Bill Williams
What about updating this for Cal Agric. If there are new data or info. jot them down. Jerry will write the article. Any pics?

UNIVERSITY OF CALIFORNIA, DAVIS

# AGRONOMY PROGRESS REPORT

Agricultural Experiment Station — Agricultural Extension Service

No. 5 — October 1959
File 3.126

2
12/26/66

## WOOLLYPOD VETCH

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Woollypod vetch (Vicia dasycarpa Ten.) is an early-maturing, self-seeding winter annual legume which was introduced into California as early as 1919. It is palatable to livestock when green, but like most vetches is more palatable when dry.

This plant is easy to establish, tolerant of early frosts, and a dependable forage producer. It is tolerant of moderately acid and moderately alkaline soils, and is adapted to areas receiving 10 inches or more annual rainfall and to elevations below 4,000 feet. The pea-vetch group of legume bacteria is appropriate for inoculation.

Woollypod vetch is more prostrate in growth habit than purple vetch. It produces a moderate percentage of hard seed, and is the earliest maturing species of commercially available vetches, blooming about three weeks earlier than purple vetch. These characteristics account for the ability of woollypod vetch to perpetuate itself under range conditions.

Woollypod vetch is similar in general appearance to hairy vetch; the flowers are a little smaller and the seeds tend toward an oval shape instead of being nearly round. Woollypod vetch is self-fertile, although very attractive to bees. It is less winter hardy than hairy vetch but hardier than purple vetch.

### USE IN RANGE SEEDINGS

The new legume can be broadcast by plane on the ash of brush burns and on annual type rangelands where there is adequate residue to provide protection to young seedlings. When possible some seedbed preparation such as disking is advantageous. In any case, covering the seed, preferably by drilling, will improve the first year's stand.

October is the best month for planting vetch over most of the area to which it is adapted. Midwinter plantings are likely to be only moderately successful, even during mild winters.

Plant 15 pounds of inoculated seed per acre. Fertilizing at time of planting with 200 to 500 pounds per acre of single superphosphate will aid growth for the majority of range soils. In areas where sulfur is the principal nutrient lacking, 200 to 400 pounds of gypsum per acre will satisfy the plants' needs. Refertilize every two or three years.

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Woollypod vetch is compatible for planting in mixture with the annual grasses, Blando brome and annual rye grass. They may be added singly or in mixture at the rate of 4 pounds of grass seed per acre.

Newly planted areas should be grazed as soon as annual grasses and weeds are of pasturable height where there is competition from annual grasses or sprouting brush. Graze vetch plantings to a uniform height of about 3 inches for a period no longer than a month. Do not graze while the soil is saturated, or the planting will suffer from trampling damage.

Remove stock well before spring moisture depletion so the vetch can mature a seed crop. A weed-free brush burn planting becomes better established if stock are kept off the first season until seed is ripe.

## USE AS A HAY CROP

Woollypod vetch makes good hay either alone or in mixture with a cereal. Vetch and oat mixtures are often preferred because of the support offered vetch by the oats and the consequent ease of harvesting. The oat variety Kanota is a desirable companion because it begins to flower at the same time the woollypod vetch is in late bloom. These are the most nutritious stages of growth for hay production. Where hay containing dough-stage oats is desired with woollypod vetch, the variety Indio is suggested. A suitable planting rate is 30 pounds each per acre of vetch and oats.

## USE AS A COVER CROP

Woollypod vetch may be used as a substitute for purple vetch as a cover crop or as green manure. It has outperformed purple vetch in a number of instances when planted at a wide row spacing. The relative price of seed may have considerable influence on the choice.

## USE AS A SEED CROP

For seed production plant woollypod vetch at the rate of 5 pounds per acre with a 5-foot row spacing. It is a prolific seed producer, but shatter creates a difficult harvest problem.

Good seed recovery can be obtained by a procedure developed at Pleasanton by the Soil Conservation Service Plant Materials Center, USDA. Rake the field with a dump or sulky rake without mowing if the stand is heavy enough; otherwise, mow and then rake.

After the crop has cured in the windrow, combine with a belt-type rubber pick-up attachment. Direct combining is possible where the crop has matured uniformly and weather conditions are right. Cylinder speeds of 4000 to 4500 feet per minute and cylinder spacing of $\frac{1}{4}$ to $\frac{1}{2}$ inch are recommended.

If the pods are fairly mature and the vines are still somewhat green, a defoliant may be applied by air. Use 1 quart of a general contact spray in 10 gallons of diesel oil per acre. Treat only as much acreage at a time as can be harvested before pods burst open (dehiscence). The time interval between applying the defoliant and dehiscence will depend on local climatic conditions. It may be as short as a few hours.

## VARIETIES

Lana.--This variety of woollypod vetch was selected and developed at Pleasanton by the Soil Conservation Service Plant Materials Center, USDA, in cooperation with the Agronomy Department of the University of California, Davis, from material introduced from Turkey in 1937. The original accession was assigned the number K1924 by the Agronomy Department and subsequently numbered P-13910 by the Pleasanton Center. It has been used widely and successfully in California for seeding rangeland in the area of adaptation described. Certified seed is commercially available in limited quantities.

Auburn.--This variety was selected and developed by the Alabama Agricultural Experiment Station for use as a forage and cover crop. It has been certified for use in Alabama and more recently in California. Limited amounts of seed are commercially available.

Oregon.--This variety was selected and developed by the Oregon Agricultural Experiment Station. It has not been released as of this writing.

## YIELD TRIAL RESULTS

Forage yields (dry basis) from winter legume trials over the past five years are summarized in the table. All plantings were made with a 3-foot row spacing, except at the Rice Experiment Station, where the seed was broadcast in rice just prior to harvest. (See table on page 4.)

Purple vetch is included with the three woollypod varieties as a standard for comparison, although purple vetch probably does not show up as well in a 3-foot row spacing as it would in close drills, because of its more upright habit.

The Cotton Experiment Station and Ontario tests were irrigated, while the other trials were not.

All plantings were made in the fall.

It will be seen that in 10 of the 19 yield comparisons there were no significant differences between Lana and Auburn, the two woollypod vetch varieties available in California. In six tests Lana produced significantly more forage than Auburn, while in three trials Auburn produced significantly more than Lana.

Lana made the best showing at Ontario and Davis where winters are moderated somewhat by the marine influence. Auburn made its best showing under the more extreme climatic conditions of the Central Valley.

It is felt that these adaptation trends are suggestive only, but they would seem to indicate a slight yield advantage to Lana under coastal influence and to Auburn under more severe interior climatic conditions.

Production of Forage (dry-lbs./A)*

| Location and Date of Harvest | Lana Woollypod Vetch | Auburn Woollypod Vetch | Oregon Woollypod Vetch | Purple Vetch | LSD 5% |
|---|---|---|---|---|---|
| Rice Exp. Sta., Butte Co.--1957 | | | | | |
| April 11 | 1,240 | 1,280 | -- | 1,730 | 450 |
| Rice Exp. Sta., Butte Co.--1959 | | | | | |
| April 30 | 1,300 | 1,550 | -- | 1,000 | 390 |
| Cotton Exp. Sta., Kern Co.--1957 | | | | | |
| April 8 | 1,390 | 1,800 | 1,720 | 650 | 300 |
| April 25 | 3,190 | 3,920 | 3,760 | 2,130 | 730 |
| Ontario, San Bernardino Co.--1958 | | | | | |
| March 4 | 1,300 | 1,130 | 300 | 1,060 | 440 |
| April 15 | 5,000 | 2,960 | 3,340 | 3,230 | 1,370 |
| May 8 | 6,730 | 4,140 | 6,350 | 4,230 | 1,780 |
| Agr. Exp. Sta., Yolo Co.--1955 | | | | | |
| April 1 | 1,380 | 1,320 | 1,130 | 890 | 220 |
| April 15 | 2,200 | 2,050 | 1,880 | 1,170 | 430 |
| May 2 | 3,390 | 3,130 | 2,890 | 2,260 | 800 |
| Agr. Exp. Sta., Yolo Co.--1956 | | | | | |
| March 10 | 410 | 420 | 340 | 920 | 340 |
| March 30 | 1,640 | 1,030 | 1,520 | 1,730 | 550 |
| April 28 | 5,630 | 5,010 | 5,560 | 6,350 | 1,490 |
| Agr. Exp. Sta., Yolo Co.--1957 | | | | | |
| March 18 | 1,030 | 620 | 940 | 270 | 360 |
| April 1 | 2,270 | 1,530 | 2,080 | 670 | 380 |
| April 15 | 3,620 | 2,400 | 3,810 | 1,470 | 940 |
| Agr. Exp. Sta., Yolo Co.--1958 | | | | | |
| March 7 | 870 | 740 | 790 | 720 | 160 |
| March 28 | 2,550 | 2,120 | 1,770 | 1,540 | 560 |
| April 11 | 3,080 | 2,540 | 2,820 | 2,450 | 530 |

* D. C. Finfrock, R. M. Barnes, E. C. Hoffman and C. L. Hemstreet were cooperators in the yield trials.