susceptible (S)
Low Resistance (LR)
Moderate Resistance (MR)
Highly Resistant (HR)
Resistant (R)
NA
DNA

Agronomic Characteristics	Bluejay 3 HR Organic	Raven Organic	Red Falcon Conventional	Roadrunner Organic	Mallard Organic	Oriole Organic	Sandpiper Organic
Fall Dormancy	3.0	3.0	3.6	4.0	5.0	6.5	8.0
Winter Hardiness	2.0	NA	1.6	2.1	2.0	DNA	DNA
Phytophthora Root Rot	HR	R	HR	HR	HR	HR	HR
Bacterial Wilt	HR	HR	HR	HR	HR	R	DNA
Verticillium Wilt	R	R	HR	R	R	HR	HR
Fusarium Wilt	HR	R	HR	HR	HR	HR	HR
Anthracnose	HR	R	HR	HR	HR	HR	NA
Aphanomyces Race 1	HR	R	HR	HR	HR	NA	NA
Aphanomyces Race 2	R	NA	R	NA	R	NA	NA
Stem Nematode	NA	R	HR	HR	R	HR	R
Pea Aphid	HR	HR	NA	HR	HR	HR	HR
Spotted Alfalfa Aphid	R	NA	NA	HR	R	HR	HR

RED CLOVER

Cardinal Brand Red Clover CNV

- This is a multi-year medium red clover with consistent performance.
- It has good early spring green up with semi-erect plant growth.
- Cardinal Brand Red Clover has faster recovery after harvest.
- It has strong disease resistance to anthracnose, powdery mildew, and common crown rots.
- Cardinal Brand Red Clover has better yield and persistence than Arlington Red Clover.
- 2012-2013 seed supply is conventional.

Red-Wing Blend Organic Red Clover

- Red-Wing is a VNS blend of medium red clover.
- Its persistence and disease resistance are generally less than Cardinal.

Consider inter-planting red clover in your pasture. Red clover increases the tonnage/yield of the pasture. It improves the health of the grass because of its nitrogen fixation. An added advantage - your cows will not bloat on red clover.

JACK GEIGER & FAMILY
Red Clover seed grower, Robinson, KS

SORGHUM SUDANGRASS

Black Hawk 12 Organic BMR Sorghum Sudangrass

- Black Hawk 12 BMR is excellent forage during the heat of the summer when other forage grasses are less productive.
- For finer stems, better palatability, and faster drying, plant 30 - 50 lbs/acre.
- Primary uses are for pasture and hay; secondary use is for green chop.
- It is best when cut at 35" to 42", leaving 6 - 10" of stubble to promote better re-growth.
- Lower lignin content increases intake by animals.
- To avoid prussic acid poisoning, allow young plants to grow taller than 24" before pasturing, and avoid pasturing for 10 days after frost.
- In 2009 hay trials at Texas A & M, Black Hawk 12 had the most tons per acre of 34 varieties tested.

Planting Sorghum Sudangrass

- Sorghum sudangrass is a warm season crop, and generally should not be planted before June 1.
- Plant 1"- 2" deep in moist soil, with good seed-soil contact.
- For seeding rates refer to the chart on page 8.

Establishing Alfalfa Stands

- Alfalfa roots are sensitive to low soil oxygen levels. As a result, alfalfa performs best on deep soils with adequate moisture drainage.
- Alfalfa seed has a limited supply of stored energy, so seed placement is important.
- Seeding depth of 1/4" to 1/2" is the goal on fine textured soils with proper seed-soil contact.
- There are about 220,000 alfalfa seeds per pound. Each pound of seed planted per acre provides about 5 seeds per square foot.
- The number of seedlings surviving the first year of seeding is likely to be between 10% and 50%.
- When no companion crop is used, it is important to have 20 - 30 plants/sq ft during the seeding year.
- Planting 12 to 25 lbs/acre should attain this goal.
- The seeding rate is normally reduced to 8 - 12 lbs/acre when a companion crop is used.

blue river hybrids
27087 Timber Road
Kelley, Iowa 50134
800.370.7979 office
515.233.3069 fax
www.blueriverorgseed.com

Why These Farmers Planted PuraMaize Corn Hybrids ...

BEN HAINES

BRH Dealer and organic farmer in Tyner, NC

"As a Blue River Dealer I wanted to grow PuraMaize corn so I could learn about the product. As an organic farmer PuraMaize will allow me to plant earlier, normally I wait a couple of weeks after our conventional neighbors to avoid cross pollination with GMO corn. This will allow me to get closer to the optimum planting date for our area."

TIM CADA

organic farmer, Clarkson, NE

"When we sell an organic product off of our farm, we (want to) have done everything possible to keep our product organic - integrity and organic go hand in hand."

HAROLD WILKEN

organic farmer, Danforth, IL

"As an organic farmer I am an island in a big sea. No one cares about the purity of my organic crop. As organic farmers we need to provide our own safety measures."

ALAN WARD

organic farmer, Viborg, SD

No other variety resists the pollen from GMO corn. In the past, I have had to wait up to 4 weeks after everyone else around me had planted GMO corn in an attempt to avoid GMO pollen from contaminating my organic corn crop. My growing season was decreased by as much as 4 weeks, and as a result my per acre yield was reduced accordingly! The fact that the PuraMaize has competitive yield potential is icing on the cake!!

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