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# Talent Alfalfa

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## Foreword

Alfalfa is probably the most important forage crop in North America. In Oregon, its high value as a crop is unquestioned in the area east of the Cascade Mountains. On the half-million acres of potential alfalfa producing soils in the Rogue River, Umpqua, and Willamette valleys of western Oregon, however, alfalfa culture has never approached its possibilities. Much of this lag in acceptance is the result of lack of varieties adapted to western Oregon conditions.

During recent years, much attention has been given to alfalfa improvement work. Numerous new varieties with different characteristics and adaptations have been developed. One of them is Talent alfalfa, a variety showing improved adaptation in western Oregon and promising to increase the use of alfalfa in that area.

This bulletin gives information on the development, testing, and values of Talent alfalfa in Oregon.

F. E. Price
Dean and director

This bulletin reports a cooperative research project. Forage crop work at the Oregon Agricultural Experiment Station is conducted in cooperation with the Division of Forage Crops and Diseases, Bureau of Plant Industry, Soils and Agricultural Engineering, U. S. Department of Agriculture.

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*Cover photo*—Otto Bohnert, Talent alfalfa grower of Central Point, Oregon, examining one of his fields.

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# Talent Alfalfa

By H. A. Schoth, L. G. Gentner, and H. H. White[1]

ALFALFA, the "queen of forage crops," as it is often called, is one of the most important forage plants in the United States and is rapidly occupying this position throughout many other parts of the world. It is credited as being highest in feeding value of all commonly grown hay crops. It has major value also for pasture and silage and assumes increasing importance for special uses, such as poultry feed and even in processed forms for human consumption.

Numerous improved varieties of alfalfa are being developed by selection and breeding. Under certain circumstances, new and improved varieties are desirable to make the growing of alfalfa on a profitable basis possible or more certain. Talent is one of these improved varieties that is attracting much attention.

## History of Talent

The original seed from which Talent developed was obtained from Provence, France, in 1935. The United States Department of Agriculture, Bureau of Plant Industry, Soils, and Agricultural Engineering imported it. The seed was turned over for testing to the Division of Forage Crops and Diseases. Its introduction designation was F. C. 19274.

A portion of the original seed was allocated to Oregon for testing, and the first test comparing it with other varieties of alfalfa was made in 1936 at the Southern Oregon Branch Experiment Station[2] near Medford.

As the result of its exceptionally favorable performance in comparison with numerous varieties of alfalfa during the initial five-year testing period, it was singled out as worthy of further testing and also possible improvement, particularly for resistance to stem nematode. Its general resistance was good—far better than that of other varieties in the test. Certain plants, however, showed more resist-

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[2]Dr. F. C. Reimer was Branch Station Superintendent at that time, and the alfalfa work was under the supervision of L. G. Gentner.

Figure 1. Dr. George B. Dean, owner of this Talent field, gets a pointer from Jackson County Extension Agent Ben Tucker. This 2-year-old field made 2½ tons of hay per acre, yielded 400 pounds of seed per acre, and topped off the 1951 season with a 5-tons-per-acre silage crop. This photo was taken on November 7, the day the silage was harvested.

ance than others. As a result, more than 1,500 plants showing particularly good forage qualities and stem nematode resistance characteristics were selected for seed production. The first seed produced by these plants was used for further testing in comparison with other varieties. The results indicated the desirability of perpetuating the improved alfalfa. This is the present Talent variety.

## Characteristics

Talent alfalfa is a vigorous grower and has shown a rather high degree of winter hardiness in trials in the Pacific Northwest. It starts growth earlier in the spring and continues later in the fall than any other variety of alfalfa with which it has been compared for several years in Oregon. It is leafy and branches freely. Its stems are relatively fine. It stands up well. Moreover, it does not produce a coarse hay.

There is considerable variation in size of leaves. It blooms profusely over a long period with flower color ranging from light blue

to reddish purple. The root growth is strong and usually consists of one tap or several semi-tap roots with numerous finer roots. On soils with a hardpan the rooting system spreads out over a wide area. The crown development is strong. Seeding characteristics appear equal to those of other varieties under similar conditions.

Experimental work shows that over a period of years Talent alfalfa will outyield most other varieties. Quite often the yields the first year may be somewhat lower than that of certain other varieties. Usually the yields the second year are larger than those for the first year and this increase in annual yields usually continues with the result that from the third or fourth year on Talent outyields other varieties. This is probably the result of its resistance to certain plant diseases, its ability to limit foreign plant competition, and its rapid growth.

## Advantages

Fifteen years of testing, largely at the Southern Oregon Branch Experiment Station but in recent years on a statewide basis, indicate that Talent has certain advantages over various other varieties tested in comparison.

- It has an early spring growth—starting from 10 to 14 days ahead of other varieties, making earlier forage for spring use possible.
- The regrowth after harvest is very rapid and is considerably faster than most other varieties.
- Where soil moisture and climatic conditions are favorable, Talent will normally produce one more cutting of hay than will other varieties.
- When temperature and moisture conditions are favorable, it continues to make fall growth after most other varieties have gone into dormancy.
- The hay is fine stemmed and leafy.
- Under favorable conditions, Talent will produce consistently high yields of good quality forage for many years.
- Its vigorous growing habits tend to retard weed and grass growth.
- It has shown a high degree of resistance to stem nematode. Crown wart and stem rot cause very little plant loss.
- It is a good seed producer when soil moisture conditions are favorable, when pollinating insects are plentiful, and when injurious insects are controlled.

## Possible Limiting Factors in Production

Talent has certain features limiting production, however.

- It shows a lack of resistance to bacterial wilt of alfalfa. Where this disease is prevalent, Talent, in common with other wilt-susceptible varieties, should be planted with the object of stands remaining in good production for a period of only two to four years or in short rotation.
- Its winter hardiness in more northern sections, or where temperatures may drop very low, has as yet not been fully determined. It has withstood satisfactorily winter conditions that prevail east of the Cascade Mountains in the Pacific Northwest.
- In short growing season locations, the early spring growth may be damaged by late frosts. Early fall frosts may damage fall growth.
- In rainy areas, its early spring development may make it necessary to use the first growth for purposes other than hay, because of difficulty of curing.

## Culture

The culture of Talent alfalfa is no different from that for other varieties. It produces best on deep, fertile soils of near-neutral reaction. It thrives under irrigation. Talent alfalfa has exceptionally

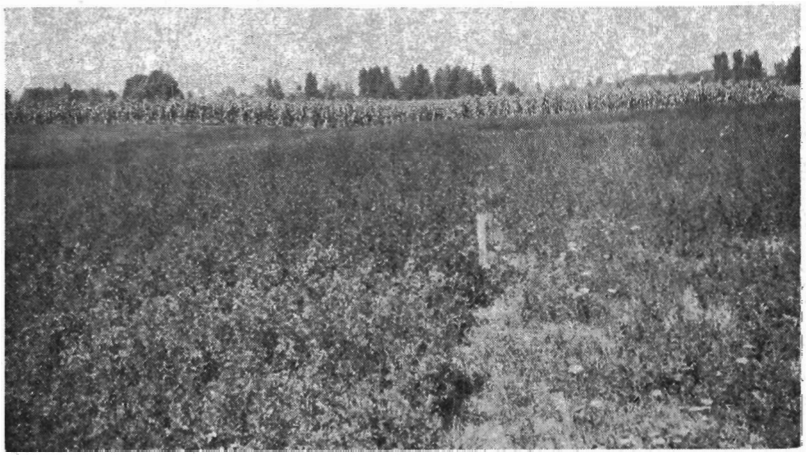

**Figure 2. The plot of Talent (*left*) remains in excellent condition, while the Grimm plot (*right*) has suffered heavy loss of plants in a 3-year-old alfalfa variety trial on the Oregon Agricultural Experiment Station, Corvallis.**

**Figure 3. Talent alfalfa (*right*) is the only alfalfa retaining a good stand in this variety trial on the Southern Oregon Branch Experiment Station. The surrounding plots have suffered heavy stand depletion, and are now occupied by summer annual weeds.**

early and vigorous spring recovery, reaching hay cutting stage seven to ten days earlier than most other varieties. Delay in harvesting the hay crop generally means that new growth from the plant crowns will be clipped back when mowing is done. Such treatment delays the development of the succeeding forage growth and will weaken alfalfa plants if it occurs frequently.

In regions where winter temperatures may drop to 0° F., Talent alfalfa should enter the winter with six inches or more of fall growth. In such regions, despite the vigorous late fall growing habit of the variety, growers should not utilize the late growth for forage. This practice weakens alfalfa, lowers its resistance to low temperatures, and reduces its vigor in the following year. Utilization of the late fall production of Talent alfalfa is a safe practice only in regions of mild winters.

## Seed

At present, seed is produced in the Rogue River Valley, Oregon, under strict isolation and under Oregon State seed certification regulations. The producers of seed belong to the Talent Alfalfa Growers Association, which has headquarters at Medford, Oregon. Only certified seed is being marketed.

## Extended Testing

During the past three years, nation-wide distribution of Talent seed has been made. The large majority of the plantings are not yet old enough to show definite evidence of its over-all adaptability, but preliminary reports indicate that good stands have been established in most of the trials and that production is generally good. The variety exhibits a vigorous growth habit over a wide area in the northern half of the United States. After another year or two of testing, it should be possible to determine the regions of adaptation more accurately than at the present time.

DRY FORAGE YIELDS OF TALENT AND OTHER VARIETIES IN OREGON*

| Variety and year | Yields per acre | | | |
|---|---|---|---|---|
| | Ontario | Medford | Klamath Falls | Corvallis |
| | *Tons* | *Tons* | *Tons* | *Tons* |
| *Talent* | | | | |
| 1949 | ..... | 4.51 | 2.90 | 4.42 |
| 1950 | 6.77 | 6.74 | 3.95 | 5.24 |
| 1951 | 6.36 | 6.09 | 4.12 | 5.64 |
| Average | 6.56 | 5.78 | 3.66 | 5.10 |
| *Grimm* | | | | |
| 1949 | ..... | 4.08 | 3.00 | 3.81 |
| 1950 | 7.00 | 6.39 | 5.15 | 5.10 |
| 1951 | 6.20 | 3.68 | ..... | 4.00 |
| Average | 6.60 | 4.71 | 4.07 | 4.30 |
| *Ranger* | | | | |
| 1949 | ..... | 4.93 | 3.20 | 5.18 |
| 1950 | 7.06 | 6.46 | 5.49 | 6.35 |
| 1951 | 6.93 | 3.44 | 4.21 | 4.95 |
| Average | 6.99 | 4.94 | 4.30 | 5.49 |
| *Ladak* | | | | |
| 1949 | ..... | 4.23 | 2.90 | 4.47 |
| 1950 | 6.92 | 6.28 | 5.09 | 4.81 |
| 1951 | 6.76 | 3.02 | ..... | 3.14 |
| Average | 6.84 | 4.51 | 3.99 | 4.14 |
| *Orestan* | | | | |
| 1949 | ..... | 5.16 | 2.80 | 4.89 |
| 1950 | 7.39 | 7.76 | 4.46 | 5.95 |
| 1951 | 7.27 | 4.93 | ..... | 4.14 |
| Average | 7.33 | 5.95 | 3.63 | 5.16 |

* All varieties cut at the same time at most stations; Talent normally should be cut 7 to 10 days earlier than the other varieties listed here for best results.