

ficial or chemical manures as adjuncts or complements to that of the farm-yard. This subject will be treated upon by-and-by. As a general observation, French agriculturists are not book-farmers—they are on the whole quick and ingenious, anxious for more light on their duties, liberal enough to change where improvement is safe, but rather inclined to look to their "paternal" government to undertake the risks and perils of innovation. Not that France is wanting in "philanthropic farmers"—courageous to speculate, and patient to wait results. One notable example is that of Mathieu de Dombasté. For twelve years he endeavored to cultivate a barren spot regardless of expense—the high farming principle. He has avowed he never could raise more than 33 bushels of wheat, and 17 tons of beet per acre, and every year of the twelve that his fancy farming continued his books balanced with a loss.

Possibly no government does more to encourage Agriculture than that of France, and no monarch has surpassed the Emperor. He is a go-ahead farmer himself—has founded, out of his private fortune, several model farms to test the best systems of culture, and to essay all new inventions; above all, to adapt his examples to the wants of the country, discarding all luxury, all that magnificent trifling which destroys the best intentions of well-disposed proprietors here, as elsewhere. He has two example farms at the gates of Paris nearly; nine, in addition to a Colony, in the desert of Gascogne; eight in Champagne; three in Sologne; one on the granite slopes of Limousin; and one in Italy, near Bologna. He receives on the average four per cent. on his capital. His cousin, the Princess Bacchioci, guards a hermit life on her model farm, in the wilds of Bretagne. The Minister of Agriculture is voted every year a respectable sum for his department, as also for the execution of public works more or less allied to rural interests, such as roads, railways, canals, &c. Some nine Departments are selected every year, in which are held, in Spring or Summer, art, industrial and agricultural exhibitions, with prizes for local competitors as well as all-comers—so that, in ten years, each Department has its subsidized little "World's Fair." Then there are governmental farms, fitted up with laboratories, where Science has but to cross the threshold to test its own conclusions—there are agricultural schools of various categories, where pupils graduate and receive diplomas. Further—there is offered to each Department annually a series of eight prizes of honor, varying from an object of art valued at 200 francs, along with a purse of 600 francs, up to a work of art, valued at 500 francs, along with a purse of 2,000 francs, (with medals, and smaller purses for agents and farm bailiffs,) for large and small proprietors, or co-proprietors, having, in the opinion of the inspector, the best managed farms, &c., in their Department.

France has but lately terminated a great agricultural inquiry, and the Commissioners have probed every grievance. The General Society of Agriculturists have still later sat upon the Report, in a Congress held in Paris. Passing over the consideration of matters purely local, the Society turned out a good deal of "sound corn." It recommends, from 1870, a general, instead of local cattle shows, the first to be held in Paris, where prizes would be given, not only for cattle of pure

breed, but for animals preserving special attributes. It is proposed to elect the judges, three in number, by "the universal suffrage" vote of the exhibitors. The same system will be applied to the annual show of implements: one prize only will be given in each class, and the entries limited to France. An International Implement Exhibition, however, is to be organized. The subject of agricultural education was largely entered into. The resolutions were in favor of founding additional State experimental farms, a Central College, an improvement in the pecuniary condition of the boarders at the Farm Schools, and the affiliation of agriculture on school studies generally. It was not to be "professed" to children—they should only be trained to "like" it; girls should be instructed in the art, and a trial should be made of working school-farms by giving the pupils a partnership in the profits.

In every industry in France almost, woman has her "Rights" in being permitted to work, and consequently she is to be found largely employed in agriculture, where alongside men "the grey mare often turns out the better horse." Machines for abridging labor are finding their natural home, but home-manufactured instruments are clumsy, bad, and dear. It is curious that so few English or American implement makers seek a foreign market. From the olive land of Spain, across fair Italy through the wilds of Bohemia and to the steppes of Russia, but two American and three English manufacturer names were all I met with—and there is a market for the article, as the "cheap labor question" is everywhere pressing.

The scientific world may be said to be concentrating its attention on the comparative value of chemical manures, limited to the phosphates and nitrates, and the rotating of crops; whose analyses indicate sympathetic relations. Farm-yard manure has not fallen in estimation of course,—but with phosphate of lime, nitrate of soda, and the salts of potash, hitherto they are in store for farmers. Some experiments at the government schools are pending, which promise to be interesting; French capital is to be employed to work the Veritable quarries of phosphate of lime in Spain; Prussia and Hungary are to supply the potash, as well as sea-water—Peru the nitrates—and coal manufactories the sulphate of ammonia.

Cold and tepid water baths, for cattle, are creeping into favor as therapeutic agents in the treatment of inflammatory diseases.

No country can derive more benefit from sheep farming than France. Knowing this, it is not surprising that the Emperor has decided upon opening a training school for shepherds. For the last thirty years the number of sheep reared in the country has been on the decline, the cause being the incapacity of the shepherds. The new school will be founded upon one of the State farms in the north of France, famous for its Dishley rams and Dishley merinos. It will be open to all France; the pupils will serve an apprenticeship of two years, receiving a certificate at the end of this period, and for 300, the equivalent of their wages. They will attend lectures on all that belongs to the Ovine race, and will be instructed in reading, writing and arithmetic. The Director will be M. Daubenton, the first authority on sheep in France. Other schools will be established in other parts of the Empire.

In Paris there are no dust-bins—the

kitchen refuse is thrown into the street after sunset, and removed in the morning by the contractor's carts as manure. The night-soil is collected according to three different systems—in a reservoir, which is pumped out periodically, and conveyed in large barrels to the sub-works, where it is made into powder, and sold for 5¢ per 22 gallons, or sold in its liquid state. It is also collected in iron cylinders or strong small barrels hermetically closed with plaster of Paris. The same companies prepare sulphate of ammonia, and animal black from the carcasses of deceased animals, sell dried blood, horn clippings, &c. Well, a company from Brussels is in course of formation to buy up all these systems, and completely revolutionize the water-closet system of the city, two thousand tons of fecal matter being daily removed from Paris.

Proprietors in France can at any time receive, by means of a Society in Paris, loans on two-thirds of the value of their property, at three and four per cent., repayable over a long series of years. In the centre of the Empire, as well as in other parts where the land is poor, the proprietor furnishes the dead stock for a farm, and divides the profits with his tenant. This is called the *metayer* system—somewhat analogous to what exists, as we shall see, in Russia, but in every way reprehensible. The tenant has no self-interest, no independence. It is an ingenious plan of "grinding" on both sides.

Since Napoleon's celebrated Decrees of Berlin in 1812, enforcing and encouraging its cultivation, so as to be independent of the English Colonies, the manufacture of beet-root sugar and brandy has made rapid strides in the western and north-western districts. Upwards of 200,000 tons of sugar alone are annually manufactured. Well, the Society of Pas-de-Calais will hold a show of beet-roots on the 9th of October next, to make known the best kinds of root to cultivate, the best manures, and the most suitable soils. Specimens of the worst, the average, and best roots are to be forwarded, with a careful history of the soil, the chemical manures employed, and the saccharine richness of the root.

Russia, it is rumored, will have an Agricultural Exhibition next year, open to all the world. Beasts, implements, &c., sent for show, will be bought in by the government at a price fixed on beforehand. All expenses of transit will be paid in advance. Odessa has recently had a trial of steam ploughs (English) and mowing machines (American), with the most happy results. Southern Russia, and its rich wheat land, cry aloud for cheap labor, where the population, already sparse, is reduced in its effects by the demands of the Greek Church, which, on an average, admits not more than twenty workable days per month. In France there are no vacations—from two o'clock on Sunday is the only holiday almost.

The Mormons have been making great efforts to induce emigration from the wine-growing districts of France, and with success; and California is now doing the same in the silk-growing districts. America is going in very heavily for wine and silk: Californian silk is at present being exhibited in Paris of an excellent quality, and cocoons are supplied to France from California (as Italy imports from Japan), and has proved the best remedy against the "disease."—What will France do when the Cape and Australia really bestir themselves?