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Wonderful Future for the Umpqua Valley

You are invited to help put this development work through and you will share in the reward. Decide to do this today—make your family a New Year's present of a few shares in this oil well. Address

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Cereal Crops Needed in Umpqua Valley

(Continued from page 63.)

for and more poorly drained land. Federation or Jenkin Club for richer and better land, the Federation especially where lodging may be a factor.

Barley: O. A. C. No. 7 and No. 28.

Spring Varieties

Wheat: Federation for the better lands. Huston for the red hills and the heavier and poorer types of soils.

Barley: Hannechen for unirrigated lands. Trebi for rich irrigated lands.

Oats: The three grain and victory have given best results in the Willamette valley and Markton at Moro with three grain doing well. It is recommended that the county agent arrange several spring oat demonstrations to try out these and other varieties.

It is recommended that the wheat acreage be confined to local needs.

It is believed that the acreage of barley, especially of winter barley, should be enlarged. Rye is only recommended as a pasture and cover crop, and in that case should be grown with vetch.

Seed

Because of the natural adaptability of Douglas county to the production of certain seed crops and because their high value per pound permits of shipment to markets desiring them, it is recommended that there be an expansion in the acreage devoted to seed production.

The committee has divided the needs into two groups, those that have been grown enough to be practical certainties and those that offer promise and should be investigated further.

Group One

Douglas county has grown purple vetch successfully several years and now has possibly 200 acres. The early maturing of the crop here fits in well with the marketing program as the crop must move in August.

It is recommended that the acreage be enlarged by including it in the rotations with other crops, but only in communities where enough may be assembled for car lot cleaning and shipment and where threshing may be done promptly. It is not recommended as a main crop to be grown on a large scale for

most farmers. It should normally be grown by fall sowing with gray oats using about 60 pounds of vetch with 40 pounds of oats. It is estimated that it will yield about 500 pounds of seed an acre with about 400 pounds of oats and screenings. The price is likely to be from 5 to 7 cents per pound F. O. B. cars.

Hairy vetch (sometimes called winter or sand vetch) grows readily on many of the poorer and shallower soils. It may be used for seed or for a cover or pasture crop. The early maturing in Douglas county lends itself to early delivery for boat shipment to the east coast markets. It should enter into the farm program only under the following conditions:

1. It should be grown on a scale that farmers may handle it quickly and without great shattering loss. Few men can handle over 10 acres until they know the crop.
2. There must be enough acreage probably 100 to 125 in a community to assure car lot shipments.
3. Conditions must be right for prompt threshing and cleaning.
4. Because of its hard seed and easy shattering which results in much volunteering for several years it is recommended that it be planted only where the volunteer will not interfere with other crops, especially wheat.

Hairy vetch may be expected to yield 400 to 600 pounds an acre of seed and to re-seed itself to a considerable extent. Its price per pound varies from 5 to 10 cents. The United States annually imports 15 to 25 million pounds, principally from Europe.

Hairy vetch as well as purple vetch may be used for hay when hay is needed. Neither are considered as good as common or Hungarian vetch. Of the two, purple is the better hay, but is less hardy. Both these vetches are good soil builders. Probably the hairy vetch is the better and it is suited to a greater range of soil types.

It is recommended that the growing of common and Hungarian vetch be confined to the local needs unless there develops a special outlet for Hungarian vetch as a concentrated feed.

A number of growers whose soils are not too sour are successfully producing red clover for seed. There is a good local demand and also a splendid outside market. No crop fits more readily into a rotation or produces better feed or is a better soil enricher than clover.

It is therefore recommended that the clover acreage be extended on

those soils suited to the crop and that special attention be given to producing seed. Seed production will be limited to localities where a clover huller is available or where a thrasher with hulling attachment may be secured. The latter will do but is not so satisfactory as a good huller. There is no danger of over production of clover.

It is the committee's observation that alfalfa seeds very well in some parts of the county. With this in view it is recommended that on the sweet soils without irrigation that Grimm alfalfa be grown in trial plantings in cultivated rows about 3 feet apart.

If the crop will set seed under these conditions there is room for an acreage of 3000 to 5000 acres and expansion later on. The crop sets seed better when under somewhat unfavorable conditions and it is believed that in rows, cultivated, that there will be sufficient seed for moisture that seed will set but that enough may be conserved to get a crop.

Some of the moist and heavy soils are very productive of rye grass which is used locally in quantities. There is also a good outside market for it. It is a crop worthy of continued expansion, and too, hinges somewhat for outside shipment on early threshing.

Group Two

Among the seeds that offer promise but that should be considered as somewhat experimental are the following: Soy Beans, burr clover, orchard grass, Ladino clover.

It is recommended that the county agent arrange, if possible, for demonstrations to determine the seed production possibilities of these crops.

Flax has been grown successfully as a seed crop. There is a good market for it at Portland. The yields are good and it will probably pay as well or better than wheat for those farmers desiring to grow a grain crop to sell. It should not be planted on worn out land and must be grown in a rotation if to continue a success.

There is nothing at this time to warrant the development of a flax acreage.

Potatoes are shipped into the county because of three things:

1. Occasional under production.
2. Unsuitable varieties.
3. Poor grading.

It is recommended that potatoes be grown to meet the local market needs; that standard varieties as Netted Gems and Earliest of All be adopted and that the grading law

be strictly enforced.

By using standard varieties, treating the seed and growing the crop in rotation in mellow new ground, in the hill areas and in sandy loam bottom lands, home grown potatoes can easily meet the local market needs to the advantage of both grower and consumer.

Limited opportunities for observation indicate that sweet potatoes are worthy of a trial in the county. Triumph, Yellow Strassburg and Yellow Jersey are good varieties.

Statistics show a rather large annual importation of eastern yellow corn into Douglas county. They also show the county to be one of the more important corn growing counties of the northwest. Corn is well suited to several of the stronger soils of the county as the black mud and the bottom lands. It is not so well suited to the upland areas in their present state of fertility.

It is recommended that the acreage of early yellow corn be expanded on the soils rich enough for reasonable yields and to the extent necessary to meet local needs, for grain. Corn is also worthy of culture for summer green feed for stock and for silage. With rotation and legumes it is thought that other soils may become corn land. There is no better soil cleaning crop for getting rid of annual and perennial weeds than corn.

Forage

The real need of Douglas county agriculture is to find some way to get better and cheaper feed for livestock. This applies to both hay and pasture. Better hay and more hay will permit of better pasture and range utilization.

It is recommended that there be more leguminous forage grown and that some of the grain be replaced with legumes like vetch that will make better yields of better feed and improve the land.

Recommended legumes are alfalfa of the Grimm variety for the bottom and other sandy soils that are well drained and not sour. Red clover for the fairly sweet bottom and upland soils reasonably well drained and not sour. Much good corn land will grow the clover in a rotation with the corn and grain.

Alsike clover for the more sour and less well drained soils toward the coast. Because of wide adaptability the vetches are recommended for very general use. Their ability to grow under somewhat sour and often run down conditions makes them especially

valuable in the cropping program. The feed quality is excellent and the curing period comes at a good time of the year. Seed is usually not excessive in cost.

For the better lands, well drained and not sour, common vetch with oats is recommended. For soils more sour and not well drained and where aphid injury is likely to be serious, Hungarian vetch is considered best.

Where the starting of vetch is difficult as in sour land or in the coast section, time and inoculation are a great help in assuring immediate returns. Where time cannot be economically used, it is best to use purple vetch where it stands the winter, and woolly podded vetch where conditions are more severe. Hairy vetch, while not quite so good for forage, will grow well under quite poor conditions and make forage and enrich the soil. Any of these vetches are good for silage. Common and Hungarian and woolly podded are particularly good for green feed. Hairy vetch and rye make good pasture. Barley and vetch, fall sowed makes good silage, but is not good for hay or seed, unless the seed is ground for feed.

A liberal expansion of the vetch acreage will enable more farmers to use a much needed legume in their rotations. There is much land in Douglas county that is better adapted to pasture than to any other purpose. The carrying capacity is low. The feed value is also poor in many cases because of grasses of low palatability and nutritive value. Better grasses and some legumes are needed in the pastures.

It is recommended that the "Commercial Burn Mixtures" which consist principally of off type seed, be not used. These mixtures are short lived and too expensive for economical use.

Grasses and legumes having a special adaptability for Douglas county conditions are given below.

Rye Grass grows well in pastures and provides good feed for a few years. It grows in the fall and spring on hill land and later on poorly drained lower land. Seed is cheap and of good quality. Common rye grass grown in Oregon is probably better than the imported rye grass that is much more expensive. Rye grass may well replace some of the grain hay as well as be included in the pasture mixtures.

Timothy. This is a good grass for a few years in the hill pasture and because of its deep rooting system

it provides feed later in the season. The grass is palatable and the seed is cheap. It is especially good for the higher elevations. Orchard grass. This grass is drought resistant, stands some shade, is deep rooted and is very durable. No upland permanent pasture is complete without orchard grass. It is available quite late in the summer. Tall Oat. This is a fairly expensive grass but with a bunch habit and a deep rooting system. It does well on poor soils and under dry conditions and should be in the dry upland mixtures.

Brome Grass is palatable and may enter into some upland mixture where there is a little seepage, but it tends to make too dense a sod for much dry land. It is good on coarse bottom land.

Kentucky Blue Grass. This grass is a good sod former and helps out in winter and early spring. It is palatable and stands tramping but dries up early.

Red Top is also shallow rooted but is suited to sour moist soils. It should go in heavy sour land mixtures and in many coast hill pastures.

Alfalfa may well be included in dry hill mixtures where the soil is reasonably sweet.

Sweet Clover of the biennial white and yellow kinds is suited to many of the dry hills that are not acid or sour. These clovers may be used alone or in mixtures on such lands and except alfalfa will probably give more late summer feed than anything else. Sweet clover will not do well on the sour wet soil types.

Red Clover may well be included in the sweet land mixtures that have a fair moisture supply during the summer. The seed is rather expensive for dry hill mixtures considering the chance for its survival.

White Clover. Common white clover is good on many of the soils but is hardly to be recommended on the real dry pastures. It does well in moist land mixtures. When seed is a little cheaper, Ladino, a rank growing type of white clover, should be included in moist, coast and irrigated pasture mixtures.

Burr Clover. This remarkable clover is suited to many of the dry hill lands of the county and as a legume for fall and spring feed stands without a peer. Its extensive distribution in the hill lands will probably do much to improve Douglas county pasture and range conditions, and it is strongly recommended that the county agent

push the expansion of its acreage. It is recommended that the county agent arrange for some local means of securing the tested grass and legume seeds for mixtures or for the handling of mixtures made of tested seed and mixed according to standard formulas agreed upon after conference with the experiment station.

Rotations

To save labor in seed bed preparation, to enrich the soils, to better control weeds and to get better crops with less work, it is recommended that farmers carefully consider the crops mentioned in this report and work out rotations that include a legume at least on an average of once in 3 or 4 years. It should, if possible, include a cultivated crop. It is believed that with a system of this sort that less plowing and preparation will be needed and better crops will be secured.

As the records show the dairy production of this district to be reasonable, and largely because of feed supply it is recommended for these dairies to maintain a more constant production that they grow supplemental feeds to go along with their pastures and to carry the stock during the winter periods. Experimental results show that vetch and oats or peas and oats make good silage and early summer green feed. Japanese barnyard millet is particularly good for late summer and fall green feed and produces wonderful yields of feed on matured uplands. Green globe and pomegranate white globe turnips have proved very satisfactory for fall and early winter feed. They must be planted about the middle of June on well prepared land. This is to avoid root maggots and to assure sweet turnips. As a winter root crop, it is doubtful if anything is better than mangels. The Mammoth Long Red, the Half Sugar, the Giant Intermediate and the Red Eckendorf are standard varieties.

With lime from the state lime plant or possibly from a coast shell supply, it will be possible to grow vetches of many upland soil types and in this way supplement the bottom land pastures.

Soils and Fertilizer Report

There is some question regarding the value of triple phosphate, super phosphate, sulphur and land-plaster on field crops in Douglas county. Each of these fertilizers has given increased yields. Further checks should be arranged by the county agent to determine the place of each in the agriculture of the county.

Straw not used for feed and bedding for livestock should be returned direct to the land and plowed under. The value of straw as a fertilizer runs from \$3.00 to \$4.00 to the ton, according to the price of commercial fertilizers. Under no conditions should straw be burned.

Irrigation

Irrigation of alfalfa has given 100% increase in hay yields in several trials. There are many ranches located along streams and a considerable number of these can successfully and profitably grow and irrigate alfalfa.

C. R. DEAR, Chairman.

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Highways

The building of highways in Douglas county has kept pace with development. At the present time efforts are being made to further increase the mileage of roads in this county by completing the highway to Diamond Lake, in the eastern part of the county, thus opening up one of the most beautiful and attractive portions of the state. A highway has just been completed between Scottsburg and the Winchester Bay cities of Reedsport and Gardiner that rivals the famed Columbia River highway. The Pacific highway, a paved thoroughfare extending from Vancouver, B. C. to the Mexican line, passing through the cities of Drain, York, Coquille, Oakland, Sutherlin, Roseburg, Myrtle Creek and Canyonville. Riddle and Glendale are off this highway a few miles, but good gravelled roads lead to these towns from the Pacific highway. At Drains the highway to Reedsport and Gardiner leaves the Pacific highway. At Roseburg the new highway up the North Umpqua river towards Diamond Lake branches off, and a few miles south of Roseburg a wide gravelled road leads to Marshfield and North Bend on Coos bay, and to Eandon on the Pacific ocean. Good market roads lead out of each town into the fertile valleys of the county.

The newcomers soon feels at home in Douglas county.