Orchardgrass

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Purdue University
Agricultural Extension Service

ORCHARDGRASS

Agronomy Department

Orchardgrass (Dactylis glomerata L.) is a bunch-type, tall growing, long lived perennial. For years it has been grown in a few counties in southeastern Indiana for seed and hay, but mainly for pasture. It is growing in popularity in other parts of the state. It is winter hardy although not equal in this respect to timothy, brome or bluegrass. It grows late in the fall and starts early in the spring. Its chief advantages are: ease of establishment, rapid regrowth after grazing or clipping and tolerance of shade, heat and drought. It will make good stands on lower fertility and nitrogen levels than brome grass.

ADAPTATION: Except for very wet land, orchardgrass does well throughout the state. It makes its best growth at a good fertility level, but requires less nitrogen than brome. It excels other grasses in its ability to give a stand from spring seeding. In fall seeding, it should be well started before severe frosts, otherwise use timothy. It does well wherever alfalfa thrives, and particularly on sandy soils; it and brome are excellent companion crops with alfalfa.

ESTABLISHING A STAND: In the seedling and young growth stage, orchardgrass is subject to stand damage from low temperatures, especially when fall seeded. It may be seeded with alfalfa in late summer or with early September seedings of winter barley, rye or fly resistant wheat. Band seeding is very helpful. In southern Indiana, the seed has often been broadcast on frozen ground in wheat in February with good results. In northern Indiana, it is best to seed only in the spring, alone or with oats. Seed about 15 pounds of seed per acre, or if mixed with other grasses or legumes, use from 4 to 6 pounds.

USES AS HAY, SILAGE AND PASTURE AND IN MIXTURES: Orchardgrass is used principally as pasture in mixture with legumes and sometimes other grasses. There should be at least 50 percent orchardgrass to reduce bloat hazard. Alfalfa, with favorable soil conditions, or Ladino, or a combination of alfalfa and Ladino are excellent companion legumes which provide the grass with nitrogen for greater total production. Orchardgrass--Ladino or alfalfa mixtures, make good combinations for grass silage. Orchardgrass has not been used as much with alfalfa for hay as have timothy and brome. Unless cut early, the grass may become too mature and rather coarse. By cutting just before the tenth bloom stage of the alfalfa, its vigor may be maintained by delaying the second cutting until after 10th bloom stage. Orchardgrass has a distinct advantage over timothy with
alfalfa in regrowth for hay or pasture.

On southeastern Indiana rolling land, orchard grass and Korean lespedeza sown together have been a desirable pasture mixture. The grass starts early in the spring, and lespedeza in early summer. The early fall growth of lespedeza is highly regarded for fattening cattle. Bloat on lespedeza has never been reported. If not pastured too close in the fall, dormant residue has been used for winter sheep grazing. Only with heavy fertilization and high nitrogen or with growth allowed to get too tall is orchard grass likely to be too competitive for the survival of lespedeza or other legumes in the pasture mixture.

**Fertilizer and Lime:** Orchardgrass is more tolerant of acidity than timothy, brome or Kentucky bluegrass but will respond to the lime needed for any companion legume. The need for lime and fertilizer for mixed seedings with the legume can be determined by soil tests. Without tests, 300 to 400 pounds of 0-20-20 per acre in alternate years are recommended. When seeded with small grain, the normal fertilization of the grain crop is sufficient for good establishment of the grass. Some farmers apply nitrogen in late winter on stands predominately grass to obtain earlier grazing and increase production.

**Seed Production:** For good orchardgrass seed production, nitrogen should be applied in late September prior to the harvest season at the rate of 40 to 80 pounds of nitrogen per acre, in addition to an adequate supply of phosphate and potash.

**Grazing Management:** Fall sown orchardgrass should not be grazed in the spring until it makes a growth of 4 to 6 inches. Spring seedings should not be closely grazed the first year.

Grazing, after the first year, should start as vigorous growth develops in the spring and continued throughout the summer. *Moderately heavy grazing is necessary during this period to maintain high quality of the early grass and reduce its competition with the early growth of the legume.* Orchardgrass is more competitive early than timothy or bromegrass. If livestock is unable to cope with the growth of the grass, it should be clipped before too much has headed, as the mature stalks are coarse and unpalatable. The aftermath of a hay crop makes very good leafy grazing. Orchardgrass makes good early fall pasture. It is superior to timothy, or red top in its ability to make new growth under moderate drought conditions. But continued close grazing under prolonged heat and drought conditions has caused almost total loss of some stands in southern Indiana. Wherever possible, practice rotational grazing and allow new growth to develop to maintain strong root reserves. Heavy grazing during October and November may seriously weaken later growth by depleting root reserves.

Experiments were conducted on the Miller-Purdue farm in Grant County, comparing beef production on alfalfa-orchard, alfalfa-tall fescue and alfalfa-bromegrass pastures. Early season gains on the orchard grass-alfalfa mixtures were poor. Gains for the season, however, almost equaled those from brome-alfalfa, and were better than total gains on fescue-alfalfa.

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