

On fields situated on mountains, hills or declivities of any kind, the ridges are usually arranged in a very injudicious manner, viz: in the same direction with the declivity of the soil. Such is, at all events, the case in places where the land is very much divided, and the property intermingled, probably because when the division was first made, nobody had been found who would take the superior or upper part for his portion, all the fertilising juices and particles of which are washed downward, or would resign his share of the lower parts, which possess so many decided advantages.

This injudicious arrangement of the ridges is attended with many inconveniences. When heavy rains fall, the vegetable is easily washed away by them and it not unfrequently happens that on the top of the declivity large hollows are to be found, from which the earth has been washed down to the bottom where it forms high embankments, when only light showers fall the water runs too rapidly from the upper part of the field which is often suffering from drought, while the lower portions have a plentiful supply of moisture; the cattle employed in ploughing are dreadfully exhausted by the up hill work those which are naturally indolent and disinclined to exertion require very severe treatment to make them get through their work, while others that are active and full of spirit become heated and tired, thus rendered liable to take disease. Nothing, therefore, but a minute parcelling out of the land can justify such an arrangement of the ridges.

The most advantageous disposition of them that can be made on an inclined surface, is to give them a horizontal, or slanting direction; the former is preferable on gentle declivities: the latter on abrupt inclinations. By this means moisture is retained longer in the trenches on heights exposed to drought, and more humidity is communicated to the superior ridges. Even on rapid declivities the water flows slowly in those furrows, the obliquity of which diminishes their inclination. When heavy rains fall they do not wash the earth from the bottom of the furrows, and if the showers come but seldom, the land does not suffer so much from dryness. It has sometimes happened that the mere act of changing the direction of the ridges has tended considerably towards the amelioration of property situated on hilly places, increased the amount of produce obtained from it and rendered the crop less casual.

The arrangement just mentioned is also calculated to lessen the labor of the draught cattle, although it cannot be denied that it increases that of the laborer. When fields situated on a declivity are ploughed by a common plough having an immovable ear which turns the slice alternately upward and downward, it is very difficult to produce a proper revision of the furrow

slice when turned from the lower side, because, in that case, it has to describe a larger segment of a circle before it arrives at that point from which its own weight will cause it to fall over. It not unfrequently happens that it falls back into the furrow. The ploughman is therefore compelled to exert all his strength to keep the plough inclined towards the right, and is frequently obliged to turn over the slice with his foot unless he is followed by some person whose express duty it is to turn over the slice with his foot, his hand, or with a fork. The best thing which can be made use of in such cases, is that elongation of the mould board described by Schwertz in his, "Agriculture of Belgium."

On rapid declivities it is almost impossible to turn the slice over from below upward. There the only thing to be done is always to turn the slice towards the bottom until the whole field is transformed into a series of terraces, each one lower than the other. This cannot be effected with a common plough having an immovable mould-board, except by managing it so that it shall always be engaged in the soil on one side and shall turn the slice over on the one that immediately preceded it, a mode of proceeding which occupies a great deal of time and fatigues the cattle very unnecessarily, causing them to pass over every inch of ground twice. It is far better to make use of a plough having a movable mould board which can be turned either to the right or to the left, as seems requisite; instruments of the description just mentioned are invariably used in all places where they are known. The Mecklenberg binoir is very useful in these circumstances; indeed in many cases it is superior to the plough, because it does not throw the earth so low as that instrument. It will easily be conceived that by degrees the plough will amass all the good soil at the foot of declivity while the top will become barren. Judicious agriculturists remedy this evil by applying all their manure to the upper part of the field, or at any rate distributing it in such a manner that that part shall always receive the greatest proportion, but this renders the carriage of the manure a much more laborious operation.

When the rapid declivities are ploughed in a slanting or inclined direction, it is of the utmost importance that such an inclination should be given to the ridges as will prevent the plough from having to encounter any sudden or abrupt declivities. Nothing but mere general rules can be laid down for guidance on this point; the first thing a farmer should do before laying out the ridges, is to traverse his land in all directions, and ask himself in different places how the slices can best be turned over. In some places he will find it necessary to plough outward, in others to plough inward, and in others again to turn the slice over on the same side.