

ny; and in the north-western parts of Germany and Holland, it may be seen more or less several times in each year.

The phenomenon in these localities is ascribed to the periodical burnings which the moors undergo in order to fit them for producing crops. About the beginning of May they are set on fire, and so arranged that they shall smoulder as far as possible, without bursting into flame. By this process an immense volume of smoke is produced, as it has been calculated that the weight of substances burnt and carried up into the air must be at least equal to 1800 millions of pounds. When this immense quantity of smoke is driven away by the wind, it produces the phenomenon of the dry fog.

We might imagine that it would be impossible for smoke to be carried so far, without settling to the ground; but if we look down from a mountain on to a town or village situated in a valley, we shall find that in the morning the air is quite clear, and objects can be seen with perfect distinctness; as soon as the fires begin to be lighted, a thin cloud of smoke intercepts our view, which increases during the day, and instead of sinking to the ground at length attains a very considerable depth, so as often to fill the whole valley. The phenomenon is however more perceptible when the air is dry than when moist; because the fine particles of charcoal which form the smoke absorb water, if any quantity be present in the air, and thus becoming heavier, they more readily sink to the ground.

That the dry fogs in Holland and Westphalia are caused by the burning of the moors, is fully proved by the coincidence in the periods, and by the fact that the fog is only seen in those places to which the smoke can be brought by the prevailing winds.

The dry fog of 1834, which was so remarkable, was most probably caused by the fearful fires which occurred during the summer, both in moors and forests. A large moor in Bavaria was burnt eight feet deep, and the fire extended under the ditches; immense conflagrations also took place in the forests of the Harz, in Prussia, Russia, Silesia, and Sweden. The summer was exceeding dry (it is celebrated for its wine), which accounts for the long continuance of the smoke, and the rapidity with which it spread itself over so great an extent of country.

With regard to the phenomenon of 1783, we have another cause producing so gigantic an effect, viz., the volcanic eruptions that occurred in Iceland and which may be reckoned as among the most considerable that have been recorded. Earthquakes were observed from the 1st of June; and about the 11th, a quantity of smoke rose from the ground in the northern part of the island, and three immense columns of fire were produced, which were visible for more than a hundred miles. The air was so loaded with sand and sulphurous vapours, that it was dark at mid-day. Immense quantities of red-hot lava were poured forth, and filled up the former beds of rivers. The quantity of lava thus emitted was calculated to be sufficient to form a mountain six times as large as Mont Blanc. Shortly afterwards, a subterranean fire took place in the interior of the island, accompanied by shocks of earthquakes. From these causes

so much smoke was evolved, that the sun appeared quite red, and the light was completely obscured near the mountains.

We cannot consider the smoke as directly produced by the volcanoes, inasmuch as we find that the dark column which rises from the crater of an active volcano consists of the vapours of water mixed with sand and ashes, which soon sink to the ground; but when we consider the immense extent of surface covered and inflamed by the lava (seventeen villages were destroyed), and considering that the earth itself seemed to be on fire in the interior of the island, we can easily account for the immense volumes of smoke. The summer of 1783 was also a remarkably dry one, and hence there may have been added to the above cause as many moor and forest fires as usually occur in such seasons.

In conclusion, we may safely assert that the peculiar phenomena known under the name of dry fogs, are caused by the presence of a quantity of smoke in the atmosphere; and that wherever very extensive fires take place, especially of moors or woods, which produce large quantities of smoke, we may expect to observe similar appearances in a greater or less degree. Whether the Indian summer, so well known on this continent, depends on similar causes, is a question on which we shall make a few remarks in our next article.

II. C.

THE WEEDS OF AGRICULTURE.

In furnishing your correspondent, J. C., according to his request, with the botanical names of the commonest weeds of this country, I shall take the opportunity of adding a few general remarks upon these enemies of the farmer.

The prevailing weeds vary in different localities, according to the nature of the soil, situation, climate, &c. Those which are most abundant in one neighbourhood, may be rare plants or perhaps even unknown in another. Hence, in the subjoined list, many may be omitted which in other parts of the province are exceedingly common, and others inserted which to the farmers of the eastern and western districts may be but little known. Thus, in some parts of the Prince Edward District, the poisonous *Datura Stramonium*, Thorn-apple, or Jamestown weed, is a common and well-known weed, but in this neighbourhood it is seldom seen, except in gardens. Many weeds, as the plant just mentioned, have been introduced from other countries, and have become naturalized where the soil and other circumstances are favourable to their growth. Some of them spread slowly, and are perhaps still confined to the vicinities in which they were first grown; while others increase rapidly, and have extended their range over the greater part of the province.

Weeds have been variously classed by writers on agriculture. The most useful arrangement for the farmer is that in which they are divided into two classes, according to the time required to complete the period of their vegetation, because it points out to a certain extent the means to be adopted for their destruction. The first class comprehends the annual and biennial plants. The annual lives