

Russet/Superior Potato Test Program Results

Fitzpatrick Farms – Houlton (Aroostook County) Maine



Summary:

The purpose of this study was to determine the efficacy of BioGrow 365 when used in conjunction with (being used over and above) the grower's normal nutrient program. Five gallons per acre of BioGrow 365 was applied to two separate conventional fields (synthetic fertilizers plus pesticide, herbicide and fungicide) on two separate sprays for a total of ten gallons per acre. A control area on both fields was used for comparison, and the results averaged. The variety of potato used on the conventional field was Russet. A separate test was also conducted on one certified organic field, applying BioGrow 365 over and above the normal nutrient program (fish emulsions). The same methodology was utilized. The potato variety utilized for the organic field test was Superior.

Results: BioGrow 365 - Conventional Field Russets

Donovan-Farm-Russets-BioGrow 365 (5 gallons at planting + 5 gallons applied July 15)

35,910 lbs x 1329' of 10 rows = .915 of an acre = 392.46 cwt per acre

Donovan-Farm-Russets-Control

27,460 lbs x 1058 of 10 rows = .729 of an acre = 376.68 cwt per acre

BioGrow 365 Yield Advantage = $392.46 - 376.68 = 15.78$ cwt yield increase over control.

It was noted that in addition to increased tonnage, the mature potato uniformity and skin colour/thickness were substantially better on the BioGrow 365 potatoes. Although the overall production was higher on the BioGrow 365 test area, the average size of potato, while extremely uniform, was of a slightly smaller size. This may present an advantage to seed potato and table potato growers, but a disadvantage to those growing under contract for McCain or other process food French Fries manufacturers, who prefer a larger potato.

Methodology

Donovan farm Russet test: 5 gallons per acre of BioGrow 365 was applied when planting the seed by injection spray. An additional 5 gallons per acre was applied in mid-July (approx. July 15) by spray boom. The BioGrow 365 was not mixed with other fertilizers, herbicides, pesticides or fungicides at the request of the manufacturer to maintain the efficacy of the microbiology. Normal nutrient program included Nitrogen, Phosphate and Potash at the grower's normal application rate.

Herbicide: Metribuzin

Pesticide: Imiacloprid

Fungicide: Chlorothalonil

Other chemical:

Diquat

Test 2: Organic Superiors

Results: BioGrow 365 – Organics Superiors (5 gallons at planting + 5 gallons applied July 15)

4,660 lbs x 432' of 6 rows = .1785 of an acre = 261.06 cwt per acre

Organic Superiors Control

3,760 lbs x 417' of 6 rows = .172 of an acre = 218.6 cwt per acre

BioGrow 365 Yield Advantage = $261.06 - 218.6 = 42.46$ cwt yield increase over control.

Methodology

Organic Superiors BioGrow 365 Test: 5 gallons per acre of BioGrow 365 was applied when planting the seed by injection spray. An additional 5 gallons per acre was applied in mid-July (approx. July 15) by spray boom. The BioGrow 365 was not mixed with other organic fertilizers, herbicides, pesticides or fungicides at the request of the manufacturer. Normal nutrient program included fish emulsions at the grower's normal application rate.

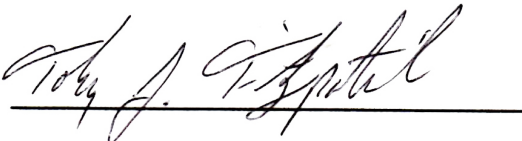
It was noted that in addition to the overall production increase, the tuber counts differed substantially. In the BioGrow 365 test area, tuber counts were as follows:

Test plot 1: 80 tubers per 10' row averaging 25.5 lbs.

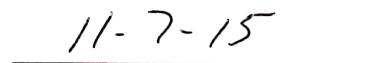
Test plot 2: 83 tubers per 10' row averaging 23.75 lbs.

Control Field: 70 tubers with 10' row averaging 20 lbs.

In all cases, the largest tuber size in both the control field and the BioGrow 365 field was 3.25". The uniformity of the tubers in the BioGrow 365 field was visibly better. Specific Gravity and other tests were not undertaken.



Donald Fitzpatrick, Test Farm Owner/Testing Coordinator



Date