ADAPTATION OF VARIOUS CROPS FOR SUPPLEMENTARY PASTURE

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One of the most difficult problems that the Rhode Island dairy farmer has to meet is the providing of sufficient pasturage for his milking herd. Improving permanent pastures by applying commercial fertilizers and lime provides only a partial solution. There are still many weeks during the summer and early fall months when the permanent pasture fails to provide sufficient grazing. The fertilizers applied often build up a surplus when the natural peak in pasture production occurs but still leave a shortage for the remainder of the season.

Many of the most successful dairymen in the state are using a regular system of growing supplementary pasture crops in order to provide additional grazing during the season of short permanent pasture. Rye and vetch, Japanese millet, oats and vetch, sudan grass, and soybeans are among the crops commonly used. There are a number of questions often raised as to the best way of growing such crops for pasture purposes. Among these questions are (a) When should each be planted in order to furnish grazing for certain periods? (b) How much feed will be produced and over what period of time? (c) What is the relative value of different crops for grazing purposes?

Little experimental data are available to answer these questions. Most of the experimental work with pastures has been done with permanent types. Woodward and Graves have pointed out that the great variation in carrying capacity of pastures during the season makes it necessary to plan for supplementary pasture crops in order to maintain sufficient grazing. Sudan grass, sweet clover, and soybeans are suggested as possibilities. The authors estimate that a 1,000-pound cow producing 25 pounds of 4% milk will need from 100 to 150 pounds of green grass daily to maintain production. Much depends on the kind and quality of green grass available.

Graves, et al., compared the feeding value of pasture grasses when grazed, when fed green, and when fed as hay or silage. Immature grass was found much superior to mature when fed in any of these ways. There was some indication that grass silage was more stimulating to milk flow than grass hay. A system of livestock farming is suggested where most of the land will be in permanent grass and any surplus not used for grazing may be utilized for hay or silage. This surplus may be used either for supplementing the pasture when grazing is short or for feeding during that part of the year when grazing is not available.

Ahlgren, Briggs, and Graber recommend winter rye, oats, sudan grass, and millet, among others, as crops suitable for supplementary