

chance when summer fallowing it to clean them off, and that on the whole the most profitable way for fall wheat was to summer fallow.

Mr. Masson said, he did not like naked summer fallow at all; he thought that on stony and stumpy land they must summer fallow so that they could get them cleared up, but that might be called *making land*, but on land that was once fairly cleared up, he thought here should not be a summer fallow in twenty years; he thought that early peas sown in June made a fine summer fallow as they would be off the ground in about six weeks, so that you could plough the land once in the fall and then in the spring before the peas were sown and then once after the peas, and the land was ready for wheat; but should the land be flat he would rather sow spring wheat as he believed that taking one year with another and making allowance for the seasons, that fall wheat was killed out in winter and rusted, that spring wheat was as profitable as it; he thought that to plough land for peas as he had described would kill thistles as well as a fallow; he thought that a bare fallow scoured the soil very severely during the excessive heats of July and August.

Mr. Dixon said, he thought that for fall wheat summer fallows were best—but if he could get a crop of wheat after peas he would prefer them as the two crops would be more profitable than one.

Mr. R. Brown said, that it depended a great deal on the soil as some land did best with a bare summer fallow, and where you had large quantities of land to work it was hardly possible to keep it clean without fallows unless that land was well kept in clever.

Mr. Wm. Rondick said, that he agreed pretty much with what Mr. Phillips had said, that rather new and rough or stoney land could not be cleared up without naked summer fallow, but that as soon as land was once fairly cleared up fallows might be dispensed with and green crops take their place, and that land could be kept clean by following up the green crop with clover; he would plough his land in the fall for green crops and the deeper the better, he had used the subsoil plough a good deal in the fall with very beneficial results; where land was very dirty it was best to summer fallow as it could be easier and better cleared that way than with a green crop.

Mr. Ball said, that if land was clear he would put on some green crop, but where the land was dirty summer fallowing it was the easiest and most effectual method of cleaning it.

Mr. Alcorn said, that after the many excellent practical remarks they had heard from Mr. Phillips and others, he would not say much in the way of summing up. On land that was well adapted to the growth of fall wheat, he thought on the whole that naked summer fallows were the most profitable for the farmer, and kept the land in the best order; he saw that our most successful growers of fall wheat put most dependence upon their summer fallows though he did occasionally see a good crop of fall wheat after peas, yet with him wheat never came away well after peas. As such level low land as he farmed was not suitable for fall wheat he generally grew spring wheat; he grew as many roots as he could

and always sowed wheat after them, he likewise grew it after peas but as he could not grow as many roots and peas, as he wanted ground for wheat, he had been in the habit of sowing spring wheat rather extensively after hay, he ploughed the land with a rather light furrow as soon as he got off his hay, then he cross ploughed the land as soon after harvest as he found convenient applying manure then if he had any, he then ridged up the land well before the frost set in, taking care to open up all the water furrows where required, and keep the land dry as possible, he then sowed the wheat in the spring without further preparation, but should the ground be baked he would go over it with a cultivator before sowing, following the method he had excellent crops of spring wheat, and he had seen some of his neighbors follow the same plan very successfully. In this neighborhood there is not one farmer in twenty that can cultivate as much land in roots as he wants for spring wheat so that we are under the necessity of trying it after other crops, and he had always had better success with it after hay than after any other crop.

#### MACHINERY IN FARMING—ITS ABSOLUTE NECESSITY.

It is not enough that farmers avail themselves of all the advantages which chemistry affords in its application to their art; it is not enough that they learn how to save as much as possible of the manures made on their premises, and the best methods of applying these and also purchased specific manures; it is not enough that they know at what seasons and to what depths their soils should be cultivated. They must perform as many of the operations of farming by machinery as machinery can be made to perform to advantage.

There is no other way in which agriculture can keep pace in respectability, pleasure and profit, with other arts. Without this expedient it will be outstripped by them, and sink steadily in comparative rank.

By machinery, as we use the word here, we mean all mechanical contrivances which can be substituted for manual labor, and combined with manual labor so as greatly to increase its productiveness.

And the policy which we recommend includes also animal labor, and as a more powerful co-operator with it.

So far as a horse or an ox can be made to do the work of five men, the horse or the ox earns the net product of five men's labor for the employer. If one man cultivates as much corn, and cultivates it well, with one horse, attached to a cultivator, as his neighbor cultivates with ten hoes in the hands of ten men, it is easy to see which of the two is travelling the fastest on the road to wealth.

So in cutting grass, in planting and harvesting grain, in shelling corn, and in various other operations of the farm, machines can do the work for a small percentage of the cost of manual labor.—*M. Makin's Courier.*