

There are two additional observations however which I will venture to introduce as likely to interest the general reader. They are both in substance somewhat scientific, yet both entirely practical in their bearing.

First. In speaking of the soils which rest upon the Marcellus shales represented in the above section, I have alluded to the difficulty experienced in keeping them clean, and to their being especially infested with the corn groomwell (*Lithospermum arvense*), known in North America by the various names of pigeon-weed, red-root, steen-crout, stony-seed, and wheat-thief. In Yates County, in Western New York, a little to the west of the line of section N S, the pigeon-weed is described to be so abundant in some places as almost to have become the lord of the soil. It was unknown there—as it is said to have been in all this lake country, and on the river flats of the St. Lawrence—thirty years ago. It is supposed to have been an importation from Europe, probably in samples of unclean seed-corn from England, France, or Germany. Now “hundreds of bushels of the seed are purchased at the Yates County oil-mill, and, if it were worth 8s. instead of 1s. 6d. a bushel, these hundreds would be thousands.”*

My readers will observe in the concluding words of this quotation how one evil leads to another. The purchase of this seed at the oil-mills must be mainly for the purpose of adulteration.† I have examined samples of American linseed cake, in which seeds were to be recognised that I could not name. They might, I then thought, be those of the dodder—a parasite which in this country infests the flax-plant in some localities—but they might also be other cheap seeds purposely mixed with the linseed. To persons who are in the habit of buying the cheaper varieties of American cake this point may not be unworthy of attention; and as oil-cakes are chiefly bought by farmers, some may regard it as a kind of poetical justice, that the idle farmers in one country should be the means of punishing the less discerning of their own class in another.

* Transactions of the New York State Agricultural Society, 1846, p. 436.

† In the Transactions of the New York State Agricultural Society for 1859, p. 512, I find it stated that this seed yields two or three quarts of oil from a bushel of seed. As a gallon of such oil weighs about $7\frac{1}{2}$ lbs., we may take *four pounds* as the average yield of this seed per bushel. But linseed of 52 lbs. a bushel yields 17 lbs. of oil; and the best rape of 56 lbs. yields 16 lbs. a bushel. Supposing the groomwell seed to be about 50 lbs. weight per bushel, 4 lbs. of oil would barely pay the cost of expressing, were it not for the value of the cake. English crushers reckon that, for an additional shilling in the price of linseed per quarter, about 3 lbs. more of oil should be yielded, so that in their reckoning, 1s. 6d., the price of the groomwell seed, would require $4\frac{1}{2}$ lbs. of oil to pay the cost of the seed alone. The value of the cake therefore, as I have said in the text, must be what the Yates County crushers mainly look to.