

ALFALFA HAY ESTABLISHMENT

A common question at the Extension office in recent weeks has to do with the feasibility of planting new alfalfa. While spring seeding is most common in this valley, mid-summer and late-season seedings have proven to be successful also. The window of opportunity for successful late summer alfalfa seedings usually ends about mid August, however.

Adequate soil moisture is the major consideration when planting alfalfa late in the growing season. Successful growers will monitor soil moisture carefully during the establishment period, and apply irrigation water as needed, as new plants must obtain sufficient growth before a killing frost. Alfalfa needs at least 6 weeks growth after germination to survive the winter. Agronomists teach that new alfalfa plants will generally survive winter if a crown is developed before killing frost. The crown allows the plant to store root reserves for winter survival and spring regrowth.

A preplant herbicide is often not needed for light weed infestations because annual weeds will be killed by frost. Postemergence herbicides can be used if severe weed pressure appears. Minimizing competition from volunteer small grains or perennial weeds is critical to ensure the success of new seedings. Failure to do so cuts seedling establishment and always lowers future yields.

Field preparation has forever been an important factor, but it is becoming increasingly necessary because of faster methods of harvest. Rotary swathers and large balers allow growers to move through the fields at a faster rate of speed. Often, speed is limited by the rough conditions of hastily prepared seedbeds, and rough fields are hard on equipment. Seed germination is also enhanced in a firm, smooth, clod-free seedbed. Overworking the soil is problematic, as rainfall following seeding may crust the surface, preventing seed emergence.

Roughly 300 alfalfa varieties are commercially available within North America. Most of these are listed in an annual bulletin from the National Alfalfa Alliance (www.alfalfa.org) that rates fall dormancy, winter hardiness, pest resistance levels and lists seed marketers. Descriptive information for these newer varieties, as well as for older ones, is available on the North America Alfalfa Improvement Conference (NAAIC) website (www.naaic.org). Fortunately, we have lots of productive varieties to choose from.

Fall dormancy (FD) is a method for classifying alfalfa varieties on the basis of differences in growth response to decreasing day lengths and temperatures following a September 1 cutting. FD scores range from 1 (extremely fall dormant) to 11 (extremely non-dormant). Less dormant types generally exhibit faster recovery following cutting and higher total season yields than more dormant types. We generally recommend Cache Valley growers select varieties with a FD score of 3 to 5.

In the past, FD was interpreted as an index of winter hardiness and survival. Relationships between FD and winter hardiness appear to be weaker in modern varieties. As such, separate winter survival ratings are provided by many breeding and variety testing programs. Winter survival is currently rated on a scale of 1 (no injury) to 6 (dead plants).

Alfalfa breeders have dramatically improved the ability of plants to resist pests and disease. Common alfalfa diseases and pests in Utah, for which resistant varieties are available include, bacterial wilt, Verticillium wilt, Phytophthora root rot, nematodes and aphids. Disease resistance is not immunity, and resistant plants can become infected under severe disease pressure. Only a portion of the individual plants in a population may be resistant to diseases that the variety is rated for. Disease and pest resistance profiles are provided on the National Alfalfa Alliance and NAAIC websites.

Utah trial summaries may be accessed via the USU Extension website (www.extension.usu.edu), and results of trials in adjacent states may be reviewed from the NAAIC website. In comparing rankings of alfalfa varieties in any trial, be aware that your location may have different pest, disease, and environmental conditions than trial locations. It is also well to remember that first-year production data are often more variable than subsequent years.