



Colorado Flower Growers Association

IN COOPERATION WITH COLORADO A & M COLLEGE

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A Fine Climate for Greenhouse Culture is at Our Back Door

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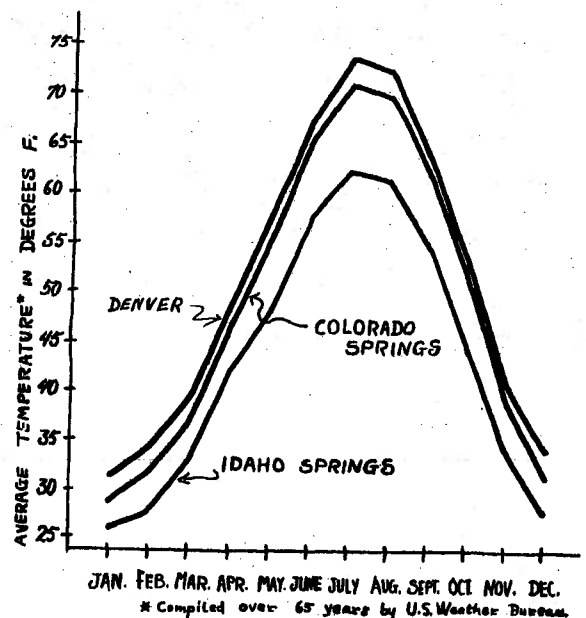
Colorado is a state with many climates. Due to the differences in altitudes, we have arctic climates within a few miles of regions where tender fruits are grown successfully. Superior plants of many kinds can be grown in selected sections of the state. Usually this super quality is brought about by cool temperatures and abundant sunshine.

For several years I have studied the climatological data which is compiled and published by the U. S. Weather Bureau. These data include daily records for stations all over the country. By careful study of these data, one can locate near ideal climates for growing any horticultural crop.

Carnations and other greenhouse crops can be grown to perfection in Denver and Colorado Springs, but it is not possible to maintain this perfection the year around. As soon as 85 to 90 degree temperatures begin occurring, the flowers lose their substance rapidly, often within a period of six to ten days. This usually occurs in early June but may be delayed some years. Once this substance has been lost, "summer" flowers are produced until September or October, sometimes later.

Most of the quality in a flower crop is produced by environment. The right combination of temperature and sunshine is no doubt the most difficult to attain. Since we can't buy sunshine, we have to locate where it is plentiful or do without. Although fans and other devices have been used to cool greenhouses in the summer, these methods have their limitations.

Let us look at the accompanying graph of the average monthly temperatures at three Colorado weather stations. Flowers are grown successfully at Denver and at Colorado Springs, but in both locations summer temperatures limit the quality of greenhouse crops. Idaho Springs has been selected as a typical representative of many areas in the eastern edge of the Rocky Mountains. Other areas are as good or better but no complete weather records are available for them.



MEAN MONTHLY TEMPERATURES FOR THREE COLORADO WEATHER STATIONS

Colorado's Fifteenth Short Course

Two Days at Fort Collins

March 22 and 23, 1955

From a study of the figure it is obvious that Idaho Springs is much cooler than either Denver or Colorado Springs. The differences in temperatures are greater during the summer than at other times of the year. Idaho Springs averages about eight degrees colder at night during winter and up to 18 degrees cooler in summer. Idaho Springs receives as much or more sunshine in winter, slightly less in summer. The air at Idaho Springs and similar locations is free from pollutants such as smoke, automobile exhaust, etc.

June and August at Idaho Springs approximate September weather in Denver. July is near, though cooler than, June in

Denver. Nights are cold during the summer, often going as low as 40°F. The minimum temperature is seldom above 50° at Idaho Springs.

Let us now look at selected daily temperatures during the summer of 1954, a period when records were set for high temperatures. Temperatures are listed in Table 1 for all days when the maximum reached 90°F. at either Denver or Colorado Springs. Idaho Springs was 7 to 14 degrees cooler on these hot days. We are interested in extreme temperatures for they cause the most serious damage to most horticultural crops.

Table 1. A comparison of selected daily maximum temperatures at three weather stations in Colorado, 1954.

		June																		
		4	5	10	12	17	19	20	21	22	23	24	25							
Colo. Spgs.		87	87	86	85	89	92	96	89	89	100	100	92							
Denver		90	90	90	90	92	91	89	90	96	100	97	91							
Idaho Spgs.		80	82	77	77	80	85	86	84	85	94	88	84							
		July																		
		1	2	3	4	5	9	10	11	12	13	16	17	19	20	21	28	29	30	31
Colo. Spgs.		86	90	89	87	90	88	97	99	95	100	88	90	90	89	90	86	91	93	84
Denver		90	90	93	90	91	94	98	101	99	99	91	89	90	90	90	90	96	93	92
Idaho Spgs.		76	82	82	81	84	85	87	90	90	88	82	82	81	81	83	81	88	85	88
		August																		
		1	2	3	4	9	10	17	26	28	29	30	31							
Colo. Spgs.		92	91	99	91	87	85	90	89	89	90	88	87							
Denver		91	90	97	86	90	92	88	92	92	93	93	93							
Idaho Spgs.		85	85	88	80	83	80	87	84	83	83	84	88							

Source: Climatological Data for Colorado, U. S. Weather Bureau

Many details must be investigated in locating a greenhouse business. The higher mountain valleys offer the finest temperatures in the country with abundant

winter sunshine. Additional heat, which would be required almost the year around, partially nullifies these tremendous advantages.