

East Indian Wheat.

In a late number of the FARMER'S ADVOCATE we referred to the importation of wheat from India to Great Britain, and the effect it would have on the prices in the English markets. From the first announcement of the arrival in English ports of wheat from Calcutta, we have been of the opinion that prices as high as we have heretofore seen would, for the future, be unknown, unless some unforeseen casualty would occur to force the markets up for a brief period. On this subject Mr. H. Kains, Jackson, in a communication to the London Evening List, writes as follows:—

The new source of grain supply in East India is brought prominently under notice by the contract in one bottom for a large cargo of wheat, 1,400 tons, the first ever despatched to this kingdom. This freight comes via the Cape of Good Hope; but the number of part wheat cargoes arrived and under contract via the canal is a matter for attention. It may be said, indeed, that the British conquest of India was incomplete until the Suez Canal opened the empire to British navigation and commerce. The new route also promises to give Southern France a new branch of trade, in supplying Marseilles, as a port of call, the produce of British India. It is believed that upwards of 50,000 quarters of Indian wheat has already been bought for Marseilles, which is thus relieved from entire dependence in Southern Russia and Turkey. A project of a ship canal from the Mediterranean to Bordeaux, to serve for vessels that have passed the Suez Canal, is now submitted; such a work would save 700 miles of the English voyage, supply wheat to that portion of France where it is required, and draw off floods, such as destroyed much of last year's harvest in the Garonne valley. The Indian northwest provinces have their harvest in February and March, and this year the first bill of lading was out by the 10th of April, and the cargo actually arrived last week. The date of these Indian supplies is about as important as their price and quality; arriving in the early summer, with Australian, they cannot fail to have an important bearing on the British markets, as a counterpoise to American and Russian demands. As to price, all corn is now regarded as a product of rent, farm capital and labor, the latter more and more becoming a chief item. And it is exactly on account of the lowness of Indian wages that Indian wheat must always compete in cheapness with the product of European and American labor.

Renovation of Soils.

The U. S. Agricultural Dept. has been collecting information relative to the renovation or improvement of soils considered worn out, and says: Many examples are given of the renovation of worn and apparently worthless soils, and the increase of fertility in fresh but unpromising lands. Fields that have been cultivated exhaustively for twenty, and even forty years have been restored to original productiveness, not by guanos and superphosphates, at from \$60 to \$80 per ton, but inexpensive local resources, the cheapest and most reliable of which is found in clovering. In one case in Butler Co., Pa., a section of thin, gravelly land, on which it was thought no one could secure a decent living, came into the possession of German emigrants at nominal rates. They cleared off the brush, plowed, cultivated, turned under green crops, saved every fertilizing material available, never duplicated a crop for five or six years' rotation, and that tract is now a garden, and from worthlessness has advanced to the value of \$100 per acre, and is yearly becoming more productive.

Rape as a Honey Plant.

K. O. Krasche, Berlin, Wis., writes the *American Bee Journal*:—"As a honey-producing plant, the rape is scarcely second to the linden, producing a beautiful golden honey of good flavor, and is in blossom when nearly everything else is out of blossom, commencing about August 15th, and continuing a couple of weeks. As a farm crop it is as good if not better than wheat. The time for sowing it is from the middle to the end of June. This gives time to prepare the soil after other crops are in; or if wheat or corn should fail in coming up, rape can be sown in their places. It is harvested from the middle to the last of September, after all other grain is harvested. It does not impoverish the soil, but benefits it. From five to eight bushels more per acre of wheat are raised on ground which had rape the previous year. It lets no weeds grow after it is fairly started, growing very dense, and its leaves completely shade the ground, therefore it does not suffer from drouth like other grains."

Tillage and Heat.

Every farmer will admit the advantage of tillage of the top soil, but we never hear of the tillage of the under or subsoil, and that is why the subsoil is poor, dense, un aerated, and unaltered. But draining an the steam plow are correcting this error. As a more perfect intermixer of the soil, we prefer the steam plow to the steam cultivator, but care must be taken not to bury the cultivated soil under a mass of poor subsoil. The cultivator afterwards crosses the plowed land. Some prefer plowing to the surface the bare soil, and then, after a time, plowing it down again. I am firmly of opinion that the double plow—that is one under and following the other—is the safe and true principle. Thus the subsoil and upper soil become gradually intermixed. This has been my practice for 30 years. Liebig is eloquent and impressive on the benefits derived from tillage.

The attraction by soil for the heated portion of the sun's rays is very great, and has a most important influence on vegetation. The want of sunshine, and consequent low temperature during the last three weeks of July, 1875 had a fatal effect on our crops. On a fallow the portion of the air in contact with it becomes heated and expanded, and struggles upward through the superincumbent cooler air in visible wavy lines. During sunshine on a cool day I have felt the heat from the soil through the thin soles of my boots. The earth is from 24 deg. to 81 deg warmer than air in the shade.

Deep or Shallow Culture.

Mr. Mechi has been in the habit of cultivating wheat after the mangel, kohlrabi, cabbage and turnips. For the preliminary crop he subsoils deeply and manures heavily, but for the subsequent wheat crop he breaks the ground only with a single plowing with one pair of horses. He finds that deep culture just before wheat sowing enlarges the straw product at the expense of the grain. The heavy foliation of the plant is often very deceptive in regard to its yield, while light-looking fields generally produce largely in quantity and of a very superior quality. He quotes Liebig in support of his views as follows:—"But in proportion as the conditions for the formation of the straw became favorable, so did the quality of the seed deteriorate as the quality diminished." He cites the practice of some successful farmers, who, on finding their crops too rank, trod them with men and horses. Salt stiffens the straw and checks a rank vegetation, but it should be used in moderation. He always scattered it in connection with guano.

How to Stack Grain.

The following plain, practical directions, which we take from the *Rural World*, are evidently from the pen of one who has had no little experience in stacking grain. There is really much art in stacking properly. Many quarters of grain are rendered comparatively worthless from being stacked by inexperienced or careless hands. We always considered a good practical knowledge of securing grain in stack to be no little acquisition to a farm laborer. We never found rails necessary under the stack, always taking care to build on the driest part of the field. Having first a round stack of sheaves partly standing, but the tops bending inwards against each other, we then pursued the work as directed beneath. In the farm yard when the grain was to remain some time—part of it till approaching seed time, we had good foundations of stone laid.

"Now that the season for stacking grain is at hand, we wish to invite the special attention of our readers to the importance of doing this work in the best manner. For a foundation for a small stack, four large rails are laid down at an equal distance apart, and across these are laid twelve more rails. The main points to be observed in stacking are:—

"First—Keep your centres full, thereby giving your outside courses a steep pitch.

"Second—Always have the tops of your sheaves point to the centre.

"Third—To keep a symmetrical form of stack. Where it is desirable to build ricks, they should always be built with their length running east and west, as the east sides of stacks and shocks are always more liable to be damaged by rain than any other parts.

"We notice that a great deal more is said about raising grain than of taking proper care of it after it is raised. Stacking grain is often so carelessly done that, after the stack settles, the bundles lie

in a horizontal position, instead of at right angles—like the roof of a house—and the result is, that more grain becomes wet and spoiled than would have paid the expense of threshing the entire crop. A writer in the Lancaster (Penn.) *Farmer*, in speaking of stacking grain, says that in finishing off a stack always reserve some small sheaves; also have a sharp stick some five or six feet in length, which is to be thrust down into the centre of the stack, and around this bend some of the grain so as to form a cap. The next morning after building the stack, when the dew is on it, rake it off. Pull the butts where there are unsightly holes, and beat down protuberances. Stacks built in this way will stand for months in the wettest seasons and sustain no injury.

"Long stacks or ricks are built on two or more squares of rails placed together. Where there is a large quantity of grain to stack, ricks economical. The chief objection to this kind of stack is, the long row of heads exposed to the weather on top unless you thatch or cover with boards.

"Inexperienced stackers are apt to build too high and run their stacks up to a spire-like point. This is unnecessary and unsightly, and the tops are liable to blow off. It is the pitch of the sheaf and not the pitch of the stack that makes it waterproof. An egg shape is the best form for a stack."

Intensive and Extensive Agriculture.

The sewerage farm of four hundred acres, near Leamington, is the most typical in its details of any of which we can speak. The owner has a contract with the city for the sewerage for thirty years, to be delivered on the farm at a cost of \$2,250 per year. It is pumped by two sixty horse power engines through fifteen inch tiling a distance of two miles, up an elevation of 137 feet, and the annual cost to the city to get rid of its sewerage is about \$5,500. Making an actual expenditure of \$250, only.

The principal crops are Italian rye grass, mangold wurzels, cabbage, wheat, beans, etc. Eight crops of Italian rye grass are grown in one season, and each crop is irrigated twice. Three crops of cabbage are grown in one season, and each crop is irrigated twice. Fifty tons of mangold wurzels are produced in one season, per acre, the beets averaging usually twelve or fifteen pounds each. The other crops are not irrigated but are grown after rye grass, beets, etc., wheat usually averaging sixty bushels to the acre. It should be remembered that before this system was begun over half of the land was waste and valueless sand, but this was tile-drained six feet deep and sixty feet apart, while the other 200 acres was tile-drained four feet deep and forty feet apart, the whole being a grand system of filtration, which leaves the fertilizing material in the soil. The grass is sold in the green or uncured state to the city, stables, etc.; and a dairy of 100 cows is kept, which furnish milk for the city. Thus the sanitary condition of the city is benefited; there is created near it a cheaper source for hay, milk, etc.

A farmer near Edinburgh, Scotland, on one of the Duke of Buccleuch's estates, says that unless he expends annually for seed, cultivators, harvesting and rents the sum of \$75 per acre, he can realize no profit. He grows wheat, barley, oats and potatoes, and keeps only enough live stock to perform the labor of the farm. He purchases the stable manure of Edinburgh, and keeps three carts drawing all the time. He is obliged to produce the greatest possible quantity of wheat, barley, oats and potatoes yearly, or financially fail and give up his beautifully situated home.

Thus every tract of land in England and Scotland is farmed as intensively as the circumstances will permit. The above system can not be pursued upon the oolitic soil, but here sheep farming is at home. The soil is the most healthy for the sheep, although it may be quite unproductive. Yet it is manured and stamped by the sheep until a crop of barley can be grown, then again until a crop of roots can be grown, which latter are fed with oil cake to the sheep in pens on the land, and the soil is thus manured and packed so as to produce a better crop of barley, and now it is quite productive, as well as healthy for England's finest sheep.

However, it is seemingly useless to bring these imperative examples before our average farmer, for while you are speaking to him of the husbanding of his manures, of the proper succession of crops, or application of fertilizers, he scarcely listens to comprehend, but occupies himself conjuring up some financial query which he suspects will stop your, to him, fanciful ideas. Hence, before you are through, he says, "all very well. Will it pay?"