

ROGUE VALLEY WELL ADAPTED TO SUGAR BEETS

O. A. C. and Medford Mail Conducted
Tests in 1897 Showing Beets Grown
Here Have Requisite Percentage of
Sugar and Purity—Experts' Report
Show Natural Conditions.

That sugar beets and a beet sugar factory are not new projects in the Rogue river valley is revealed by the files of the Medford Mail, which in 1897 conducted an exhaustive inquiry into the subject in co-operation with Prof. G. W. Shaw of the Oregon Agricultural College whose report upon the subject is as follows:

It has been my pleasure to visit Jackson county during the past week and to study the conditions which obtain for the growing of sugar beets and the manufacture of sugar therefrom.

In 1891 I began experimenting with sugar beets in Oregon, believing that we had within our state the requisite condition for the production of beets, rich in sugar and with a high purity. In 1892 the experiments were again conducted, beets being grown by representative farmers in different sections of the state. The U. S. department of agriculture also conducted independent experiment along the same line. The results obtained in the experiments made in Jackson county interested me particularly inasmuch as the sugar content and purity of the beets analyzed were high, and other economical conditions, including fuel, limestone and water supply, seem especially favorable to the development of this important industry.

Constituents for Sugar

That you people will have a better understanding of this matter allow me to say that a good sugar beet should contain 14 per cent sugar, and have a purity of 80, and should be a long tapering root without branching rootlets. The average sugar content and purity for the states where sugar is now being successfully manufactured from beets is as follows:

	Sugar Purity
California	14.9 82.
Nebraska	13.5 80.
Utah	14.5 80.

The beets from Jackson county analyzed previous to this year gave an average of 17.93 per cent sugar, purity 81 per cent; the report of the

chemist of the U. S. department of agriculture shows sugar 18.94 per cent, purity 84.9. Analysis made during the present season have also shown mature beets to carry a high sugar content and purity.

Three Periods of Growth

A glance at the temperature condition would indicate, a priori, that such results might be expected.

The season for the growth of beets may be divided into three periods—that of germinating; that of plant formation, and that of sugar storing. The following is a comparison of the temperature averages for Germany and Southern Oregon during these periods:

Periods of Growth	Av. Temp. Foreign	Av. Temp. S. Oregon
First	49.1	53.3
Second	63.3	64.5
Third	56.3	54.8

Thus it may be seen that your section of the state has all the requisite of temperature for the industry.

Effect of Rainfall

It is in the rainfall of the state that we find the greatest seeming deviation from those portions of the world which are taken as typical beet producing regions. This seeming difference should not be considered as a too serious drawback, nor would it appear so to those acquainted with all the conditions. The average amount of rainfall does not differ much from that of the beet growing regions of other countries, yet it must be borne in mind, however, that the soils of Oregon are much different with respect to their retentiveness of moisture, and that for all our crops necessary moisture nearly all falls during the "wet season," and for this reason we do not usually consider the monthly rainfall as bearing so close relation to the crops, as it does in most other states, but rather are wont to consider the seasonal precipitation as the more important factor. When the comparison is made along this line we find that we are again favored by a close agreement. By the way this same condition of things holds in our sister state, California, where so much success has been made in this industry.

Sandy Loam Favorite

Beets seem to have little preference in soils, yet they are the most grateful for a sandy loam of considerable depth. Speaking concerning this matter Commercial Agent Hawes says:

"The best soil for quality, as well as quantity of production, according to the experiments of Orth, are those that consist of mild, moist loam about 50 centimeters (20 inches) deep, then loam or marl one to two metres (3 to 6 feet), and, under this, sand. Such soils, which are easy to cultivate, have a high degree of absorption, can combine nourishments, and give the plant physically a good start. Such soils are called 'natural sugar beet soils.'"

So far as the chemical constituents of the soil are concerned, phos-

phoric acid seems to bear the closest relation to the amount of sugar, or, if this be wanting, sugar will not be provided, while a lack of lime would be replaced by potash, soda or magnesia.

Phosphoric Acid Needed

Champion and Pellet consider phosphoric acid as an indispensable base for the formation of sugar in the beet. They classify the order in which the plant food is indispensable as follows: (1) phosphoric acid, (2) lime, (3) nitrogen, (4) potash. It is foreign to our purpose to discuss, at this time, the soils of Oregon to any length, but in connection with the last statement I desire to direct attention to the fact that the soils of Oregon are well—yes, abundantly—supplied with phosphoric acid, that they surpass those of France in lime, and equal them in potash.

With these facts before us it would seem that there is certainly a bright prospect for Jackson county provided the people organize in such a manner as to lay the facts before people who are seeking investments along this line.

Regarding Yield Capacity

Just a word as to the matter of yield. For the last few days I have traveled over your beautiful valley and measured the experimental plots and weighed the beets in order to obtain a true idea as to the capabilities of the soil. The plots have yielded from 12 to 24 tons of workable beets. These beets are worth at the factory \$4 per ton. Let us now consider the harvest yield, i. e., 12 tons per acre. Thus that would be an income of \$48 per acre for the beets. The cost of growing would not be far from \$30 per acre, leaving a fair profit at least, when it is considered that in the \$30 is included rent of land and that the farmer has received pay for his time.

The indirect benefit to be derived from the establishment of such an enterprise means a great deal, among which may be enumerated a much increased population, a decided use in the value of lands, employment for all who are willing to work, the development of lime and coal deposits, better sale for farm products and an increased yield for cereals and other crops which will follow from the more thorough cultivation of the soil.

I trust that you people may take hold of the matter in earnest and lend every possible aid to an undertaking for the development of which you have such excellent conditions.

The experiment station stands ready to aid in any manner possible in this important movement.

G. W. SHAW,
Chemist.

Growers and Results

Here is the report:

Name of Grower	Per cent Sugar Purity
D. W. Cornish, C. Pt.	21.4 81
C. G. Duncan, C. Pt.	13.5 84

W. Sydow, C. Pt.	15.5 80
R. C. Henslee, C. Pt.	13.2 79
J. S. Fredenburg, C. Pt.	12.2 77
W. W. Scott, C. Pt.	13.9 77
J. H. Downing, C. Pt.	15.8 91
J. McFarren, Medford	13.6 79
E. B. Jennings, T. Rock	17.4 90
F. Morine, T. Rock	12 80
J. Anderson, Medford	18.6 89
W. H. Stewart, Medford	18.8 89
L. H. Tucker, Medford	18.7 85.5
S. L. Bennett, Medford	13.8 71
M. Bellinatti, J'ckville	11.8 71
S. Raphaelitz, J'ckville	11.4 76
One large beet—no name	15 78
Jesse Adams	14.0 79.6
J. W. Smith, Medford	15.7 82.63
E. G. Coleman	14.0 69.0
J. W. Smith, Phoenix	14.5 79.0
W. H. Hurley	16.5 82.4
H. P. Lyons	14.1 79.0
Jos. Clift	14.0 87.0
A. J. Stevens	16.3 81.0
S. Sherman	12.0 71.5
J. W. Abbott	16.0 80.0
E. O. Hendricks	13.0 69.0
L. A. Murphy, Medford	20.1 93
H. Tripp, Medford	20.4 91
J. S. Hagey, Medford	17.2 82
P. Stewart, Medford	15.5 71
J. L. Wilson, Medford	16.4 80
C. Hoxie	18.7 82
W. Griffin, Medford	17.74 82.4
W. M. Smith, Medford	19.9 91
C. Stewart, Medford	17.2 87
C. E. Stewart, Medford	18.3 83
S. W. Spears, Medford	15.7 82
Weeks & Orr, Medford	20 93
I. Wakefield, Phoenix	9.5 64.5
L. Wakefield, Phoenix	11.3 66
J. W. Richardson, M'rd	14.2 79
J. O'Conder, Medford	10.2 65
J. W. Wiley, Medford	12.4 74
S. A. Carlton, Br'naboro	14.7 79
J. K. Bell, Br'naboro	16.7 76
J. W. Compton, Br'naboro	20 86.6
Jos. Clift, Phoenix	15.9 81

Mr. Shaw's experimental tests as to the amount of beets that can be grown to the acre show from 12 to 24 tons.

PLAINTIFFS FINISH IN POWER CASE

The plaintiff will finish its testimony in the hearing of the suit of the California-Oregon Power company against the city of Medford this afternoon, and the city submit evidence in its behalf, the first of next week, the sessions adjourning until that time this afternoon. Aside from known facts, embracing fine technical points of law, nothing has developed. It is expected that the hearing will be concluded in two more sittings.

Testimony offered will be transcribed and presented to Federal Judge Wolverton, who will render a decision early in the new year.

VANCE ELECTED CAPTAIN MEDFORD COAST ARTILLERY

At a meeting held last night at the armory of the Seventh company, Coast Artillery Reserve, in compliance with orders of the War department, and under the supervision of Captain R. W. Collins, inspector instructor, U. S. A., Al J. Vance was the unanimous choice of the company to fill the vacancy caused by the resignation of Captain A. W. Deane.

Honor Unsolicited

When seen today, Mr. Vance stated that the honor was entirely unsolicited and had been thrust upon him against his protest, but since the company had unanimously tendered the captaincy to him, it would be showing small appreciation not to give the matter further and serious consideration. Under the requirements of the regulations pertaining to the election of captain the appointment must be accepted or declined within ten days, during which interval the newly elected captain will make his decision.

Speaking further on the subject, "Captain" Vance stated that affairs military did not appeal to him, but there was a feature in connection with the Seventh company that did appeal to him very strongly, and that is the founding of a young men's organization in Medford somewhat along the lines of the club which exists in Ashland under the direction of Professor Vining, and which, in his opinion, could be incorporated with or at least occupy the quarters of the artillery company.

Favors Boys Club

The rooms occupied by the company are furnished by the state, and many of the officers and men have expressed a desire to assist in the promotion of such a club as an auxiliary or entirely apart from the military feature of the company, and it is in this connection that the newly elected captain will be influenced in accepting the appointment. The intention would be to have club rooms where members of the company and other young men can have access to athletic games and training, reading and literary features, billiards, bathing pool, evening gatherings to be addressed by prominent speakers, and all the other features that appeal to the young men and boys, and which are so essential to the proper training and education of the present day live American boy.

Not many cities of the size of Medford but have such institutions, and Mr. Vance expresses the opinion that it is time that someone got behind such a movement here. The captaincy of the Seventh company opens up the waiting opportunity and may be the deciding factor in the acceptance of the unsolicited appointment.

Danger of Rail Exceed War

LONDON, Dec. 10, 3:22 a. m.—Advices from Vise, Belgium, to the Exchange Telegraph company, by way of Amsterdam, say that a train of forty carriages conveying wounded, on the line between Gemmenich and Aachen, was derailed yesterday, killing fifty-two, and injuring a large number. Every carriage was badly damaged and some were destroyed.

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EFFECTIVE DEC. 10th

Ashland, Talent, Phoenix, Medford

NORTH BOUND			SOUTH BOUND		
Leave Ashland	Leave Talent	Leave Phoenix	Leave Medford	Leave Phoenix	Leave Talent
7:15 a. m.	7:30 a. m.	7:37 a. m.	8:10 a. m.	8:22 a. m.	8:29 a. m.
9:10 a. m.	9:25 a. m.	9:32 a. m.	10:10 a. m.	10:22 a. m.	10:29 a. m.
12:35 p. m.	12:50 p. m.	12:57 p. m.	11:20 a. m.	11:32 a. m.	11:39 a. m.
1:20 p. m.	1:35 p. m.	1:42 p. m.	2:20 p. m.	2:32 p. m.	2:39 p. m.
3:20 p. m.	3:35 p. m.	3:42 p. m.	3:20 p. m.	3:32 p. m.	3:39 p. m.
4:20 p. m.	4:35 p. m.	4:42 p. m.	5:00 p. m.	5:12 p. m.	5:19 p. m.
6:35 p. m.	6:50 p. m.	6:57 p. m.	5:45 p. m.	5:52 p. m.	5:59 p. m.
7:30 p. m.	7:45 p. m.	7:52 p. m.	7:20 p. m.	7:42 p. m.	7:49 p. m.
8:30 p. m.	8:45 p. m.	8:52 p. m.	8:30 p. m.	8:42 p. m.	8:49 p. m.
11:20 p. m.	11:35 p. m.	11:54 p. m.	10:20 p. m.	10:32 p. m.	10:39 p. m.
12:45 a. m.	1:00 a. m.	1:07 a. m.	12:05 a. m.	12:17 a. m.	12:24 a. m.

SUNDAYS ONLY			SUNDAYS ONLY		
10:50 a. m.	11:05 a. m.	11:12 a. m.	9:50 a. m.	10:02 a. m.	10:09 a. m.
2:30 p. m.	2:45 p. m.	2:52 p. m.	1:20 p. m.	1:42 p. m.	1:49 p. m.
5:30 p. m.	5:45 p. m.	5:52 p. m.	4:30 p. m.	4:42 p. m.	4:49 p. m.
10:20 p. m.	10:35 p. m.	10:42 p. m.	9:20 p. m.	9:32 p. m.	9:39 p. m.

FARES		
Either Way Between—	One Round Trip	Ashland and Medford
Ashland and Talent	15	15
Ashland and Phoenix	20	20
		Medford and Phoenix
		10

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