

REPORT OF PLANNED WORK ACCOMPLISHED

Date of writing: Dec. 26, 1969

Period covered by
this report:

Name: Curtis Lynn

Location: Fresno

From: 1/1/69

Project Plan Title: Gibberellin for Grape Production

To: 12/31/69

Proj. No.: 2

Primary Subject: A64

Commodity: H3

: Audience Type: 10 Research involved: Yes Status: Terminated

Copies to: V. Patterson, R. C. Crouch, A. N. Kasimatis, H. B. Richardson, Jack Dibble

PROCEDURE:

A. Technical

1. An experimental gibberellin wettable powder formulation was compared to Pro Gib EC in a Thompson Seedless table grape vineyard. The treatments included a 10 ppm bloom spray plus 20 ppm shatter spray and 10 ppm bloom plus 40 ppm shatter (see plan supplement dated 5/19/69 for plot design and application details). On July 29, the plots were sampled and the fruit taken into the County Extension Lab for berry weights, soluble solid, and number berries per cm. lateral determinations (the lab procedures are included with the results in Table 1).
2. Concentrate and dilute gibberellin spray applications were evaluated in a table Thompson vineyard near Reedley. The treatments included a Kinkelder concentrate sprayer at 33 and 96 gals/acre and a Randell inverted "U" sprayer at approximately 200 gals/acre (175 gpa bloom spray and 225 gpa shatter spray).

Both bloom and shatter sprays were evaluated with the various sprayers. The addition of a wetting agent (Biofilm) to a concentrate spray also was included in the test.

B. Educational

1. My 1968 market study was reported at our Fresno County Grape Day. Also, in the Country Life section of Fresno Bee and at two farm center meetings.
2. An article on gibberellin thinning sprays for better raisin quality was written for Sun-Maid's newsletter. This also was discussed on radio and TV and at Dried Fruit Association and Raisin Advisory Board meetings.

RESULTS:

A. Technical: See attached sheets

B. Educational

1. Table grape growers showed considerable interest in the market study.
2. Approximately 15 per cent of the California raisin growers applied gibberellin thinning sprays this past season.

GIBBERELLIN SPRAY TRIAL RESULTS

D'Arrigo Bros., Reedley
Palmer Vineyard

Color Code	Rep.	Gibberellin Formulation	Gib Concentration		No. berries/ cm. lateral	Av. berry wt. gms.	% soluble solids
			Bloom	Shatter			
White	1	Pro Gib EC	0	40	3.16	4.03	17.6
	2				3.56	4.94	15.9
	3				3.42	4.43	16.0
	4				3.28	4.29	16.8
	5				3.33	4.46	15.2
	Av.				3.35	4.43	16.3
Red	1	Pro Gib EC	10	20	2.93	3.79	17.9
	2				3.42	4.64	16.1
	3				3.42	4.41	17.5
	4				3.07	4.74	17.9
	5				2.40	4.74	16.4
	Av.				3.05	4.46	17.2
Blue	1	Pro Gib EC	10	40	2.45	4.53	17.3
	2				3.23	4.94	15.6
	3				2.60	4.90	17.5
	4				2.90	4.47	16.8
	5				2.98	4.37	16.8
	Av.				2.83	4.64	16.8
Yellow	1	Pro Gib WP	10	20	2.65	4.72	17.3
	2				3.03	4.25	17.5
	3				2.48	5.45	16.5
	4				2.53	5.37	16.9
	5				3.46	4.23	17.5
	Av.				2.83	4.80	17.1
Orange	1	Pro Gib WP	10	40	2.56	4.88	17.1
	2				2.83	5.06	16.4
	3				3.28	4.58	16.2
	4				2.77	4.98	17.8
	5				2.85	5.72	15.5
	Av.				2.86	5.04	16.6

REMARKS: Sampled July 29, 1969. In sampling the second lateral was taken from one cluster, selected at random, per vine (14 vines per plot). The berries were removed from the laterals, counted, and weighed, the length of the laterals was measured in centimeters. Soluble solids were obtained by macerating 100 berries in a blender and reading the clear juice with an American Optical TC hand refractometer.

SUMMARY

GIBBERELLIN SPRAY TRIAL RESULTS

D'Arrigo Bros., Reedley
Palmer Vineyard

Color Code	Gibberellin Formulation	<u>Gib. Concentration</u>		No. berries/ cm. lateral	Av. berry wt. gms.	% soluble solids
		Bloom	Post-bloom			
White	Pro Gib EC	0	40	3.35	4.43	16.3
Red	Pro Gib EC	10	20	3.05	4.46	17.2
Blue	Pro Gib EC	10	40	2.83	4.64	16.8
Yellow	Pro Gib WP	10	20	2.83	4.80	17.1
Orange	Pro Gib WP	10	40	2.86	5.04	16.6

REMARKS: The above figures represent the average of 5 replications.

TABLE 2
GIBBERELLIN BLOOM SPRAY APPLICATION TRIAL RESULTS

D'Arrigo Bros., Reedley 1969
Ranch 10

Rep.	Bloom spray treatment (sprayed 5/19 - 75% bloom)	No. berries/ cm. lateral	Av. berry wt. gms.	% soluble solids
1	Kinkelder 33 gpa. 14 oz. Gib	3.0	4.38	15.1
2	Sol 2% (7 gms GA) and 1.5 pts.	3.2	4.03	18.0
3	Delnav 8E per acre	2.8	3.64	17.5
4		3.5	3.83	17.5
5		2.9	3.43	18.5
Av.		3.1	3.86	17.3
1	Kinkelder 33 gpa. 14 oz. Gib	3.1	4.29	17.8
2	Sol 2%, 1.5 pts. Delnav, and	3.5	3.76	17.5
3	5 oz. Biofilm per acre	2.6	3.76	17.0
4		3.3	3.89	17.6
5		3.2	3.90	18.8
Av.		3.1	3.92	17.7
1	Kinkelder 96 gpa. 14 oz. Gib	2.6	4.26	18.0
2	Sol 2% and 1.5 pts. Delnav	3.5	3.99	17.0
3	8E per acre	3.2	3.28	18.0
4		3.0	3.85	17.9
5		3.4	3.89	18.5
Av.		3.1	3.85	17.9
1	Kinkelder 33 gpa. 1.5 pts	3.9	4.03	17.4
2	Delnav 8E per acre	3.8	3.48	16.8
3		3.7	3.63	18.9
4		4.1	3.88	18.4
5		3.6	3.63	18.0
Av.		3.8	3.73	17.9
1	Randel inverted "U" boom 175 gpa.	2.5	4.28	18.8
2	14 oz. Gib Sol 2% and 1.5 pts.	3.3	4.08	17.1
3	Delnav 8E per acre	3.2	3.83	18.5
4		3.4	3.62	17.8
5		4.1	4.00	17.9
Av.		3.3	3.96	18.0

REMARKS: Latin square design 16 vines/plot. Shatter spray applied 5/29 with Randel sprayer 225 gpa, 40 ppm (36 gms GA/A) Gib Sol 2%.

Sampled Aug. 5, 1969. In sampling the second lateral was taken from one cluster, selected at random, per vine (14 vines per plot). The berries were removed from the laterals, counted, and weighed, the length of the laterals was measured in centimeters. Soluble solids were obtained by macerating 100 berries in a blender and reading the clear juice with an American Optical TC hand refractometer.

TABLE 3
GIBBERELLIN SHATTER SPRAY APPLICATION TRIAL RESULTS

D'Arrigo Bros., Reedley, 1969
Ranch 9

Rep.	Shatter spray treatment (sprayed 5/29)	No. Berries/ cm. lateral	Av. berry wt. gms.	% soluble solids
1	Kinkelder 33 gpa. 72 oz. (36 gms GA) Gib Sol 2% per acre	3.1	3.57	18.1
2		3.1	3.98	18.7
3		2.9	4.27	18.4
4		3.1	3.53	18.8
5		2.6	3.51	17.8
Av.		3.0	3.77	18.4
1	Kinkelder 33 gpa. 72 oz. (36 gms GA) Gib Sol 2% and 5 oz. Biofilm per acre	3.0	3.65	17.8
2		2.9	4.00	18.3
3		2.7	3.64	18.0
4		3.5	3.58	18.3
5		2.6	3.47	18.8
Av.		2.9	3.67	18.2
1	Kinkelder 96 gpa. 72 oz. (36 gms GA) Gib Sol 2% per acre	2.8	3.80	18.1
2		3.0	3.50	19.4
3		3.3	3.87	18.0
4		3.5	3.29	19.2
5		2.9	3.00	19.1
Av.		3.1	3.49	18.8
1	Kinkelder 33 gap 72 oz. (36 gms GA) Gib Sol 2% per acre	2.9	3.85	18.5
2		3.5	3.67	18.4
3		3.5	3.82	17.5
4		2.9	3.74	17.5
5		3.7	3.06	17.6
Av.		3.3	3.63	17.9
1	Randel inverted "U" boom 225 gpa. 72 oz. (36 gms GA) Gib Sol 2% per acre	3.4	4.42	18.4
2		3.3	4.17	18.1
3		3.3	4.09	18.4
4		3.3	3.19	19.1
5		3.2	3.49	17.7
Av.		3.3	3.87	18.3

REMARKS: Latin square design, 16 vines/plot. Bloom sprayed 5/19 with Randel sprayer 175 gpa, 14 oz. Gib Sol 2% (7 gms GA) per acre.

Sampled Aug. 5, 1969. In sampling the second lateral was taken from one cluster, selected at random, per vine (14 vines per plot). The berries were removed from the laterals, counted, and weighed, the length of the laterals was measured in centimeters. Soluble solids were obtained by macerating 100 berries in a blender and reading the clear juice with an American Optical TC hand refractometer.