

Evaluation of IBR biologically based product in Blueberry.
Two-year study at Jim Gaskin Farms Richmond B.C.
Interim Report
July 31, 2001

Blueberry is significant crop in B.C agricultural industry. This crop is fertilized usually twice a year. Spring application is ½ -1 pound of Berry mix per plant, which is translating into 500-1000 lb/acre of actual fertilizer. Fall application is 200-250 lb/acre.

We have two plots dedicated to our trials for two-years thanks to Mr. Jim Gaskin. First plot was older blueberry plants that were cut back to about 1 foot in order to stimulate rejuvenation of aging plants. Here we intended to monitor new growth development and some yield data from the second year. Second plot was standard set-up with developed blueberry plants in full production. Whole farm is not irrigated and is using chopped branches and wood chips as mulch. Yield data, tissue samples and soil sampling was conducted and values compared to optimal ranges suggested in Berry production guide for commercial growers 2000/2001 edition from Ministry of Agriculture and Food.

Objective:

1. To substitute part of the berry mix by volume with IBR products and its effect on yield, vigor and nutrient up-take in blueberry.
2. To evaluate effect of IBR product on new growth promotion in cutback older blueberry plants.

Cutback blueberry field.

Treatment in cutback blueberry field were as follow:

1. Control 750 lb/acre berry mix from Evergro
2. IBR LIQ 750 lb/acre berry mix +IBR liquid 15 ml/1 liter (1 liter per plant)
3. IBR A 750 lb/acre (75% berry mix 25% IBR dry) by volume.
4. IBR B 750 lb/acre (50% berry mix 50% IBR dry) by volume

Methodology:

Those treatments were applied first year only. Second year we have same treatments but IBR LIQ treatment was abandoned and was treated as additional control.

Treatments were applied manually in May each year. There was no additional fall application. First year data were collected in September 2000 and second year data were collected in late July 2001. Harvest data were collected second year only by hand picking.

Results:

First year IBR treatments achieved average 10 % more height growth compared to control treatment. In addition, the IBR treated plants have more and greener leaves than the control. Addition of liquid only resulted in 5 % increase. There was not significant

difference between IBR A and B treatments. Second year increased from first year was sustained but not increased.

Yield data is presented in table #1. There is a slightly higher yield from IBR treated plants.

Table#1: yield data collected from 15 plants selected randomly

Treatment	Yield from 15 plants, lb	Percentage to control
Control	5.5	100%
IBR LIQ	7	127%
IBR A 75/25	7	127%
IBR B 50/50	6	109%

Standard blueberry field trial.

Treatments were as follow:

1. Control, farmers practice
2. IBR liquid added to farmers practice
3. IBR dry mixed at 25% by volume to 75% farmers practice
4. IBR mixed at 50% by volume to 50% farmers practice by volume

Methodology:

All treatments were applied both years in the spring with no additional treatment in the fall. Field was divided to section each two rows wide except control 4 rows. Harvest data were not collected first year due to miscommunication between IBR and grower. Second year yield data were collected on July 30TH 2001 by handpicking. We collected soil and tissue samples as well and those were process by Pacific soil analyses in Richmond.

Results:

All IBR treatments appear to have more biomass (leaves) per plant and abortion of fruit is less than in the control treatment.

Yield data is presented in the Table #2 bellow.

Table#2: Interim yield data collected from 8 plants selected randomly

Treatments	Yield from 8 plants/lb	Percentage to control
Control	34	100%
IBR LIQ	42	123%
IBR A 75/25	58	170%
IBR B 50/50	38	111%

Conclusions:

Significant increase in yield in Berry mix 75% /IBR dry 25% treatment is due to slight increase in size of the berries, less abortion of fruits and more uniform ripening at the time of first pick.

Tissue samples are showing minor deficiency in N, P and Iron for all treatments but the rest of the elements are in optimum range as suggested by berry production guide.

Soil samples results are similar for all treatments except sodium levels in the control treatment were significantly higher 150%-300% compared to IBR treatments.

All trace elements are slightly lower in IBR treatments but this is not translating to tissue samples results. Potassium level was significantly higher in control treatment compared to IBR treatments.

The full report will be presented after monitoring the yield of second pick in 2 weeks.