EFFECT OF FERTILIZERS ON MAINTAINING STANDS OF ALFALFA

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INTRODUCTION

In regions where alfalfa does not thrive unless strict attention is paid to several limiting factors, the problem of maintaining good stands for more than two or three years is an important one. Regardless of whether a long rotation, including several successive years of hay, is an economically sound practice, the fact remains that in the northeastern United States this type of rotation—or lack of rotation—is commonly followed. When a farmer finds that his alfalfa field is growing mostly grasses or weeds the second or third year after he has spent considerable time and money to secure a stand of this valuable legume, he is apt to conclude that some other crop is more suitable for his conditions. Therefore, if the present campaigns to replace grass with alfalfa are to be successful, everything that will help growers to maintain good stands of alfalfa for five or more years should be considered carefully.

In New England it is usually necessary to have a fertile soil, lime liberally, and inoculate thoroughly to secure stands of alfalfa that will go into the first winter in thrifty condition. To enable the alfalfa to withstand severe winter weather several practices have been recommended. The use of seed from hardy northern-grown strains has been advocated so widely that it need only be mentioned here. In recent years the results from several well-conducted experiments have demonstrated that cutting when the alfalfa approaches full bloom and the removal of not more than two crops per year reduces the amount of winter-killing appreciably. It has been proved that this is due to the large supply of reserve food which the growing alfalfa stores in its roots as it approaches maturity. Frequent cuttings drain these reserve food supplies and reduce the plant’s resistance to adverse conditions. Top-dressing with manure or straw in the fall has been recommended and is, no doubt, a good practice if a sufficient supply of these materials is available. Good surface drainage is also a prime requisite. However, when all of the above-mentioned conditions are favorable, failures to maintain good stands of alfalfa are found. That this may be due to improper or inadequate

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