SAKATA®

A New Era of Trusted Genetics...

Tough Eastern conditions are no match for the newest Sakata varieties

It's no secret that the Sakata name is practically synonymous with broccoli. A long-time industry leader, Sakata broccoli accounts for more than 65% of the broccoli market – and for good reason. The success of our broccoli program can be attributed to the simple fact that we know broccoli. We know what works where and how and our passion is developing varieties that bring this expertise to you.

The East is a unique and challenging growing region. Amidst fluctuating temperatures, harsh winters and a whirlwind of other environmental elements, Sakata varieties both new and old have persevered and proven themselves performers in the East.

Latest and Greatest

Limited Seed Available - Place your order now!



Crown cut / Short trim

Eastern Crown

- Small beads
- · Blue-green head color
- Crown cut / short trim



Multi-use

- Eastern Magic
- High-domed
 - Great blue-green color
 - Multi-use variety



Crown cut / Short trim

Millennium

- Uniform head maturity
- Highly adaptable
- Crown cut / short trim



- Fine-beaded, round shape
- Very firm heads
- Crown cut / Asian trim

Tried and True



= Performs well in long day and moderate heat conditions.

Pathology Report: Get Rid of ROT

Alternaria head rot, commonly called 'pin rot,' has become a damaging disease of broccoli heads in certain Eastern regions and slots. Two closely related fungi, Alternaria brassicae and A. brassicicola, can cause this disease. Recently, growers have seen an influx of head rot that has severely depreciated their crop and it is now a common pain point for Eastern brassica growers.



Symptoms

Infection of heads begins as a yellowing of individual flower buds; the disease quickly progresses to form a dark brown, sunken lesion. Buds at the edge of the lesion may become chlorotic. The disease may affect only a small area (1/16 to 1/4 inch) of a floret, or can encompass large portions of the head. Dark lesions often extend along the branching stalks below the florets. These lesions do not extend very deeply into the stalk tissue. Soft rot bacteria can quickly enter infected tissue, resulting in a soft, watery, smelly rot.

Alternaria head rot can be confused with bacterial head rot caused by Pseudomonas fluorescens (=P. marginalis). Alternaria head rot differs from bacterial head rot in producing dark lesions on the branching stalks below the flower clusters, and in the formation of a dark brown, velvety spore-bearing mass on the infected area under humid conditions. These spore masses can be seen with a hand lens. Laboratory testing is often necessary to distinguish these two diseases.

These fungi also attack cabbage,

cauliflower, Chinese cabbage and many other crucifers, causing seedling diseases and leaf spot, as well as head rot. On seedlings, the fungi produce pinpoint to small, dark spots on stems and leaves; severe infections may result in plant stunting or even damping-off. Leaf spots caused by Alternaria begin as small, darkened areas with chlorotic margins, and can expand rapidly to form large, circular spots up to 1-2 inches in diameter. The spots are shades of brown to black and may be zoned. Dark brown masses of spores are produced in the lesions.

Disease Cycle

Disease is favored by wet conditions in the form of

fog, dew, rain or overhead irrigation). Infection requires a film of water on plant surfaces for five hours or more. Alternaria diseases can develop over a wide range of temperatures, from the low 40°F to 90°F. Alternaria species produce spores in large quantities under humid conditions. Spores are mainly spread from plant to plant by wind and splashing water. Farm equipment, people and animals can also carry spores. These fungi attack, survive and reproduce on cultivated crucifer crops and crucifer weeds. They can also reproduce on exposed host crop debris. Although these Alternaria species can be seed-borne, they are

rarely a concern in high quality seed with excellent germination and vigor.

Control

It is very important to destroy or minimize the sources of inoculum. Chop and plow under crucifer crop debris as early as possible after crops are harvested. Eradicate volunteer crucifer crop plants and crucifer weeds in and around fields. Use non-host plants for crop rotation. Minimize extended periods of plant wetness by overhead irrigation, particularly during

head maturation. Sanitize equipment between fields. Apply registered fungicides following product label directions as needed for control. Use only high quality, healthy seed and transplants.

Written By:

Hacene Bouzar, Plant Pathologist R.H. Morrison, Plant Pathologist

East Coast Broccoli Harvest Chart

Variety	Slot	Maturity from Direct Seed	Market	Comments
Northeast				
Green Magic	Spring/Fall	81	F, P	Excellent variety for fresh market and processing. Widely adaptable.
Gypsy	Spring	83	B, F	Wide regional adaptability.
Emerald Crown	Spring/Summer	85	С, Р	Produces excellent quality crown cuts/short trim product in all NAFTA regions. Highly resistant to purpling.
Eastern Crown	Spring/Summer	82	С	Outstanding variety for East Coast.
Emerald Pride	Summer/Fall	85	В	Moderate heat tolerance, exceptional stalk color, nice stem with even beads.
Eastern Magic	Spring/Summer/ Fall	87	B, C, P	Excellent performance in Northeastern U.S. and Canada.
Imperial	Summer/Fall	90	B, C, P	Performs well in long days. Good for crown cut and processing.
Diplomat	Spring/Fall	90	B, C	Performs well in long day length and moderate heat.
Emerald Jewel	Fall	100	C, F	Multi-use variety. Intermediate resistance to some races of clubroot.
Millennium	Fall	105	С	Excellent for crown cut and short trim (Asian cut).
Southeast				
Emerald Crown	Fall/Winter/Spring	85	С, В	Produces excellent quality crown cuts/short trim product in all NAFTA regions. Highly resistant to purpling.
Eastern Crown	Fall/Winter/Spring	N/A	N/A	Outstanding variety for East Coast.
Imperial	Fall/Spring	90	B, C	Performs well in long days. Good for crown cut and processing.
Millennium	Fall/Winter/Spring	90	С, В	Excellent for crown cut and short trim (Asian cut).
Eastern Star	Fall/Spring	95	B, C	Crown cut/Asian trim type with fine-beaded, round shape.
Emerald Star	Fall/Winter/Spring	105	С	Excellent for crown cut and short trim (Asian cut).

* Days to Relative Maturity are an approximation and may fluctuate due to varying planting times, location and conditions. Market: (B) = Bunching, (C) = Crown Cut, (F) = Florets, (P) = Processing/Freezing.

Eastern Market Broccoli Harvesting Schedules

Northeast / Midwest - Summer / Fall				
Variety	Harvesting Period			
Arcadia	August - Mid-October			
Centennial	October - November			
Diplomat	August - Mid-October			
Eastern Crown	August - October			
Eastern Magic	August - October			
Emerald Crown	August - November			
Emerald Isle	August - November			
Emerald Jewel	August - November			
Emerald Pride	August - October			
Endurance	October - November			
Expo	October - November			
Green Gold	August - October			
Green Magic	August - September			
Gypsy	August - Mid-October			
Imperial	August - October			
Marathon	October - November			
Millennium	October - November			

Florida / Southeast - Fall / Winter / Spring				
Variety	Harvesting Period			
Centennial	January - February			
Eastern Crown	October - May			
Emerald Crown	October - May			
Emerald Isle	January - March			
Emerald Jewel	February - March			
Emerald Star	October - May			
Endurance	January - February			
Expo	January - February			
Green Gold	January - February			
Green Magic	December; March			
Gypsy	November - December			
Imperial	February - March			
Marathon	January - February			
Millennium	October - May			

Packaging, Handling and Storing Standards

Typical Packaging

Crown Cuts	20 lb box, bulk 34, 38 and 42 count
Bunches	23 lb carton, 14 and 18 count
Florets	9 to 18 lb, cello bags packed in carton 8 oz and 1 lb retail packs (2 inches or less) 3 lb cello bags for foodservice
Fresh-Cuts Spear	10, 15 and 20 lb loose packed cartons
Broccoli Cole Slaw	8 oz, 1 lb and 5 lb bags (shredded broccoli, red cabbage and carrots)

 Iceless broccoli is usually available from most shippers or brokers, but may require special ordering. Some suppliers also offer shrink-wrapped product.

 Products made with broccoli stalks are also available and may include: diced, coin-cut and shredded.

Broccoli Handling and Storage Conditions

32 °F, 0 °C
95-100%
Lightly (Unpackaged Product)
Bunched – 10 to 14 Days Packaged – 14 to 16 Days
Sensitive (note 1)
Moderately Sensitive (note 2)

Soaking in cold water can revive slightly wilted broccoli. Notes:

1. Do not store or transport ethylene sensitive items with commodities that produce ethylene.

2. Broccoli can recover from one or two nights of light freezing.

DISCLAIMER: Claims and other disclosed information are based on our observations and/or information from other sources. Crop performance depends on the interaction between the genetic potential of the seed, its physiological characteristics, the environment, including management, and other uncontrollable factors that may alter expected performance. Statements on the reaction of varieties to a specific pathogen, pest or stress are based on evaluation under defined conditions. These reactions can be affected by changes in environmental and biological factors, especially new pathogen races, pest biotypes or vectors of disease agents. Therefore, we give no warranty, express or implied, for crop performance relative to the information given; nor do we accept any liability for any loss, direct or consequential, that may arise from any cause. Read all seed package labeling carefully as it contains terms and conditions of sale.

We're Here to Help!

Matt Linder Senior PD Manager Broccoli & Cauliflower (831) 809-1585 • mlinder@sakata.com

Craig Howell Area Manager, Southeast

(229) 821-0399 · chowell@sakata.com

Lisa Ward Assistant Area Manager, Northeast & Canada

(717) 449-8305 • lward@sakata.com

Dennis Thome Area Manager, Midwest & Canada (248) 709-5684 • dthome@sakata.com

Atlee Burpee Area Manager, Mid-Atlantic (610) 316-6063 • aburpee@sakata.com

Amber Bullock Assistant Area Manager, Carolinas & Tennessee (706) 340-2566 • abullock@sakata.com

Watch! Matt Linder and Lisa Ward discuss new varieties making an impact.

Scan Here!

Sakata Seed America, Inc. • 18095 Serene Drive, Morgan Hill, CA 95037 • (408) 778-7758 • www.sakatavegetables.com PASSIN in Seed