100 grains of barley meal give, on burning, ins of ash. 100 grains of this ash contains, of

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| Silica,..... | 29.67 |
| Phosphoric acid,..... | 36.80 |
| Sulphuric acid,..... | 0 16 |
| Chlorine,..... | 0.15 |
| Per-oxide Iron,..... | 0.83 |
| Lime,..... | 3.23 |
| Magnesia,..... | 4 30 |
| Potash,..... | 16 00 |
| Soda,..... | 8.00 |
| | 100.00 |

is analysis was made by PROF. THOMPSON sgow. German chemists have found some- less than 3 per cent. of ash in 100 parts of rley. In a good soil adapted to the plant, antity found by Dr. T. may be regarded as erage. Supposing that all the straw was re- d to the soil either directly, or in the shape of re, 2000 lbs. of barley, after it was thoroughly at 212° taken from an acre, (equivalent to 50 bushels,) would remove from the earth 60 its most valuable minerals. Among these be 17.80 lbs. of soluble silica or flint, which mainly in the hull of barley. The most ble ear hy element in the eeed of this grain, all others, is *phosphoric* acid. Of this, 2000 f barley remove from the soil 22 lbs. If bar- fed to swine, horses, or other domestic s, and all their solid and liquid manure be d back on the field that produced the crop, the will be made richer for the operation. This accrues not from the mistaken idea that *all* rly all the matter removed in a crop, can be d back in the manure, which the crop will when fed to animals. All animals literally their food in their *warmed* bodies, the gases vapor formed by the combustion escaping h the lungs in expired air. 100 lbs. of dry ill make less than 50 lbs. of dry dung and urine How, then, can the removal of 100 barley, corn, or wheat, from a piece of ground, e return of only 40 lbs. of the *same matter* the soil? This question we greatly desire ery child, whether male or female, 14 years ould be able to answer correctly. We are d and mortified at our poor success in per- g those that till the earth that schools to teach ws of nature which govern the growth of ce- nd other cultivated plants, ought to be estab- and supported for the benefit of agriculture. t that pass; while we ask again *why it is* farmer may take 1000 lbs. of barley from a d by restoring only *one-tenth of the same,* his land none the poorer by the operation? rill be recollected that 1000 lbs. of this grain in at most but 30 lbs. of uncombustible earthy r. By restoring these and 70 lbs. of organ- carbon, oxygen, hydrogen, and nitrogen, the husbandman gives back to the soil as much furnished towards the 1000 lbs. of barley. ow is the land made richer when we restore particle more soluble flint, phosphorous, sul- iron, lime, magnesia, soda, potash, chlorine, n, and nitrogen, that was removed in the crop?

Some knowledge of agricultural geology is indispensable to the clear understanding of this interesting subject. Consider for a moment the *source* from which all soils derive their lime, potash, phosphorus, sulphur, and other earthy elements of plants In 100 lbs. of the ash of barley there are 37 lbs. of phosphoric acid, 24 lbs. of potash and soda, beside 7½ lbs. of lime and magnesia. No wonder that this crop requires good land to yield a large amount of seed.

It is the constant abrasion, comminution, and solution of the small particles of rocks, which lie exposed to the meteoric influences of frost, heat, light, electricity, water, oxygen, carbonic and nitric acids' from the air, that renovate soils while at rest, when partially exhausted by the removal of crops. *Science* can render the practical farmer most valuable aid in hastening the natural process for bringing back virgin fertility to a worn out field But alas, the practical man too often scorns the proffered light of science. He ridicules the idea of having his sons study the properities and source of the constituent elements, which God has appointed to make the bread, the meat, and the clothing of all rational beings.—We rejoice however in the strong faith that this deep prejudice against the study of the natural sciences which have so intimate a connection with rural industry, can not last always. Our children's if not our own offspring, will see the end of it.

As a bushel of barley can be grown on some soils about as easily as a bushel of oats, who would not give a trifle to know by actual experiments the relative value of 200 lbs. of barley meal and a like weight of corn meal, for making pork, beef and mutton? By making meal into well cocked pudding, and mixing it with boiled or steamed potatoes, a little slop from the kitchen and dairy, pork can be made at no great expense, while the dung and urine from the pig sty will make great barley next year. We are much in favor of that system of husbandry which consumes the largest amount of the products of the farm at home, and carefully saves, and uses to the best advantage the manure thus made. We have often help to harvest from 45 to 50 bushels of barley on an acre, and have seen it much used in fattening hogs. But its precise value for feeding has never been determined.—*Gen. Far.*

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*Green Peas for Winter Use.*—The lovers of green peas will be pleased to learn that they can be preserved for winter use, by simply gathering them at the proper season for using them green, shelling them and drying them in the shade, and when well cured and perfectly dry, packing them away for use.

When required for use, they should first be immersed in warm water for ten or twelve hours, which will render them as tender and delicious succulent as when taken from the vines. The best method of preserving them, after they have been thoroughly cured by the above process, is to put them into close jars or bottles. In this way, not only green peas' but green beans and green corn may be had the year round.—*Far. & Mech.*