



Fig. 36.—Prairie grass is a good producing grass, and is suited to rich, warm country.

[S. H. Saxby, photo.]

Summarised, the position of ryegrass in our pastures is as follows:—

**Ryegrass may be profitably sown on a wide range of country provided that the clovers form a good proportion of the sward. Where vigorous clovers can be grown, so can perennial ryegrass be grown.**

Perennial ryegrass is distinguished from Italian ryegrass in the vegetative state by the fact that the leaf shoot is folded and not rolled as in Italian ryegrass. The ligule is small and the ears, although variable, are seldom as large as in Italian ryegrass. In the flower heads they may be readily distinguished by the presence or absence of awns. Awns are frequently known as "whiskers" or "tails," and are pointed extensions of what is commonly regarded as the seed. These are well developed in Italian ryegrass, and absent in perennial ryegrass. In some of the poorer types of ryegrass a small number of poorly-developed awns may be found on some parts of the seed head.

### Italian Ryegrass

**Italian Ryegrass** (*Lolium multiflorum*) is the most useful and the highest producing of our short-lived grasses. Its habitat range is similar to that of perennial ryegrass, although it will not thrive under such hard conditions. For its maximum development a deep, rich, and well-drained soil is required. Like perennial ryegrass, it becomes very

low in production when at all waterlogged or when the supply of nitrogen is low.

The nitrogen essential for the growth of Italian ryegrass is, in the first instance, generally made available by the various operations of cultivation, but after six months or so this is frequently all used, and unless a further supply is available production of vigorous herbage ceases. This nitrogen may be best supplied through clovers, such as white clover, red clover, or subterranean clover.

Red clover, because of its rapid establishment and good, high-yielding hay qualities, is usually associated with Italian ryegrass, but provided a good establishment is secured white clover is quite satisfactory. Where Italian ryegrass is being grown on subterranean clover country a considerable degree of success may be secured by drilling in the Italian ryegrass on an established subterranean clover pasture in the early autumn.



Fig. 37.—*Paspalum dilatatum* thrives in districts experiencing a warm summer and a fairly high rainfall. Most of its leaf-production is during the summer and autumn.

[S. H. Saxby, photo.]

### Further Value

Although Italian ryegrass is used chiefly as the main ingredient in temporary pasture mixtures, it is also valuable as an additional species in a general pasture mixture, when the addition of 5 lb. per acre will provide earlier feed than a mixture without Italian ryegrass. Up to 10 lb. per acre may be sown, but care should be

taken that the pasture is fed off sufficiently early to prevent smothering of the slower-establishing grasses and clovers.

When sowing pastures from which it is intended to harvest perennial ryegrass seed, Italian ryegrass should not be sown, as the practice of sowing and harvesting the two together has been responsible for the deterioration in type of much of the South Island perennial ryegrass.

The identification of this grass is discussed under perennial ryegrass, where the differences between the two are pointed out. The main difference is in the rounded sheath and the rolled leaf shoot of the Italian ryegrass.

### Questionable Value

**Western Wolths Ryegrass** is a variety of Italian ryegrass and was originated in Holland. Its useful life is restricted to one year at the most, and on this account its value, even for temporary pastures, is very questionable.

Up to the time of its first grazing it will produce more feed than Italian ryegrass, but after this its production becomes less and less in comparison.

There is no way of distinguishing western wolths from Italian ryegrass unless the two are growing side by side. The seeds are also indistinguishable, and the length of the awns on various samples indicates nothing. When the awns have been removed by hard threshing or dressing it is not possible to decide whether the seed is perennial, Italian, or western wolths ryegrass. Consequently, this has resulted in all three grasses being unconsciously sold and harvested under any one of the three names, the ultimate naming of the line of seed depending not on the type of plant but on the size and frequency of occurrence of awned seed.

### No Guarantee

The result of this has been that many lines of, say, Italian ryegrass contain

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