



BioFlora®

Case Study

Nature Knows Best

Red Onion

Overview

Crop Tested: Red Onion, varieties Red Star and Burgesa

Date of Trial: June 2010

Purpose of Trial: To determine if adding the BioFlora® product Humega® to a conventional fertilizer program would help to reduce or eliminate the incidence of the plant disease *Sclerotinia sclerotiorum* in the crops production.

Location: Samanga, Abato, Ecuador

Conductors: Grower and Farm Engineer; Marcelo Guerra, BioFlora® International Sales Representative

Background

The dry onion is a very popular vegetable grown throughout the world for its pungent bulbs and flavorful leaves. There are a variety of cultivars ranging from sweet to pungent with colors that vary from red, brown, yellow and white. Dry onions can be grown on any fertile, well-drained, non-crusting soil, though alkaline soils are preferred for maximum growth.

This vegetable can be sown by direct seeding, transplants or through transplanting sets. Even though dry onions utilize substantial amounts of nutrients, a common problem is over fertilization, which can lead to more complicated issues such as soft bulbs, susceptibility to disease and environmental damage.

Pictures



Above: Control field, with visible infestation of the plant disease *Sclerotinia sclerotiorum*.



Above: BioFlora® field with no visible infestation of the plant disease *Sclerotinia sclerotiorum*.

BioFlora® Program

A standard BioFlora® supplemental, sustainable program for growing dry onions would be applied as follows:

Humega® should be applied as a pre-plant to open compacted soils, stimulate beneficial soil microbes and to hold nutrients in the soil, thus allowing the reduction of synthetic fertilizers. This product should be used with every irrigation cycle throughout the growing season to better suppress disease.

Fulvex® should be used at planting to prevent the soil from crusting, this helps the seeds to germinate and break through the soil surface. Applying Fulvex® every month throughout the growth cycle will also assist in preventing the soil from sticking to the bulbs during harvest.

BioFlora Seaweed Creme® should be applied at the planting of transplants and seeding to help develop a stronger root system, which in turn, helps nutrient uptake.

BioFlora® 6-0-0 + 8% Ca should be used at each irrigation cycle throughout the last two months of fertilization. This product will help strengthen the onion bulb and protect it from bruising.

BioFlora® 0-0-25 should be applied in place of standard nitrogen for the last 45 to 60 days before harvest. This product will help harden off the bulb, prevent soft centers and lengthen the storage time of the harvested bulbs.

Method

Control Field: In this trial, the grower used a conventional fertilizer program based on the usage of nitrogen, phosphorus and potassium on the control field. Rates of applications and specific NPK products and were not disclosed.

BioFlora® Field: In this trial, the BioFlora® test field was pre-irrigated with Humega® prior to planting. Following this, four subsequent applications of Humega® were added to the drench irrigation system every two weeks. Rates of Humega® varied per individual application.

Date of evaluation for the incidence of Sclerotinia sclerotiorum was October 5, 2010

Results

A total of 25,000 red onions were tested in this trial.

The control field had a high infestation of *Sclerotinia sclerotiorum*, calculated to be over 70% of its production.

The BioFlora® treated field had an infestation rate of approximately 0.008% of *Sclerotinia sclerotiorum*.

This trial also showed that the application of Humega®, along with other BioFlora® products, have been found to reduce the normal fertilizer applications of NPK by approximately 50%, while still increasing yields and reducing or eliminating the incidence of disease in the treated crop.

BioFlora®

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