Wisconsin may hope to accomplish along this line what it already has done in life insurance, railway regulation and the like, and be the first to blaze the way for a national solution of this problem. If by this investigation we can in some small measure aid in the decrease of the great fire waste; if we can suggest a more equitable distribution of the fire insurance tax; if we can lessen the tragedies of the Iroquois theater, the Collingwood school and the Asch factory, then the insurance companies, the state, the legislature and its committee will not have labored in vain.

FARM MANAGEMENT PROBLEMS

By J. C. McDOWELL, Agriculturist, U. S. Department of Agriculture.

Wisconsin, Michigan and Minnesota contain large areas of very sandy soils. Much of this land was originally covered with scrub oak and jack pine. Such land is easily cleared and can be brought under cultivation quickly and at little expense. Most experienced farmers, however, prefer to settle on the heavier types of soil, because the heavier soils are naturally much more productive.

Large sections of the sandiest land in Michigan and Wisconsin are now being advertised by real estate firms and seem to be meeting with a ready sale to city people. The prices for such land appear to range all the way from $1 to $20 per acre, regardless of the quality of the soil or its location. Inexperienced purchasers frequently pay as high as $20 per acre for the wild jack pine and scrub oak sandy soils, when adjoining pieces of the same kind of soil and as well situated can be purchased for $1 per acre. They seem to have the idea that any land located in Michigan or Wisconsin must certainly be cheap at $20 per acre. They forget that there is a possibility that some soils even in these favored states may be dear at any price.

The true value of farm land depends upon its ability to produce, and the market value of these products. Land that will not produce enough to pay for the labor has no agricultural value. Lands that produce much in excess of the cost of labor have an exceedingly high value. In order that the purchase of land may be a good investment it is necessary that such land produce enough to pay good wages and at least a fair interest on the investment. Land that costs $125 per acre must earn at least $5 more each year than land purchased at $25 per acre, in order to net the owner 5 per cent on the additional investment. No one should lose sight of this important fact when purchasing lands of any kind and in any location.

It is not the purpose of this article to discourage the purchase and development of our sandy lands, but rather to encourage their purchase at a reasonable price and their development along right lines. The sandy lands are low in plant food, their water holding capacity is not high, they are frequently acid, and they require much more skillful handling than do the medium loam and heavier soils. During the past four years our department has made a careful study of the systems of farming as practiced by the best farmers now living on the sandy soils of our northern states. We do not claim to have solved these problems in full, but their solution does not seem to be impossible.

One thing is certain: The systems
of farming commonly practiced on the heavier types of soil must prove an absolute failure when tried in the sandy districts. The sale of hay or grain from the sandy soils must not be considered unless the owner is so situated that he can buy plant food and organic matter at a low price to replace what was used by the products sold from the farm. The humus content of sandy soils must be maintained. Sandy soils that are high in humus are supplied not only with plant food, but the humus greatly increases their moisture holding capacity. In order that the nitrogen gathering plants may do well on the sandy soils it is necessary that these soils should not contain an excess of acid. If the litmus paper test indicates that the soils are sour, enough ground limestone or marl should be added to correct the acidity. As sandy soils are open and porous, they are subject to much loss of fertility through leaching. To prevent this loss something should be kept growing on these soils throughout the entire growing season. Because weeds rob the soil of plant food and moisture, the farmer on our sandy soils should be especially careful to keep his fields clean of weeds. Our sandy soils seldom have moisture to spare, and never under any circumstances do they have an excess of plant food.

In deciding what crops to grow on our sandy lands we must select those that will grow on such soils, and those that can be used in such a way as to maintain permanently the fertility of the soils. Care should be taken to sell from these farms only high priced products. The sale of clover seed, vetch seed, butter and cream is to be recommended, because their price is high, and a dollar's worth of any one of these products takes very little plant food from the soil.

Among the crops that may be mentioned as being especially adapted to our sandier soils, rye, hairy vetch, buckwheat, beans, peas and clover take the first rank. Watermelons, cantaloupes, pumpkins, sunflowers, tomatoes and most garden vegetables do well on warm, light soil. If the soils are not too light, and if their supply of humus is maintained, they should be able to produce fair crops of corn, potatoes and alfalfa. A discussion of the best methods of producing each of these crops would require too much space to be undertaken in this article.

There are many different systems of farming that are adapted to our sandy lands. The best systems include dairying, hog production, potato growing, the production of clover seed, and such a combination of these that the farm will produce all the roughage for the live stock and most of the concentrated feed. A three year rotation, consisting of rye, clover and potatoes, has proven successful on some sandy farms. The old four year rotation—consisting of grain, clover and timothy meadow, pasture, corn and potatoes—is more common and provides for a greater amount of live stock. The five year rotation of vetches and rye, potatoes, rye, clover, corn, has many points in its favor. In the last rotation mentioned the vetches and rye are sown in the corn at the time of the last cultivation and harvested for seed the following summer. The seed of the vetch being very high in price, this crop, where it is successful, is exceedingly profitable. As the vetches shell considerably in harvesting, the disking of the land soon after removing the crop will usually start a thick growth of vetches, which may be plowed down the following spring as a green manure for potatoes. The plowing down of a green manure crop one year in five, and the fact that this rotation maintains a fair amount of live stock, makes it especially adapted to those soils that are light in texture and that require a high percentage of humus.

The growing of all kinds of small fruit on sandy soils is profitable where the market conditions are right. The production of poultry on the sandy lands is generally profitable, but provision must always be made for the production of their feed. The keeping of bees and other special lines of work may be made profitable, but in all such cases everything depends upon the
taste and ability of the parties in charge.

The use of commercial fertilizers on our sandy soils will undoubtedly increase as time goes on. The purchase of phosphoric acid and potash for clover, alfalfa, vetches and other legumes will ordinarily greatly increase their growth, because these crops when grown on inoculated soil have the power through the bacteria in their root nodules to take their own nitrogen from the air. The use of complete fertilizers for potatoes may give a profit on sandy farms that are not located too far from the railroad station. The use of commercial fertilizers generally throughout the states of the middle west is still in its infancy, and many trials on different types of soil must be undertaken before anyone can give intelligent advice as to their value in this section.

While it is true that our most prosperous and successful farmers are generally located on the richer soils, there is a probability that intelligent effort will bring success to those who choose the lighter soils. At the present time we are co-operating with many farmers living on such land and are working hand in hand with them in the solution of their individual problems. There still remains much work to be done; but what has already been accomplished gives us much encouragement, and we feel convinced that the ability to farm successfully on almost any type of soil depends primarily on knowing how.

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**A "SANE" CHRISTMAS.**

*By MINNIE M. HOBBS*

So much was written and spoken in favor of a "Sane Fourth," for so long a time before the celebration, and so much has been accomplished along the desired lines, that one is reasonably sure that if enough time, energy, work and publicity is given to any reasonable reform, it will become a fact.

I therefore venture to hope that a word of warning with reference to Christmas may not come amiss.

It is pretty generally agreed that Christmas has departed from its old-time cheeriness and comfort and has become a period of feverish unrest. The aftermath of the holiday is, most frequently, worry and anxiety as to the ways and means of paying the debts incurred. One often hears: "I shall be so glad when Christmas is over; it is such a nuisance;" or "Christmas is chiefly good to make one feel thankful when it is past, and that there will be a year until the next one." We all deplore the passing of Father Christmas, and many of the more thoughtful members of society are observing the festival without extravagant gifts and entertainments so much in vogue a short time ago. However, the great majority of the population through the department stores for days before the holiday, buying the most impossible "bargains," pushing and elbowing their way to the counters upon which are displayed every imaginable article, both desirable, useful and useless. Women, wild-eyed and haggard after a hard day's work in shopping, attempt to suit the purchases to the respective recipients, and know in their secret hearts that there are many "misfits."

Money flows like water, from the purses of the buyers to that of the merchant, but it only produces a state of satisfaction in the head of the firm, as the shop girls and clerks are tired, impatient and too exhausted to care whether Christmas ever comes again.