FNE 94-49

Griffith Cranberry Co., Inc.

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March 1, 1996

Fred Magdoff, Coordinator
Northeast Region Sare
Hills Bldg.
University of Vermont
Burlington, VT 0540

Dear Mr. Magdoff:

This is the final report of our 1994 project on Reduced Fungicides for Cranberry Fruit Rot.

- The goal for the project was to determine whether the variety Shaw's Success would produce good quality fruit with only one fungicide application. This was done in conjunction with controlled fertilizer doses to evaluate the combination of fungicide and various nutrient protocols.

- We are farming 90 acres of cranberries. 80 in full production and 10 in partial production or newly renovated.

- Our cooperators were Frank Caruso, Extension Plant Pathologist, Cranberry Experiment Station; Carolyn DeMoranville, Cranberry Station; and Joan Davenport, Ocean Spray Cranberries, Inc. In addition Jeff LaFleur, Cape Cod Cranberry Growers Association assisted with outreach.

- A 1.9 acre section of Shaw's Success vines was split into two sections with flags. Each section received fertilizer applications according to two common protocols employed by cranberry growers. In addition, one section was again divided at a ditch and a supplemental application of foliar nutrients was applied. One application of Chlorothalinol (Bravo 720) was applied by chemigation (5.5 pints/acre) at early bloom. See the attached sheet for details of the fertilizer programs, exhibit A.

- Findings are summarized in the attached exhibit B. An unexpected result was the reduced production when supplemental foliar nutrients were applied. I would say that the results were not noteworthy as to fruit rot control. Results did show that the nutrient programs in use are both viable and productive with grower preference for materials, prices and the use of organic materials being factors to consider in decision making.

- There is no specific site information relevant to the project.

- We made no evaluation of economics in this project.

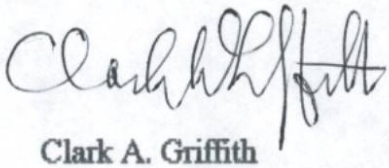
- Any "next steps" would be a several year program of single applications of fungicide to get multi-year data for evaluation. Pressure from pathogens varies dramatically from year to year and from month to month within each year according to weather and temperature variables. A large database is needed to predict pressure and then realistically determine when a single application would be viable.

- We will not use this practice since much more data is needed. The time required to generate the needed data is not available to us. Separating out this one small area for special treatment does not seem practical. A small grower may be willing to experiment and take a chance on the quality of his fruit with significant dollar savings per season in relation to his total operation. For a 90 acre grower to experiment over several seasons by manually manipulating special applications is not cost effective.

- Since our results were not especially meaningful to other producers, an announcement of the results was made at a winter seminar session with the comment that anyone interested could follow up on a one to one basis. No inquiries have come forward.

No photos or slides were taken since they would not show anything meaningful.

Sincerely,



Clark A. Griffith

Attachments:
Exhibit A
Exhibit B

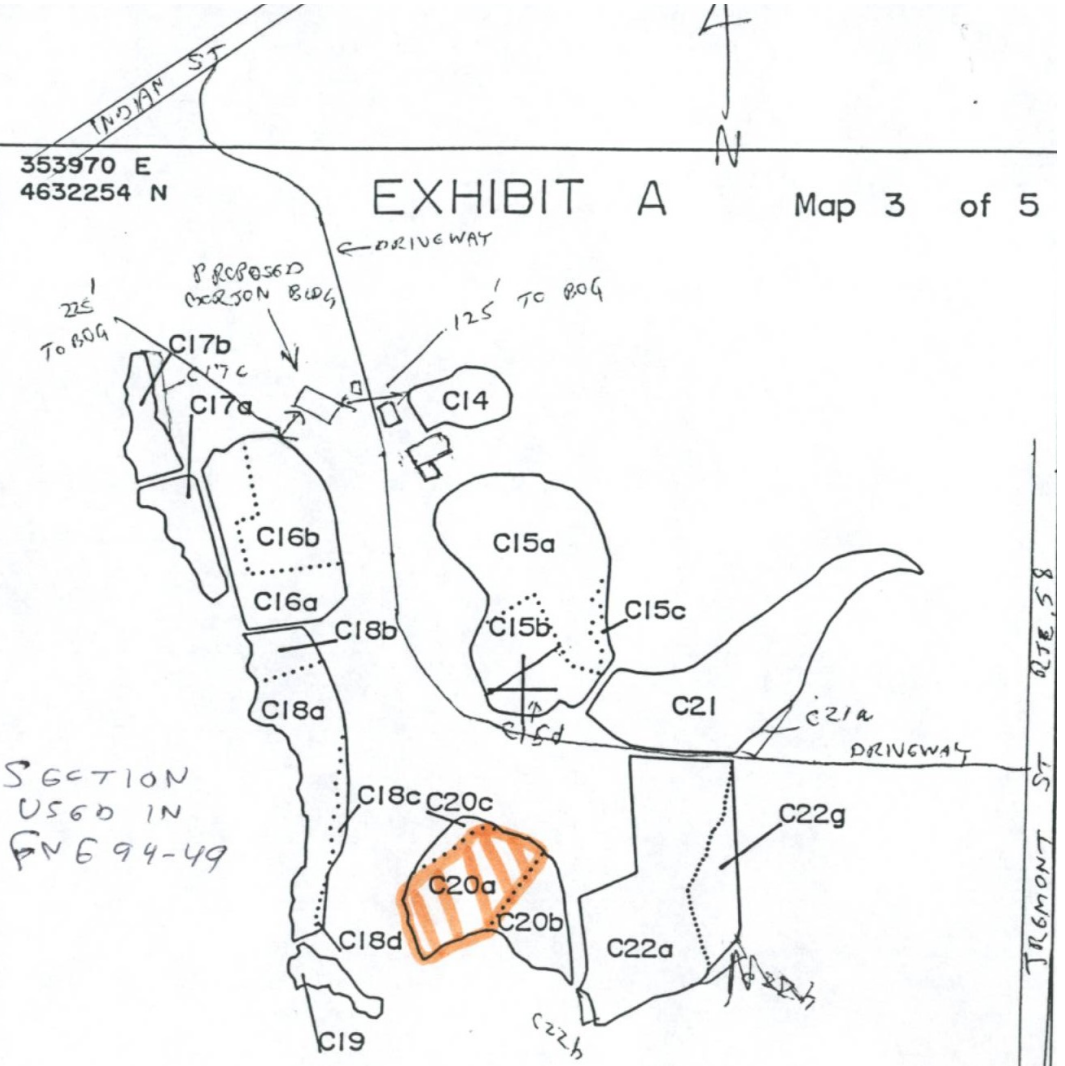
070 2796 09/30/93
GRIFFITH CRANBERRY CO., INC.
SNIPATUIT PD QUAD MA
INDIAN BRK BOG

ID	ACRES	VAR	CODE	HARV
C14	.85	EB	A	
C15a	3.78	EB	A	
C15b	~~1.20~~	OT	A	
C15c	.19	EB	R	95
C16a	1.74	EB	A	
C16b	1.81	H	A	
C17a	.87	EB	A	
C17b	.74	EB	A	
C18a	2.08	H	A	
C18b	.51	EB	A	
C18c	.24	H	N	95
C18d	.05	H	N	95
C19	.46	H	A	
C20a	1.87	OT	A	
C20b	1.08	EB	A	
C20c	.22	F	N	95
C21	4.28	EB	A	
C22a	4.40	EB	A	
C22g	.97	EB	N	94
	27.84	TOTAL	ACRES	
C15d	.97	EB	N	96
C17c	.11			
C21a	.08			
C22h	.07			
	28.1			

353970 E
4632254 N

EXHIBIT A

Map 3 of 5



SECTION USED IN FNE 94-49

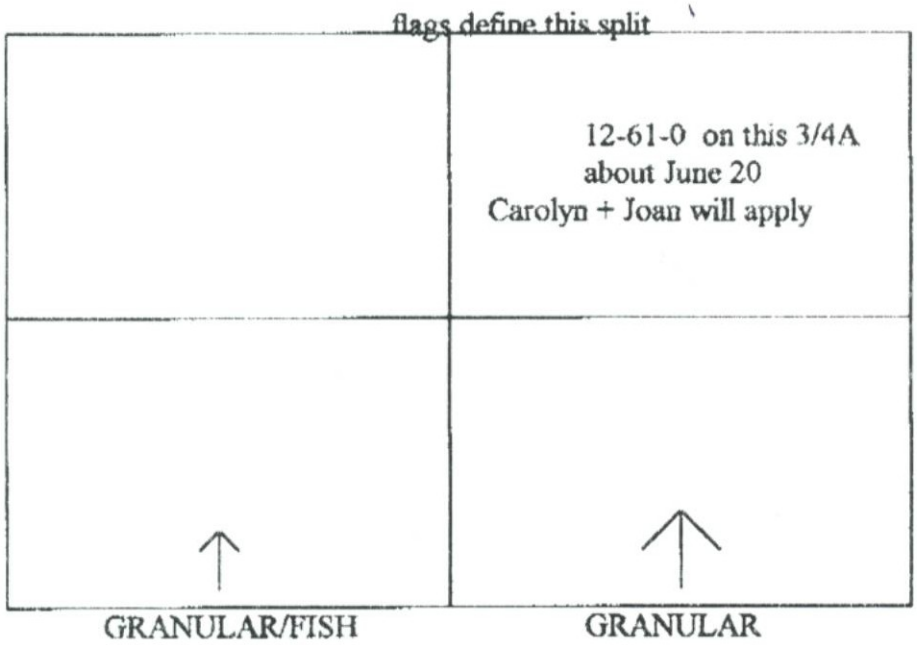
SCALE 1 : 5600

Grower's Initials _____ Date _____

Fertilizer protocol for 'Shaw's Success' at Griffith Bogs
Carolyn DeMoranville and Joan Davenport

Split the bed into 2 sections along the line of flags: one will receive only granular fertilizers and the other will receive a combination of granulars and fish. On the far side of the first ditch, one side will receive no additional fertilizers and the other will be supplemented with 20 lb/A 12-61-0 at hook stage (see map). The supplement will be provided by Joan and will be dissolved in water and applied with a backpack boom spray rig. We would do the application. Clark Griffith would be responsible for all other fertilizer applications. Just prior to harvest, Joan and Carolyn will collect 5-10 1x2ft scooped samples from each of the areas. Collected fruit will be weighed to calculate yield. We will look at color and put out cranberry fruitworm pheromone traps.

In order to keep the fish out of the granular only side, sprinkler heads will have to be blocked during the fish applications in May and August.



Granular program

Roughneck	100 lb/A 3-13-26
Bloom	100 lb/A 10-20-20
2-3 weeks later	100 lb/A 10-20-20
August 5-15th	100 lb/A 3-13-26

Granular plus fish program

Roughneck	12 gal/A fish
Bloom	100 lb/A 10-20-20
2-3 weeks later	100 lb/A 10-20-20
August 5-15th	12 gal/A fish PLUS 100 lb/A 0-0-50 (sulfate of potash)

Whole piece should receive 2qt/A of Zn foliar (1-2% actual) at roughneck (early June). Joan will provide this material.

Fertilizer trials on 'Shaw's Success'

Clark Griffith
Carolyn DeMoranville and Joan Davenport

Methods: Split the bed into 2 sections along a line of flags: one received only granular fertilizers and the other received a combination of granulars and fish. Splitting in the other direction, one side received no additional fertilizers and the other was supplemented with 20 lb./A 12-61-0 at hook stage (backpack sprayer). The entire area received 2 qt/A 1% foliar Zn spray at roughneck stage. Just prior to harvest, we collected 5 1-ft^2 samples from each of the areas. Collected fruit were weighed and counted to calculate yield. Field rot percentage was also calculated.

Granular program

Roughneck	100 lb./A 3-13-26
Bloom	100 lb./A 10-20-20
2-3 weeks later	100 lb./A 10-20-20
August 5-15th	100 lb./A 3-13-26

Granular plus fish program

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Results/Discussion:

The results of the fruit collections are presented below. Differences in number, rot , and weight/berry were not significant. However, yields were significantly different at the 5% level. Both the granular and the granular/fish programs with no added 12-61-0 had the highest yields. The addition of the 12-61-0 did not improve yield, in fact the opposite effect occurred.

Yield with the granular/fish program was statistically similar to that with the strictly granular program. Nitrogen dose in the two was the same. However, in the fish program, 23% of the nitrogen was supplied as an organic form.

Treatment	Berries/ft^2	Yield (bbl/A)	% Field Rot	Weight/berry (g)
Granular	214	217 a	9.7	1.06
Gran. + 12-61-0	148	141 b	19.7	0.99
Granular/Fish	193	201 ab	9.0	1.08
Gran./Fish + 12-61-0	159	145 b	3.8	0.94
	NS	*	NS	NS