

An Overview Of Cool-Season Forages In Ohio

From Ohio State University Extension Sources

The forage industry plays a major role in Ohio agriculture. Following are some considerations regarding forage production in Ohio including an overview of cool-season varieties.

Pure Stands Versus Mixtures

The decision to establish a pure stand or a mixture of two or more species should be made before deciding which species to plant. Advantages of pure grass or legume stands are: simpler management, more herbicide options, and greater forage quality potential. Pure legume stands decline in forage quality more slowly with advancing maturity than grasses, providing a wider window of opportunity for harvesting good quality forage.

Legume-grass mixtures are common in Ohio and have the potential to exploit the relative strengths of grasses and legumes. Grass-legume mixtures are often higher yielding and have more uniform seasonal production. Including legumes in a mixture reduces the need for nitrogen fertilizer, improves forage quality, and reduces the potential for nitrate poisoning and grass tetany compared with pure grass stands.

Including grasses in a mixture usually lengthens the usable life of a stand because they persist longer and are more tolerant of mismanagement than legumes. Grasses also reduce the incidence of bloat, improve hay drying, are usually more tolerant of lower fertility, and are

stronger competitors with weeds than legumes. The fibrous root system of grasses helps reduce erosion on steep slopes and reduces legume heaving. Growing grasses and legumes together often reduces the losses from insect and disease pests. Mixtures are generally more satisfactory for pastures than pure grass or pure legume stands.

For hayland seedings, keep mixtures simple. Seldom are more than four to five species needed in a hayland seeding. Prepackaged "shotgun mixtures" of many grasses and legumes usually have no advantage over simpler mixtures carefully designed by the producer to match specific grasses and legumes to the soil, climate, and management conditions on the farm.

Cool-Season Forages

- Alfalfa is grown on about one-half of the total hay acres in Ohio. Where adapted, it is unmatched by any other forage as a feed for livestock, as a cash crop, and as an energy-efficient crop. Alfalfa requires deep, well-drained, fertile soils with near-neutral pH (6.5-7.0) for greatest production and persistence. Alfalfa has good seedling vigor, excellent drought tolerance, and produces good summer growth. Alfalfa is prone to damage by the alfalfa weevil and potato leafhopper.

To capitalize on alfalfa's potential, select high-yielding alfalfa varieties with resistance to problem diseases. Yield testing of alfalfa varieties is conducted by The Ohio State University and results are available at county offices of Ohio State University Extension.

- Red clover is a short-

lived perennial legume grown for hay, silage, pasture, and as a green manure crop. Red clover is better adapted than alfalfa to soils that are somewhat poorly drained and slightly acidic; however, greatest production occurs on well-drained soils with high water-holding capacity and pH above 6.0. Red clover is not as productive as alfalfa in the summer. Red clover is one of the easiest legumes to establish using no-till interseeding or frost-seeding techniques. Under Ohio weather conditions, red clover is often difficult to dry quickly enough for safe hay baling. Harvesting it for silage or including a grass in the stand helps overcome this problem.

Medium red clover varieties can be harvested three to four times per year. Mammoth red clover is late to flower and is considered a single cut clover because the majority of its growth is produced in the spring. Most of the improved varieties are medium types and have good levels of disease resistance to northern and southern an-

thraxnose and powdery mildew. These and other diseases can reduce stands quickly.

- Birdsfoot trefoil is a deep-rooted perennial legume that produces well in long-lay stands, especially in northern Ohio. More than other forage legumes, birdsfoot trefoil is tolerant of low-pH soils (as low as pH 5.0), moderate to somewhat poor soil drainage, marginal fertility, and fragipans. Birdsfoot trefoil can withstand several weeks of flooding, and tolerates periods of moderate drought and heat. Birdsfoot trefoil seedlings develop slowly, and early spring seedings are generally more successful than late summer seedings. Birdsfoot trefoil is subject to invasion by weeds when grown in pure stands; therefore, it is best seeded with a grass companion. It produces excellent quality forage, has fair palatability, stockpiles well, and is non-bloating. Birdsfoot trefoil should be managed to allow for reseeding, which will help maintain its presence in forage stands.

Empire-type varieties have prostrate growth and fine stems, making them well suited to grazing. European-type varieties are more erect, establish faster, and regrow faster after harvest. Thus, they are well suited to hay production and rotational grazing. Most of the newer varieties are intermediate with semi-erect to erect growth habit.

- White clover is a low-growing, short-lived perennial legume that is well suited for pastures. White clover improves forage quality of grass pastures and reduces the need for nitrogen fertilizer. White clover can be frost seeded or no-till seeded into existing grass pastures. White clover has a shallow root system, and does not tolerate prolonged dry spells. Although well-drained soils improve production, white clover tolerates periods of poor drainage.

Large white clover types, also known as Ladino clovers, are more productive than the White Dutch or "wild white" clovers. Wild

(Turn to Page 25)

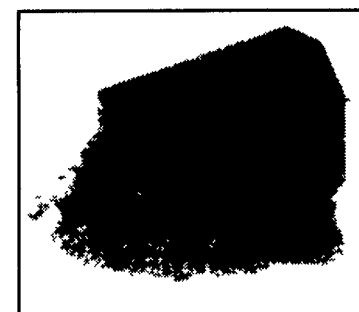


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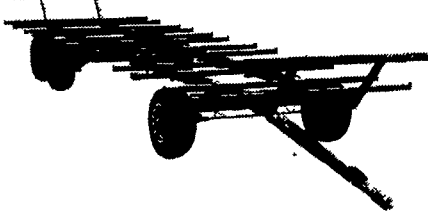
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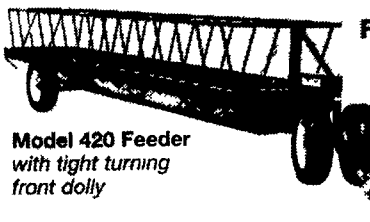


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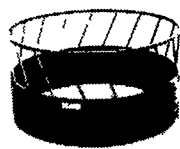
Model 818WS
All steel bedframe w/ wood flooring, shown



Feeders

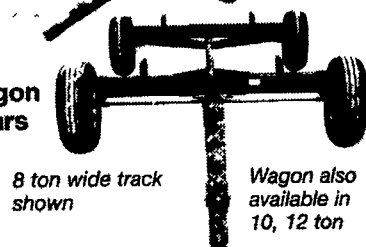


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