

depends on the amount of water available, but if it is under - man-hour per acre it is very good, or 1 to 2 man-hours per acre is fair to good. Over 2 man-hours per acre probably indicates too small a stream of water or poor efficiency in the irrigation system.

Every farmer should analyze his irrigation system on this or a similar basis and know the fact. If water is the limiting factor, it may be that either the corrugation or sprinkler method would have to be used in order to cover the land adequately and use labor efficiently.

Measure for Sprinkling

If a sprinkler system is to be installed it is very important to measure the water available throughout a season and determine the average flow and the minimum flow. When water is limited, the sprinkler design must be based on the amount available.

Another situation where water measurement is important occurs when water is to be pumped from a limited supply. The size of pump and power requirement will be determined by the amount of water to be pumped and the lift.

On many projects in Montana we have unnecessary ditches which parallel each other and which serve no definite purpose. In order to determine what the ditch loss is and what might be accomplished by rearrangement of ditches it is advisable to measure water at different places in the ditches on the farm. Certain sections of ditches may be losing water in large enough quantities to justify lining with bentonite or concrete. For this type of measurement, portable measuring devices are best adapted.

Measuring water is a relatively simple thing if properly installed structures are available. Plans for making water measuring structures can be obtained from county agents or by writing to the Montana State college, Bozeman, Mont.

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Seven Points For Growing Beans

WYOMING BEAN GROWERS will do well to watch seven factors in producing this year's crop.

Douglas W. Burke, assistant plant pathologist at the Big Horn Basin laboratory of the University of Wyoming, lists these pointers for the benefit of growers:

1. **Rotation.** This makes it possible to maintain soil fertility through plowing under alfalfa and clover crops. It also discourages the development and spread of soil-borne bean diseases.

2. **Good Seed.** In clean, fertile soil, good seed is a good combination to start with. Seed should be bright and plump, free of disease organisms, free of varietal mixtures, and have high germination. Certified seed meets these requirements.

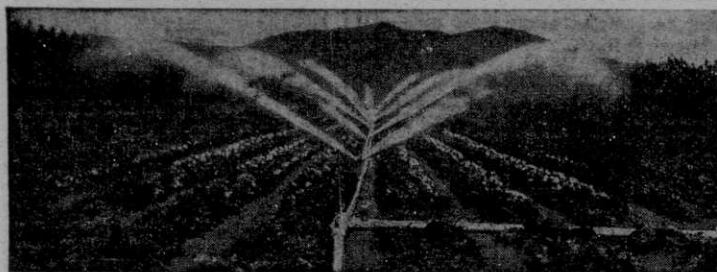
3. **Dusting with Sulphur.** Preventing rust development in Great Northern and Pintos is always good practices. At least one application of 20 to 25 pounds per acre should be made early in the season, when the plants are 8 to 10 inches high.

4. **Frequent, Light Irrigations.** These will reduce the leaching away of soil fertility and provide a generally more healthful environment for plant growth. Light irrigations will also aid in controlling soil-borne root rot and white mold.

5. **Early Varieties,** including the new Idaho Great Northern Nos. 16 and 31 and Pintos Nos. 78, 72 and 111. These should prove desirable for growing on fields with heavy infestations of root rot or white mold. Since these diseases generally cause greatest damage late in the season, these varieties, maturing 1 or 2 weeks earlier than commonly grown Great Northern, should escape some of the damage.

6. **Depth of Planting.** Plants from seed planted 2½ to 3 inches deep were much more severely damaged by root rot than those from seed planted 1 inch deep.

7. **Time of Planting.** Don't plant beans before soil is well warmed up.



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