

Spring Crops for Land on Which Fall Seedings Failed

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Oats is the surest spring-seeded small grain.

Missouri farmers frequently find themselves in need of spring crops that can be grown profitably in the utilization of land left idle because of adverse weather conditions in fall and winter. Each year a percentage of the intended fall seeding is not made, while a portion of the acreage actually seeded is abandoned for one reason or another. Normally the acreage involved is so small that it can be absorbed without serious difficulty, but in years of abnormally bad weather the idle acreage may be so large that good utilization of it the following spring presents an extremely serious problem.

The problem, of course, is to utilize this unexpected additional acreage in some spring crop which will at least give approximately the same returns as the intended fall use in terms of feed units or cash. The labor involved in this utilization must be in addition to the labor required for the acreage

normally intended for spring crops. Also any crop-acreage limitations there may be on the farm must be considered in determining final utilization.

Spring Oats

Oats is the best spring-seeded small grain crop in terms of yield per acre, feed units, or cash returns. This is indicated in the following data secured in four different sections of the state over a three-year period covering comparative yields of spring wheat, oats, barley, and rye. The spring oats yielded 39.1, the spring wheat 11.5, the spring barley 23.0, and the spring rye 13.7 bushels per acre. Oats has the further advantage of availability of good seed at home or at a reasonable price. An acreage materially larger than normal tends to pile up labor at planting and harvesting time, however, so some other crops need to be considered

Spring Wheat

Not more than two tenths of one per cent of the total wheat acreage in the state each year is seeded to spring wheat. This represents largely the seedings made by individuals who in the spring do not have their normal wheat acreage for one reason or another and resort to spring seeding in an endeavor to increase their cash wheat crop. This extremely small acreage year after year indicates rather clearly that those who seed spring wheat are not well satisfied with the results. The relatively poor performance of spring wheat in Missouri may be attributed, at least in part, to the fact that the cool season is nearly always too short for the full development of the grain, and spring wheat, because of its later maturity, is more often damaged by rust and insects such as chinch bugs, than is winter wheat.

In yield trials over a three-year period in northern and central Missouri, spring wheat averaged only 10.0 bushels per acre while winter wheat made 22.9 bushels. On this basis, spring wheat could not be expected to yield more than half as much as winter wheat. A yield this low could not be considered a practical use of land one year with another. The yield differential becomes even greater as the crop is grown farther south in the state.

Another consideration of great importance in most areas of the state is the fact that spring wheat is hard and would be very undesirable to millers when mixed with the good soft red winter wheats grown in the area.

If, in spite of these facts, it seems desirable to seed spring wheat under a given set of circumstances, either Thatcher or Marquis would probably be the best variety to use, the choice of one or the other being dependent upon the ease of securing seed. Thatcher is relatively the most rust resistant.

Spring Barley

The spring barley situation is very similar to that of spring wheat. The acreage is very, very small, and the same weather, insect, and disease hazards are involved. A yield comparison of three varieties of spring barley and Columbia oats was made during 1931-1934 at 14 locations in the northern half of the state. The average yield of spring barley was 27.1 bushels as compared to 57.2 bushels of oats per acre.

On the basis of their values for protein and total digestible nutrients, the barley produced 117.1 pounds of protein in 1033 pounds of total digestible nutrients per acre, while the oats produced 177.5 pounds protein in 1288.3 pounds of total digestible nutrients. Thus, in these trials oats produced 51% more protein and 24.5% more total digestible nutrients than did barley. The oats not only outyielded in bushels per acre, but also outfed and in most years could have been sold to purchase more corn or other feed than could be secured with spring wheat or barley. Again, as with wheat, this inferiority of spring barley becomes more pronounced the farther south in the state the crop is grown.

If spring barley is grown, however, it is probable that Trebi, Spartan, or Flynn would be the most desirable to use in the state. Missouri Early Beardless barley seeded early in the spring on good land and on a good seedbed can reasonably be expected to yield as well as the true spring barleys.

Winter wheat and winter rye should never be spring seeded under any circumstances likely to prevail on the average farm in Missouri.

In view of these facts, it seems advisable to use oats as first choice as a small grain crop for land on which a fall seeding was not made as intended or on which the crop was abandoned. The early seeded acreage, up to requirements on the farm, could be taken off for grain, the later seedings up to feed requirements could be cut for hay, and any remaining acreage, especially if sown on lespedeza sod or if lespedeza is seeded with the oats, could well be utilized for pasture.

If the acreage involved is large, however, it may be undesirable or impracticable, because of the labor factor in planting and harvesting, to put all such land into small grain. Therefore, it is well to consider crops whose times of seeding and harvest are different from those of small grains. Some crops which would tend to distribute labor, crop hazards, and income sources are flax, soybeans, and sorghums. Of course, the land could be utilized for corn if acreage restrictions, labor, and equipment are not limiting factors.

Flax

When the price of flax is attractive enough to overbalance, at least to a degree, the natural hazards in the growing of the crop, an acreage can be devoted to this use. Flax produces usually

from one-fifth to one-third the number of bushels that oats will under similar conditions.

Flax is so seriously damaged by weeds it is important that the field selected be relatively free from weed seeds. Fields previously in a cultivated crop such as corn or soybeans, where weeds have been brought under control, are usually best. On the whole, bottom lands should be avoided. Linota, Redwing, and Bison are probably the best varieties for Missouri conditions. Redwing is the earliest in maturity and might be best. Flax is an excellent nurse crop for legumes and grasses and should be so used if at all practical.

Soybeans

Soybeans for hay can be grown on almost any land if proper precautions are taken to control erosion, if the hay crop is removed early, and if the land is then seeded to a small grain cover crop. Soybeans for grain, however, should usually be confined to fertile soils not subject to erosion. However, when the price of beans is high enough to justify the extra precautions necessary to control erosion or to make profitable their production on the less fertile level lands, they can be utilized at least in emergencies. The decision as to whether to grow hay or grain will need to be made upon the basis of needs and probable income. One ton of soybean hay is equal in feeding value to approximately 20 bushels of corn. A yield of one ton per acre is about average.

Sorghums

Sorghums for grain, hay, or silage can utilize a portion of this land to advantage under certain conditions. The grain, hay, or silage may be used to replace corn which can then be sold as a cash crop.

Summary

Oats is the surest spring-seeded small grain and can be expected, one year with another, to produce more feed or sell for enough money to buy back more feed than will any other spring-seeded small grain.

Soybeans, on the fertile soils not subject to erosion, can be grown profitably under most circumstances; but soybeans for grain should not be grown on the poorer soils or on land subject to severe erosion, unless the price is high enough to make their production profitable and at the same time pay for the precautions necessary to control erosion.

Flax can be grown profitably on relatively weed-free land only when the price is high enough to offset in a degree the natural hazards in producing the crop.

Sorghums can be used on most lands, but should usually be limited to an acreage that can be utilized at home for grain, forage, or silage.

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