

much rain, or the rain comes at undesirable times. Then again, there will be dry spells of weather when rain is needed. All countries which depend upon the rainfall for agricultural purposes will have these difficulties to put up with, no matter how favorable the average climate conditions may be. With dry lands which can be conveniently irrigated, all this is avoided. In the latter case there is no fear of rain when it is not wanted, and the water can be turned on exactly when it is wanted. In countries depending upon the natural rainfall for moisture, rain is the greatest factor in the production or destruction of crops. If the farmer could have control of the rainfall, supplying or withholding as the country required it, the greatest difficulties which beset the farmer would be removed. To hold the key to the rainfall would leave very little to be desired by the farmer in the line of weather conditions. In the case of irrigated lands, this is practically the situation, as the supply of moisture to the crops is under control.

THE COMMERCIAL hopes to hear of great progress in the work of irrigation in our dry regions. There are no doubt large areas which can be successfully irrigated, thereby enabling the settlers in those districts to follow mixed farming as a certainty, instead of having to depend upon stock raising alone.

MANITOBA WATER POWERS.

A conference was held at Portage la Prairie last week between delegates from the municipal councils of Brandon, Portage and Winnipeg, regarding the question of utilizing the water-power of the Assiniboine river. This river affords water-power at various points along its course, and it has been proposed to utilize this water-power by the construction of dams at the three points named. The greatest difficulty in the way of carrying out such works is found in the fact that the river is classed as a navigable stream, and the Government has refused to sanction the construction of dams upon the river unless a canal is provided to furnish a passage for boats around the dams. The cost of building these canals would be so great that it deters those interested in undertaking the work. The conference held at Portage was for the purpose of taking joint action to induce the Government to declare the stream closed for navigable purposes, and allow the construction of dams without enforcing the building of boat canals in connection therewith.

The facts in connection with the navigation of the Assiniboine river are as follows. The river has not been navigated since 1892, and the depth of water has not been sufficient to permit of its navigation to any extent since that year. Previous to 1892, during a period of abnormally high water, it was navigated to some extent; but there were no railways in the country then. Now the river is paralleled by two railways as far as Portage la Prairie, and by one railway beyond the latter place. The course of the river is exceedingly tortuous, making the route by the river about three times the distance by rail. With these railways now in existence, it is not at all probable that the river would be navigated,

even if a period of high water should again render it temporarily navigable. The steamers which formerly navigated the river are now out of use, and new steamers would not be built for the purpose of navigating a river which might only be available for a month or so during a single season once in a decade. The fact that the Red river, a far more valuable stream for purposes of navigation, has not been navigated above Winnipeg for many years, indicates the slight probability that any attempt is likely to be made to navigate the Assiniboine.

The real value of the Assiniboine river lies in its water-power, and not in its navigability. The utilization of its water power would be of vast value to the towns along its course, and to the country at large. It appears evident that the wise course would be to permit the construction of the proposed dams, without the requirement that expensive canals should be built. To adopt the opposite course is simply to prevent the utilization of by far the more valuable features of the river, for the purpose of maintaining the purely nominal value of the stream.

GRAIN TRADE LEGISLATION.

The Minnesota Legislature, now in session, is greatly exercised over proposed legislation affecting the grain interests. There is a clamor for legislation alleged to be in the interest of the farmer, and opposed to elevator men and the railways. Some very peculiar measures have been proposed, some bills going almost so far as to propose that the state should undertake to handle the grain trade. At least this is the principle of some of the measures. One plan is to provide for a line of state elevators. Another bill proposed to give the counties power to go into the elevator business. Another bill provides that all elevators along the railways be placed under state supervision. It also proposed to pass legislation to compel railway companies to furnish sites for grain elevators or warehouses to any party or parties, for buildings with a capacity of not less than 5,000 bushels. With all these bills under consideration, our neighbors to the south seem determined to pass some kind of a measure in the line of grain trade legislation, and the most likely form is a bill to provide for state supervision of the elevators.

SMUT IN WHEAT.

A paper was read at a meeting of the South Brandon farmers' institute some time ago, by Wm. Hull, upon smut. His theory is that smut is not a fungus, and that therefore the bluestone treatment to prevent smut is useless. He advised farmers not to bother with bluestoning their wheat, as it could do no good. THE COMMERCIAL will not enter into a discussion as to what smut is, but Mr. Hull is certainly wrong in his theories. It has been proved over and over again, as conclusively as the fact that two and two make 4, that bluestone does prevent smut. Whatever Mr. Hull's theories may be, the fact cannot be disputed by any person open to listen to reason, that the proper treatment of seed with blue-

stone will insure immunity from smut. The fact exists, and has been proved year after year, that the treatment of seed in this way will prevent smut. If any farmer has failed in obtaining this result, it is because his treatment of the seed has not been thorough, or the bluestone used was not of good quality.

It is to be regretted that this paper by Mr. Hull has been published throughout the country, as it may induce some farmers to foolishly neglect this sure means of preventing smut. F. T. Shutt, chemist at the Central experimental farm at Ottawa, comments very severely on the paper by Mr. Hull. He says in his closing sentence: "The whole world of botanical and microscopic science proclaims in words that admit of no doubt the character of the smut. They are undoubtedly fungi and propagated by spores. I would urge upon you the necessity of impressing upon our farmers the value of the bluestone treatment, if our future crops are to be saved from smut."

MARKET PECULIARITIES.

The style of package has a great deal to do with the sale of most classes of goods. Manufacturers who do an extensive trade well understand this. In undertaking to cater for a new market, the first move of the manufacturer should be to learn the style of package required for that market. Neglect of this point frequently leads to failure and loss, where a little regard for the peculiarities of the market would have brought about success. Superior products are sometimes passed over, and an inferior article taken, simply because the style of package does not suit the requirements of the market. The manufacturer who would do an extensive and widely distributed trade in package goods, must, therefore, study the peculiar requirements of each market.

Even in our own country there is a wide difference in the requirements of various markets, in the matter of style of package of some of our most staple goods. To show this we do not require to go beyond the leading commodity of flour. Beginning at the extreme east, we find that the trade demands that flour shall be put up in barrels. Millers who do a maritime province trade understand this. Coming east to Montreal the trade calls for 140 pound sacks principally. Toronto and west requires 140 pound sacks, and a considerable number of 93 pound sacks. In Winnipeg the trade takes 93 and 49 pound sacks. In British Columbia, the Victoria market calls for 49 pound sacks, but they must be in jute only, whereas the usual rule is to make 93 pound sacks of jute, and 49 and 24 pound sacks of cotton. On the mainland of British Columbia the 49 pound sack is what is wanted also, but, unlike Victoria, a cotton sack only is wanted. This shows some of the peculiarities of our own market in such a staple commodity as the staff of life. Manufacturers in other lines of goods have also to provide for similar conditions. When it comes to the export flour trade still further styles of packages have to be provided. The export trade is usually done in jute sacks, and the British market requires 280 and 140 pound sacks. A barrel of flour is always net weight, but a sack is always gross weight.