

Soybeans and Winter Barley In One-Year Rotation

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Agriculture in Missouri is and should be based upon a system of livestock utilization of the crops grown. Such a system, to operate efficiently over a long period of time, requires a dependable, economical supply of pasture, hay and grain in the order named. The pasture should be well distributed throughout the year and at least a portion of the hay produced must be a high-quality legume hay. All of this must be accomplished at the lowest possible cost in labor, materials, and soil fertility. In other words, any crop or cropping system must be evaluated in terms of its contribution to the livestock feeding problem and its costs figured in terms of labor, materials, and soil fertility over a period of years.

Soybeans properly handled offer one excellent means of supplying a large part of the legume hay needed on many farms. Unfortunately, however, the way the crop has been handled too frequently in the past has permitted undue erosion to take place and as a result the crop has a bad name so far as soil maintenance is concerned. If soybeans are cut early for hay and followed immediately with a small grain crop to effectively cover the land during the winter months, the soybean crop can be grown in a relatively soil-conserving way.

Winter barley properly managed in a normal season will furnish an abundance of fall pasture during October, November, and December if seeded in late August or early September. This pasturage comes at the close of the Korean lespedeza pasture season and at a time when bluegrass is just recovering from the summer dormant period.

In the southern two-thirds of the state, winter barley seeded on land which will grow 20 or more bushels of corn per acre and properly fertilized can be depended upon to produce a grain crop approximating corn over a period of years. This is in addition to the fall pasturage secured. In the northern one-third of the state, winter barley is not as dependable a grain crop as is corn but its value for fall pasture is as great as in Southern Missouri.

Soybeans and winter barley can be grown in a one-year rotation

successfully and will contribute legume hay, fall pasture, and spring pasture, or a spring grain, to the livestock feed requirements. These contributions are made at relatively low costs so far as labor, materials and soil fertility are concerned.

The winter barley following soybeans furnishes the winter cover so desirable to control erosion and the soybeans leave an almost perfect seed bed for the barley. The barley can be pastured out or cut for grain by June 1-15. The land can then be thoroughly disked or springtooth harrowed and drilled to soybeans. The beans can be cut for hay during the period of August 15 to September 1 and the land seeded to barley again with little or no seedbed preparation.

Missouri Early Beardless barley has an advantage in this rotation because of its early maturity. The barley should be seeded at the rate of 1½ to 2 bushels per acre as soon as the land can be prepared after the soybeans are removed for hay. Since a firm seed bed is essential for barley, care must be exercised not to work the soil too deep if any disking or harrowing is done. Unless the land will produce an average of 40 bushels of corn per acre over a period of years, 150-200 pounds of 20% superphosphate, or its equivalent, should be drilled with the barley.

Generally speaking, the Virginia soybean is the variety best adapted for use in this rotation, although the Wilson can be used on the most fertile lands. The Laredo is a good variety for South Missouri, but its late maturity is a serious handicap in this rotation. The soybeans should be drilled solid, preferably on the contour at the rate of 1 to 1½ bushels per acre. The beans should be cut for hay when the pods form on the top-most branches or tip of the main stem. In this rotation they should be cut for hay by September 1, regardless of maturity.

On any farm where soybeans are needed to produce legume hay or there is need for a fall pasture which can best be supplied by a small grain, the one-year rotation of soybeans and winter barley has a very definite place. The rotation can be depended upon to produce practically double the return from corn on all soils of medium or less than medium fertility. With careful attention to returning the manure, applications of lime and phosphate as needed, and contour planting where needed, the rotation can be followed continuously on the same land with a reasonable expectancy of soil fertility maintenance. Further, the rotation or combination can be easily worked into as long or as short a crop rotation system as may seem desirable on the farm.

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