

tice had failed—that, by certain peculiar circumstances, the doctrine was not altogether applicable to his land, and that, though certain principles were tried with advantage in England, they were of no use in Germany. Thus, all the supporters of that extraordinary system of culture held this strange position; they recognized the principles which had been taught them, as true in theory, though inapplicable in practice. And, what was worse, the effect produced upon those who could not distinguish true doctrine from false theory was an utter horror of scientific instruction.

The idea of perfection that man attaches to mathematical operations, and to all that resolves itself into figures and measures, caused the name *rational* to be given to a culture based upon of agricultural statistics. From that time there were *rational* and *non rational* cultivators, and the one knew as little as the other of the reason or motives of their manner of acting. In fact, the reason was none other than the number of pieces of money with which the method of culture was measured and compared.

The cultivator who abandoned the triennial distribution for the alternate sowing, and found his revenue increase, regarded the new method as the rational one, and threw behind him a glance of pity on his old way of culture. None saw that the change to alternate distribution was in itself an indication of the improvement of his fields, because in the countries where the triennial cultivator saw his labours remunerated by heavy crops of grain, no one thought of being able to get any advantage from the alternate course. If nature had not so abundantly supplied the cultivable soil with all that is necessary for the existence of men and animals, and if the changes which the earth undergoes from one harvest to another were visible, the practical cultivator would soon become convinced that his rational culture did not rest on a golden soil, but that what he mistook for gold was only a gilt surface. Several generations must have succeeded before it was known that his was a false route. The dazzled eyes of the practitioner saw only false and disfigured images. It astonished him that, after having for thirty years well-tilled and manured his fields, their fertility was not the least in the world increased. He remembered that his father with less manure gathered more grain and less straw, and that in the time of his grandfather the hectolitre of barley had weighed from 10 to 15 kilogrammes more than now. "But," thought he, "I need not seek the cause in the land, for it looks the same as it did formerly; nor can it be my fault, for I have cultivated it with much more care," &c.; but the evil was that, peas, clover, and fodder plants in general would no longer succeed. If he could only find means of getting more frequent crops of these plants, then his trouble would be at an end. With more fodder he would have more manure, and with plenty of dung he could obtain large grain harvests. If he only

had enough fodder the grain crops would come of themselves. His system of culture was based on the production of manure, and that on the production of fodder. It had taught the cultivator that he should transform his fodder into stable-dung, and that manure was the matter that his art transformed into meat and bread. But it had not taught him what he should do to procure the manure when fodder would not grow in the land: it had only taught him that the cereals and certain commercial crops exhaust the soil, whilst fodder spares it, besides improving and enriching it.

If cereals cultivated successively on the same field, did not produce the second or third year satisfactory crops, they said the land was sick. For the same phenomenon they had two different causes. In the first case they supposed the cause of non-success to be the failure of certain principles; and, in the second case, want of fertility or strength. For the exhaustion of the land the cultivator found a remedy in manure for fodder, he sought a medicine, or, as for a lazy horse, a whip. "What will be the end of agriculture," cried these practitioners, "if we must manure fodder plants as we do cereals? The farmers can scarcely produce enough manure for the cereals, and where would he get it for other crops?" The practical cultivator neglected to get intelligence in his practice; but he had not seen what the shoe-maker does—see—that his quantity of leather is constantly exhausting. He had treated his fields as a piece of leather without end, which if one cuts at one end it sprouts at the other. The manure was to him only the means of lengthening out, softening the leather, so as to make it cut more easily. He treated it as if God had worked a miracle for him—not for the preservation of human species, but to save the cultivator the trouble of thinking of the source from whence flow the blessings of the Creator. In the schools of agriculture they had taught him that the talent of the cultivator consisted in cutting from the immense quantity of leather, which he supplied, the greatest possible number of shoes in the shortest time, and at the least expense, and that the best masters appeared to be those who carried to the farthest that art.

There was no lack of voices that raised themselves in defence of that doctrine, and one of the greatest evils that it caused subsequently was that the cultivators were quite content with occasionally obtaining from their land the crops, which sustained itself, and which they increased as well as enriched them, and gave colour to the belief that they owed to their intelligence and ability what was only traceable to their land, which gave them, without trouble what others could not obtain from theirs with the greatest efforts.

To the evident fact that the harvests diminished upon an infinite number of lands, these petty cultivators opposed their own local ex-