

Forage Crop Report

Committee Members Present:

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 Howard Holliday, Co-Chairman
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 Dick Henzel
 Jack O'Connor
 Arnold Brandt
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 Gene Gross
 Scott Warren, Co-Chairman of Crops Committee
 W. S. Thompson, Co-Chairman of Crops Committee

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Pasture and hay crops occupy about 60 per cent of the county's 300,000 acres of crop and pasture land. Grazing on wood lands and non-crop pasture lands is additional forage. Much of the county's land is better suited to forage than to grain or seed or potato productions.

Taxes, water charges and higher land values are forcing development for increased annual return.

The problem is not only one of increasing forage production per acre but also a problem of marketing forage; choosing the best hay market or the most profitable type of forage consuming animal through which pasture or range may be marketed.

In general, range land and poorer pasture land is best adapted to cow-calf operations. On better pastures on more valuable lands, dairy, farm flocks and feeders pay best in that order. Dairying does not seem to offer opportunities except for market milk production; is not considered profitable for butterfat production at 70 cents.

Range development possibilities are great. Fencing, water development, salting away from water, rotation deferred grazing and seedings where possible offer much greater income possibilities than the same money invested in additional range.

With \$10 per acre range producing 200 pounds of dry matter per acre, \$1,000 invested in brush removal by sprays, burns or plowing and in seeding grass and legume mixtures may bring a production of 90 tons of dry matter from 100 acres already owned as compared to 10 tons of dry matter from purchase of an additional 100 acres of range land. Development of irrigation where possible of course brings much greater increases.

Bronco grass ranges good for perhaps three weeks of spring feed become good forage producers over a much longer grazing season when seeded to mixtures of dry land grasses and grazing type alfalfa.

Legumes in pasture or ranges improve quality of forage and also increase quantity produced. No-mad alfalfa at two pounds per acre is recommended in all dry land grass seedings.

Crested wheatgrass is still recommended for very dry sites. Many sites particularly on north slopes, on better, less droughty soils and in areas of greater precipitation grow intermediate or Pubescent wheatgrasses very well. Beardless wheatgrass is being tried in several locations. Seeding rates for grasses on dry lands should provide six pounds of seed per acre.

On irrigated lands White Dutch clover is proven as a legume at rates around two pounds per acre, which provides 30 seeds per square foot. Bloat becomes a problem when percentage of legume exceeds 40 per cent of the forage. Legumes grow more rapidly than grass in late summer months.

Some success in bloat prevention is attributed to feeding penicillin salt mix, silicone salt mix or mixes of detergent, bonemeal and salt.

For irrigated pastures, meadow foxtail is an excellent palatable grass, particularly suited to the Fort Klamath area and to better soil conditions elsewhere. Seeding at 10 pounds per acre provides 120 seeds per square foot.

Orchardgrass is good on lands of the main project. Seeds per square foot at 10 pounds per acre total 120. Palatability of orchard compares well with that of mead-

ow foxtail. Orchard may also be seeded with alta fescue.

Alta fescue although rather coarse and not as palatable as many other grasses will out-produce other grasses and is recommended for tougher soil conditions on the main project. Seeds per square foot at 10 pounds per acre total 50. English ryegrass may be included in alta mixtures on tougher land. Smooth brome does not stay in pastures under most conditions.

Tall wheatgrass and Lemons alkali grass will stand tough alkali conditions. Yellow blossom sweet clover and strawberry clover are best adapted legumes for alkali lands.

For irrigated pastures, daily rotation grazing is estimated to increase production 30 per cent over well managed rotation grazing. A three to four week interval of undisturbed growth between heavy grazings to "take it close" increases pasture yield very materially. Grazing wet pastures immediately after irrigation is poor pasture and soil management. Commercial fertilizer offers opportunity for increasing production. Nitrogen boosts grass. Phosphate and sulfur boosts clover growth.

Rotation grazing gives better yield than continuous stocking, but not as great a yield as daily ration. Green chop gives even greater yield than daily rations but involves additional expense.

Excess spring pasture can be utilized for hay or for silage. Average percentage of TDN's from hay is 50 per cent. With silage more TDN's are saved, but it's hard to sell silage. Silage is a bulky feed that works best with dairy cattle. Silage is not a balanced feed. Amounts fed to cattle or calves must be balanced with other feeds. It is easier to make good silage than it is to make good hay.

Although alfalfa produces twice the quantity of TDN's per acre than can be obtained from grain, low hay prices do not permit any greater net returns per acre. This point and the need here for the soil improvement features of alfalfa is the reason for greater interest in the hay pellet development.

Pelleting with proper hay grain ratios has been proven for lamb fattening and also looks promising for fattening cattle, particularly calves.

Pelleting permits use of a higher percentage of roughage in fattening lambs and cattle. With pelleting costs reported around \$12 per ton, pellets become a better buy when hay prices are higher.

Bulk handling for ease in feeding and opportunity to feed a uniformly balanced ration without waste are additional advantages of pellets. The pellet ration may be tailored to order. There is less digestive disturbance and less trouble from bloat.

Pellets are compressed, making possible cheaper transportation. Baled hay averages 10 pounds per cubic foot, while pellets weigh 40 pounds per cubic foot.

Investigations of hay pelleting by Pendleton Grain Growers as a market for alfalfa indicate that savings in field chopping over bale harvest, bulk handling, and freight savings over bale shipment make possible delivery of hay in pellet form at no increase in price over delivery of baled hay.

There is a good possibility that pelleting may develop as an important market outlet for alfalfa hay with sales on the basis of analysis for protein, total digestible nutrients, and fiber.

Hay spoilage from weathering amounts to as much as 25 per cent loss or more. A roof over the hay pile is needed as much as any other production equipment. Hay growers pay for storage even when they do not have it.

Some areas are experimenting with protein tests in marketing alfalfa hay. One difficulty is obtaining representative samples from which to make protein tests. Protein in alfalfa hay is the main reason dairymen buy it. Average alfalfa hay runs about 14 per cent crude protein while stemmy hay may analyze below 12 per cent. Leafy fine stemmed alfalfa may analyze more than 16 per cent protein.

Leafiness and good green color

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