P.O. Box 106, Rocky Ford, Colorado U.S.A. 81067-0106
Phone: (719) 254-67411 Fax: (719) 254-3539
www.hollarseeds.com

# IMPORTANT NOTICE
# BACTERIAL FRUIT BLOTCH

Company: Siegers Seed Company

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|---|---|---|---|---|
| Variety Purchased: | | | | |
| Lot Number: | | | | |
| Quantity | | | | |

A bacterial disease known as Bacterial Fruit Blotch (BFB) has caused severe damage to watermelon crops in various parts of the United States. The causal organism of BFB is Acidovorax avenae subs. Citrulli. This bacteria may be seed-borne, but infection may also occur from many types of secondary sources before or after planting. Hollar Seeds (Hollar) makes no claim of resistance or tolerance to this disease, or freedom from any bacterial disease, including BFB, with regard to any of its seed.

Symptoms of BFB on seedlings appear as dark, water-soaked lesions on the lower surfaces of plant cotyledons or on true leaves. The lesions later become necrotic and may also have chlorotic halos surrounding the dead tissues. Many times, lesions will also appear on the hypocotyls of seedlings, resulting in the wilting and death of these plants. **The most dramatic and destructive phases of this disease are the fruit infections that occur later in the growing cycle.** The lesions on the top surface of the fruits appear as small, water-soaked areas, which under the right conditions of high temperature and humidity enlarge rapidly to cover most of the surface of the fruits. Fruit decay often follows. **This later condition of the disease cycle could lead to significant economic losses to the grower.**

In cases where the pathogen is carried by planted seed, the lesions described above will appear on the seedlings within 7 days of emergence. The ultimate user of watermelon seed is urged to inspect watermelon seedlings within two weeks of emergence for evidence of seed-borne diseases. **If no symptoms are observed on seedlings within the three (3) weeks following emergence, it is very unlikely that any subsequent BFB infection stems from seed-borne BFB bacteria. Any subsequent BFB infection will most likely be caused by other sources.** ***It is imperative that each grower inspect seedlings during this early stage, in order to determine the presence or absence of these symptoms and to mitigate any potential economic losses.***

**CAUTION:** Symptoms that appear on plants in the early stages of growth, and especially those symptoms caused by secondary infections, may not be evident on new foliar parts as the plants develop. The pathogen, however, may still be alive in infected tissues, and may infect the fruits if favorable conditions of temperature and humidity prevail. **Do not retain any plants that show any symptoms of BFB at any time. Remove such infected tissue from the field and dispose of away from fields that may be planted to vegetable crops in the future.**

## MEANS OF SEEDLING INFECTION

It is widely understood that precisely the same pathogens that Hollar tests for may be ever present in some soils, attacking otherwise healthy plants. BFB contamination of seedlings can come from a variety of sources. There is a wide variety of alternate host plants (including wild citron, melon, eggplant, and many others) that which, when growing in close proximity, can transmit bacteria and provide for the spread of BFB and many other diseases to otherwise uninfected plants. Bacteria can overwinter in diseased fields on organic matter and may be transmitted from field to field by improperly sterilized tools, the use of previously used plant trays or via human contact with plants. The 1990s saw the widespread occurrence of BFB in the United States. If the disease has not already become endemic (naturally occurring, much like Fusarium and Anthracnose), it will do so very soon.

Important notice continued on page 2.

Your Initials:

HOLLAR SEEDS
*Where Good Ideas Grow™*

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## PRECAUTIONS TAKEN AND SEED TESTING

Hollar has undertaken reasonable precautions to identify and control seed-borne pathogens on the seed it sells. Irrespective of careful production, field roguing, special treatments or lot testing techniques, any of Hollar's seed lots may contain infected seeds or be subject to genetic weaknesses that encourage seed-borne infections or other diseases beyond Hollar's control. These infections could lead to loss of plants or produce grown from seed of this variety.

A minimum of 10,000 seeds of each lot of watermelon seed sold by Hollar is tested for the presence of seed-borne bacterial fruit blotch through the Polymerase Chain Reaction (PCR) test. Unfortunately, this test only can speak to the presence or absence of the BFB bacteria on the seeds tested. As a result, seed pathology tests cannot detect with 100% accuracy all pathogens within a seed lot. Hollar cannot warrant that any of its seed is completely free of the BFB bacteria.

There is no foolproof way to ensure that seeds are not contaminated with the BFB bacteria. While some seed treatments control seedborne diseases on a very limited basis, nothing has been proven to ensure complete seed immunity to BFB. Even if seeds are clean, no way exists to ensure that the disease will not develop as a result of infection via a secondary source. Hollar is committed to provide growers clean seed, but we cannot and do not guarantee our seeds to be free of the BFB bacteria. By buying and planting our seed, purchaser accepts that Hollar's seeds may contain the BFB bacteria, and releases Hollar from any actions related to BFB. Do not plant seed under any circum-stance if you do not understand or accept these facts.

## WAIVER AND RELEASE AGREEMENT

**As a condition of the sale of watermelon seed by Hollar, the undersigned acknowledges that they have been informed regarding the risks associated with the potential presence of the BFB bacteria, and hereby waives any right to recover dam-ages, and releases Hollar, its agents, dealers, and suppliers from any and all claims relating to BFB with respect to all water-melon seed supplied by Dollar. The undersigned further agrees and acknowledges that all seed supplied by Hollar is subject to Hollar's standard terms and conditions of sale appearing in on its price lists, on its seed containers, and in its contract docu-ments.**

**The undersigned expressly acknowledges that its exclusive and sole remedy (for any cause) against Hollar is limited to a return of the purchase price of the seed. It is further agreed that in the event of resale of the seed sold hereunder, Dollar does not adopt or assume any warranties, expressed or implied, given by the undersigned. The undersigned further agrees to defend, indemnify and hold harmless Hollar against any and all claims, actions, proceedings or other liabilities of any nature whatsoever relating to any such resold or transferred seed. It is further agreed that in the event of the resale of these seeds, the purchaser agrees to obtain a signed release pertaining to bacterial fruit blotch from the subsequent buyer.**

**I have read both pages of this document and have discussed its implications with my attorney, and agree to be bound by it.**

Your signature _____

Date: _____

Name: _____

Company: _____

Address: _____

City, State, Zip _____