The value of a sodded loafing area for dairy cows is being attested to by dairy scientists and dairy herd managers alike. The many benefits include 1) easier heat detection, 2) a possibility of less trouble from common diseases because of disease dilution in space, 3) a decrease in foot problems, and 4) the distribution of manure on the grass rather than in the feedlot where it must be handled mechanically.

The area of the concrete lot can be decreased to minimum size when grass paddocks are available for occasional use. For instance, the recommended concrete lot area for complete confinement is 110 sq. ft. per cow, but it can be reduced to 60 sq. ft. when paddocks are designed into the system.

Location
Grass loafing paddocks should be adjacent to the feed lot so cows can walk directly from the concrete onto the grass as shown in Figure 1. It takes preplanning and engineering of the facility to achieve this. The type land to be used for grass paddocks can vary from Class II to VI. Normally this type land rolls enough to drain well. This also allows many farmers to put acres of otherwise low-productive crop land to valuable use.

Area
The amount of grass area allowed per cow should vary, depending on land quality, fertility practices, slope, drought potential, the frequency and intensity of use, etc. The smaller the area, the more critical maintenance and management become. A 50-cow herd on class III to class VI land would normally need ten to twelve total acres. The area should be divided into at least three plots for rotation. Normally, the herd should have access to each one of the subdivided plots for about a week. However, this period may vary, depending on rainfall and regrowth.

Controlled Use
The main management responsibility for successful use of grass loafing paddocks is control of the time of use. Selecting the time when cows may be allowed to leave the concrete and go to grass paddocks is the responsibility of the dairy herdsman. Cows should not be allowed to use sodded areas when the sod is easily damaged. This would be during times of high rainfall and during a thawing period. Sodded areas can, of course, be used when they are dry or frozen.

Zones of Maintenance
One of the biggest problems in managing grass loafing paddocks is the variation in intensity of use around the concrete. As can be noted by Figure 2, there will be a high maintenance zone caused by concentrated walking, usually within a few feet of the edge of the concrete lot. This will usually extend out about 50 yards. This area will probably need reseeding at least once and sometimes twice each year.
Figure 2. This diagram shows the areas of the grass paddock that require differing amounts of maintenance.

A little beyond, from 50 to 150 yards out, is a medium maintenance zone where there will be slightly less wear. This zone will probably need reseeding once each year. A large part of the paddock will be in the third, normal maintenance area. The main maintenance activity for this outer area is regular clipping to prevent dormancy, weed control and correct fertilization. Manure in the paddock should be mechanically scattered, either by spike tooth or chain-link harrow, three to five times each year depending on buildup and animal concentration.

**Enticed Zone Usage**

Cows can be enticed to move to the outer reaches of the paddock in several ways. Some hay may be fed on the ground, and grain in very limited amounts, or minerals, can also be fed in portable feeders. Drinking water may be located at the outer edges of the paddock to encourage cows to move further out during warm weather.

**Establishment**

The establishment of a sod cover in a paddock will take four to six months before the area can be used by cows. Late August to mid September is preferable for seeding. Seeding may also be done in late February or in March, but rates should be increased 20-30% for safety. The soil should be tested to be sure that the pH, phosphorus, and potassium levels will not limit growth. Nitrogen should be applied at the rate of 30-60 pounds per acre just prior to seeding. Tall fescue at 120 to 160 pounds per acre is the best bet for most seeding conditions. Kentucky Bluegrass at 80 pounds per acre will do quite well in the Inner and Outer Bluegrass Regions of Kentucky.

Normal renovation practices may be used on areas that already have some grass in them. After the seedbed has been prepared, the seed may be broadcast and mechanically worked in to a depth of about 1/4 to 3/4 inch with a spike tooth, chain link harrow or cutting harrow. In some cases the cows can tread the seed into the sod. When doing this, the seeding rate must be increased by 20 to 30 percent over conventional seeding.

After the sod has been established it must be managed as carefully as a high producing corn or alfalfa crop, a football field, or a lawn. Routine dressing with needed fertilizer is imperative. Use nitrogen, phosphorus, potash and limestone at liberal rates as needed to stimulate top and root growth.

Grass loafing paddocks are a valuable asset to other physical dairy facilities and should be engineered into the overall milking center system. In the Kentucky climate, well-established grass paddocks can be used for a loafing area and the construction of more costly resting barns can be delayed or kept to a minimum.

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