



Alfalfa on Acid Seils

W. W. Weir, Missouri

Red clover, and especially alfalfa, unless grown on a very fertile soil, do not make their best growth under pronounced acid conditions. Very frequently alfalfa fails absolutely in requestly affait fails absolutely in spite of the fact that sufficient moist-ure may have been present. In such cases it usually happens that there are two soil problems with which to contend: Soil acidity and soil inoculation. Liming will correct the acidity, but it cannot inoculate. Liming should always precede inoculation so as to provide conditions more favor-able for the bacteria which must be added to the soil through inoculation. It would be a difficult task for a

farmer living in an acid section to lime and inoculate all his land if he wishes to grow alfalfa in rotation with his other crops. Under such condi-tions alfalfa should be grown outside of the regular rotation, A field hav-ing other conditions favorable should be selected to grow the alfalfa. This field should be specially prepared in the way of liming, fertilization, and inoculation before the alfalfa is seeded, and be allowed to grow alfalfa as long as a profitable yield can be har-vested. Continuous cropping in this way would necessitate subsequent treatments with manure or other soluble fertilizers as top dressings to return to the soil the mineral ele-ments removed in the hay.

Fertilizer for Wheat

Partilizer for Wheat The states which I would be an end of the states which I would be an end of the states of the

It is generally considered that by the time the plant is in full blossom it has gathered nearly all of its plant food constituents, with the exception of the carbonates. If this be true, the most profitable time to plow down clover would be after it has reached full blossom.

Wheat does not need heavy applicawheat of manures or fertilizers, but, owing to the season of the year at which it makes most of its growth, it seems to be more in need of nitrogen than anything else. This is due to the fact that the fall and spring rains the fact that the fall and spring rains leach the nitrates from the soil to such an extent that growth is some-times hampered in the spring for want of these nitrates. It is, conse-quently, not due to the large amount of nitrogen taken up by the wheat, its growth in the early season after the soil has been leached and before nitrification has taken place readily in nitrification has taken place readily in the spring.

the spring. Forty bushels of wheat will take from the soil approximately 45 pounds of nitrogen, 18% pounds of potssh, and 19 pounds of phosphoric acid. This is in the grain alone. Whether it will be necessary for you to apply fertilize with nitrogen after them. a fertilizer with nitrogen after plow-ing down clover will depend a great deal upon the condition of the soil

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extremely doubtful if it will pay to add any mixed fertilizer. Occasion ally in the spring when backward weather is experienced, it may pay to apply a readily soluble ni rogenous fertilizer, such as nitrate of soda This will supply the constituent which the plant is possibly in the most need of at that time of the year and has given wonderfully good results, With given wonderrung good results, win regard to the best kind of fertiline to use on the farm, nothing can take the place of farmyard manure, and artificial fertilizers of any kind should only be used as a supplement to the farmyard manure. many reasons for this which we can-not go into at this time.

Clover tops are possibly as rich as the roots in plant food. As to whe ther it will pay to mow for seed de-pends upon the filling of the heads, If there is an abundance of seed in the head I certainly would cut fa seed and plow sod under.

You say how is it that in using fer, tilizer on oats or barley you do no get any larger crop from 500 pound than you do from 200 pounds? may have been true in an isola case, but it probably would not true in all cases. In the first pyou do not say what kind of a tilizer is used or anything about soil on which it was applied, s thing can be made of this state I would say, however, that oats a barley are, like wheat, a compan-tively light feeder, and I am w doubtful if it pays to apply com cial fertilizers to these crops. would be a much better practice apply these to the hoed crops allow the grain crops to look the residues from that crop. W it will pay to use fertilizers on t clay soil or on any kind of soil d pends so much upon circumstan that I cannot answer this question general. There doubtless are no bers of cases where fertilizers given remunerative results, but as whether it will pay depends so m upon so many different condi-that each man must work this blem out for himself.—Prof. H. court, O.A.C., Guelph. Ont.

Profits or Permanence

A. J. Vance, Essex Co., Ont. Essex county is, I believe, laya, tile drains at a greater rate than a other county in Ontario. I recent heard one farmer explain why he i vested so much money in tile du and the explanation is so good pass it on. It was given in re to an inquiry by a visiting agn turist who had heard of our in drainage operations. Said the la mer: "It is just our method of it vesting the surplus."

He then went on to explain that had noticed that large business fi have a habit of laying aside par their earnings each year to be vested entirely apart from the b ness as a "surplus" fund. W business is slack and orders at coming in the surplus fund serve carry the business over until the pression clears away. This fan pression clears away. This is views his tile drains in the natured "surplus" investment. Did he se all of his income as it came to h all of his income as it came to a hard times would find him "in hole," as he put it. As it is, he is improving his farm that the a earnings of an improved farm will sure to him a living income at a in the hardest season. He as with our former Minister of Age He ag ture, Nelson Monteith, that it ter to "put his money in a clay a than in a town bank." This st me as being a very well-reasoned planation of why Essex farmers afford to invest their surplus is

drains.



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