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Lespedeza Is Here To Stay

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The legume Lespedeza has made a place for itself in southern Iowa by establishing a stand and providing excellent pasture on poor soils where other legumes and grasses have failed. Because of this, in almost any community of southern Iowa Lespedeza has come to stay on at least a few farms. Livestock have put their “O. K.” on its value by choosing to graze in those parts of the pasture where it has made its best growth.

Thus far its extensive use is limited to the more southern counties because it is an annual, and in order to maintain itself from year to year it must mature a seed crop. The seed, which shatter readily, carry over on the soil surface and provide a volunteer crop the following spring. The ordinary Korean Lespedeza, grown so extensively in Missouri and in other states to the south, requires a season a bit too long to be depended upon to mature its seed north of the southern part of Iowa.

We are convinced that Lespedeza will come to have great value, especially for pasture, over most of the southern half of Iowa. But this cannot come until earlier maturing strains become generally available. Early maturing, vigorous, disease-resistant strains have been found and the seed supply is being increased.

Different Kinds

There are several different kinds or varieties of Lespedeza. Success or failure may depend upon the use of the right variety or kind. Some are better suited to different conditions and localities than others.

Korean Lespedeza (Lespedeza stipulacea). The ordinary Korean Lespedeza is the one now generally available commercially in Iowa and other Corn Belt states. It is ideally suited to Missouri and southern Illinois. Missouri has about 8 million acres—almost as many acres of Lespedeza as Iowa has of corn. Lespedeza has revolutionized the agriculture of Missouri in the few years since it was first available.

It can be recommended only for the southern two or three tiers of Iowa counties. It may be grown with some success a little farther north, but in general seedings fail to maintain themselves because the season is too short for seed to mature.

Early Korean (19604). Early Korean Lespedeza may be expected to mature seed satisfactorily as far north as central Iowa. This is a selection from the Korean, tested through a period of years at Ames and at other state stations before it was released by the United States Department of Agriculture. Its seedlings make an early start in the spring and grow more vigorously than the ordinary Korean Lespedeza.

This is the only variety of Lespedeza of which seed is available and which can be recommended for seeding in Iowa north of the southern tiers of counties. Seed is generally available from Iowa seed houses and direct from growers under the name “Giant Lespedeza.” This name is somewhat misleading inasmuch as the plants are no larger than those of the ordinary Korean Lespedeza. It has been found to be susceptible to Lespedeza wilt which somewhat limits its usefulness.

Other Early Strains. The Iowa Station has been comparing and testing a rather large number of other early strains obtained in 1938. These can be expected to mature seed and carry over from year to year as far north as central Iowa. A number of these are as productive as the common Korean; they are early and disease-resistant. No seed of these strains is as yet available commercially.

A Legume Suited to Use With Bluegrass as Pasture Crop for Southern Iowa Thin Soils
Common Lespedeza (*Lespedeza striata*). Common lespedeza and Bermuda grass fill somewhat the same position in the far south that white Dutch clover and Kentucky bluegrass do in the Corn Belt. Accidentally introduced from eastern Asia sometime prior to 1850, this lespedeza is commonly called Jap clover. It is a different species from the Korean lespedeza. The Korean can be easily distinguished by the large, light colored stipules, borne in pairs at the base of each branch.

*Sericea* (*Lespedeza sericea*). There are many different kinds of lespedeza, all of them perennial except for the two named above, Korean lespedeza and Jap clover. A number of these are found growing in Iowa. Only one perennial species has come into commercial use—the *Sericea*. This lespedeza has been grown with considerable success in some of the states farther south, providing relatively large acre yields of high protein hay on acid, infertile soils. We have made a considerable number of trial plantings in different parts of Iowa but when cut repeatedly for hay, the plants are likely to winter-kill. When other forage is available, animals are likely to avoid it for pasture because of its high tannic acid content, making it somewhat unpalatable.

Greatest Value in Pasture

Korean lespedeza is making its greatest contribution in southern Iowa when seeded on thin, unproductive bluegrass pastures. Many southern Iowa pastures have become thin and weedy. Often little is obtained from them except for a brief period in the spring and late fall. Numerous unpalatable weeds completely take over in midsummer. Such pastures can be tremendously improved by seeding Korean lespedeza. This legume starts off slowly in the spring and early summer, but at this time bluegrass is at its best.

Lespedeza does not provide much pasture until late June or early July. Peak production comes during July and August when bluegrass is dormant. It continues until frost. Experienced stockmen emphatically state that livestock continue to make good gains throughout the summer when lespedeza is in the pasture, whereas on bluegrass alone animals are likely to lose weight. Lespedeza seems to provide an ideal complement for Kentucky bluegrass.

Lespedeza not only provides a palatable protein pasture, but, being a legume, it can utilize the free nitrogen of the air making this available to the grass growing with it. The result is that in the end the growth of the grass itself is markedly increased.

The value of lespedeza for erosion control is not too good because it is an annual and tap-rooted. It does have the ability, however, to become well established on thin, bare slopes, and in such a situation has proved of value in erosion control. The growth of lespedeza in good bluegrass sod may be rather insignificant, especially in the year it is seeded. It is seldom possible to maintain a good stand and growth of lespedeza in a thick grass sod. Under such conditions the seeding of lespedeza is not recommended. There are few pastures in southern Iowa, however, in which certain areas would not be greatly improved in production by the seeding of this legume.

Lespedeza, Small Grain

The use of small grains for pasture in southern Iowa with lespedeza appears to have considerable merit. The small grain provides...
pasture in the early part of the season when the growth of lespedeza is rather insignificant. The lespedeza takes over as the growth of the small grain diminishes. A small grain and a lespedeza crop are produced each year. The seedbed for the small grain is prepared by surface tillage rather than by plowing. Reseeding of lespedeza each year is not necessary. This cropping plan provides a soil cover throughout almost the entire year, plowing is avoided and the crop is produced at a minimum of expense. Growing lespedeza on the same land year after year results in an increased vigor of growth and yield, both of the lespedeza and the grain.

Lespedeza may be sown with winter rye, winter wheat, or oats. When sown with oats, sow as early in the spring as possible. Lespedeza is broadcast after the small grain has been seeded. The oats may be grazed, cut for hay when in the milk stage, or harvested for grain. When grazed, lespedeza comes into production in time to take over by the time the oats are gone.

Preparing the seedbed for oats following the lespedeza crop is important. The land should not be plowed as this will cover the lespedeza seed so deeply that a poor stand will result. Usually a double disk- and harrowing will provide a good seedbed for the oats and will leave the lespedeza seed near the surface to provide a thick volunteer stand.

If too much growth is left on the land in the fall and over the winter it may form such a mulch as to delay the drying of the soil until after normal seeding time for oats and until after the lespedeza seed begin to germinate. If trouble of this kind is anticipated late fall tillage may be helpful.

The continuous growing of Korean lespedeza and winter wheat or winter rye is another procedure used extensively in Missouri. After grazing or harvesting the winter grain the lespedeza comes on to provide pasture through the rest of the season. The rotation is started by seeding the lespedeza on the small grain very early in the spring, or preferably in the late winter. In order to allow for the full utilization of the lespedeza and the maturing of the lespedeza seed, the seeding of the winter grain the following fall is delayed. Because of the greater hardiness of winter rye it is preferable to winter wheat in Iowa.

Seeding and Management

When lespedeza seed is purchased it is well to insist on the hulled, or black seed, as this is more likely to be free of noxious weeds than seed sold in the hull. Lespedeza seed bought in the open market is likely to have been produced in Missouri or Tennessee where horsenettle and dodder are prevalent. Both of these are noxious weeds. The horsenettle is particularly troublesome in southern Iowa.

The law requires that all field seed be properly labeled as to germination and weed seed content. Always look for this information when purchasing seed.

Sow 20 pounds of lespedeza per acre to obtain a full stand. As little as 10 to 15 pounds per acre may be seeded when one is willing to wait a year for full returns. This appears to be poor economy.

We have found it exceedingly important to inoculate lespedeza in Iowa. Many seedings have failed because the seed was not inoculated.

Very early seeding is recommended, possibly late February or early March on permanent grass pastures or on winter grains. It is not necessary to disk or cultivate before seeding on grass pastures especially if the seeding is
made early. The seed is simply broadcast on the surface by any convenient method. The seed works into the surface by the freezing and thawing action, together with early spring rains. When seeded with oats, however, both crops should be seeded as early as the season permits. Lespedeza preferably should be broadcast after the oats have been seeded and covered. The use of the cultipacker or roller after seeding is always beneficial.

Korean lespedeza normally cannot be pastured so close that it is prevented from reseeding. Lespedeza should be grazed at nearly full capacity throughout the season. If a thick stand of lespedeza has been obtained and grazing is not begun until relatively late in the season the seed are likely to be consumed by the grazing animals with little or no reseeding.

When lespedeza is grown with bluegrass, close early grazing of the grass favors the establishment of the legume. This procedure weakens the bluegrass and favors the lespedeza. The lespedeza, in turn, by making nitrogen available to the grass stimulates its growth.

For Hay or Seed

It is doubtful whether lespedeza will have much value in Iowa for hay. We have other crops better suited to this use. When grown on rich bottomland soils with a thick stand, a yield of as much as 1 1/2 tons per acre may be obtained. It has about the same feeding value as alfalfa. But under these conditions red clover and alfalfa are likely to have considerably greater value.

A limited amount of lespedeza seed is harvested in Iowa. This consists largely of the early maturing variety called Early Korean, No. 19604, or Giant Lespedeza. The lespedeza seed crop should not be harvested until fully mature, usually after the first frost and the leaves have turned brown. The most common method of harvesting seed is with a combine. If a combine is not available it may be mowed and windrowed when the crop is tough from dew or the high humidity of night. A buncher or windrower attachment may be used, or if not available, the crop should be raked into bunches very soon after cutting. Great care must be exercised in handling the harvested material when dry to prevent loss of much of the seed from shattering.

After mowing and bunching, two or three bright sunny days will dry it enough for threshing. For this job either a combine or a grain separator may be used, making proper adjustments to reduce the air blast. It is better to reclean the seed than to lose much of it in threshing.

Lespedeza invariably is kept close grazed in pastures. This is Early Korean on an eroded, infertile south exposure which has been kept close grazed in spite of the fact that 100 acres of grass in this same pasture was standing half knee-high, practically refused by beef animals.

Soil Considerations

Lespedeza has its greatest value as a legume that will make a stand and can be grown and used extensively on thin, acid soils without the use of lime or fertilizers. When seeded on such soils, however, the best results are obtained if lime and fertilizers are used. Lespedeza makes its best growth on fertile, moist, bottomland soils, not acid in reaction. Under these conditions, however, it is believed that seeding one of the clovers usually will give a greater production than can be expected from lespedeza. When it is seeded on the less fertile, acid soils, growth the first year is likely to be relatively insignificant. The second year, the growth will be noticeably better, with full vigor and growth usually the third or fourth year.