

weeks fewer peas by five bushels than the other three, yet weighed more when killed by two stones and four pounds upon the average,—a strong argument in favor of keeping pigs clean. From Mr. Boswell's experiments on the feeding of swine, we find, that during an equal space of time, the increase in the live weight of five pigs fed on steam-boiled food was 4 cwt. 2 qrs. 7 lbs., at an expence of £6 19s. 4d., while the increase in the live weight of pigs fed on raw food was only 2 cwt. 2 qrs. 21 lbs., at an expence of £5 8s. 6d.—a result highly favorable to the practice of feeding swine on steamed food.

"In fattening pigs," says Mr. J. Steele, "I have always found a mixture of barley and peas-meal, moistened with milk in sufficient quantity to make it of a drinkable nature, to be the best; the pigs must be rung to make them lie quiet; the sty should be warm and airy, and the sun not suffered to scorch their backs, as thin skinned white pigs are blistered by it, which not only renders them of an unsightly appearance, but retards their thriving. They should be protected from exposure to cold winds, cold rains, sleet, or snow—a subject not sufficiently attended to on many farms, where they are allowed to lie in heaps, shivering with the cold, in which case it is utterly impossible they can thrive. On the other hand, when they are kept constantly in a close pestilential atmosphere, their constitution becomes undermined, they look delicate and siekly, like consumptive subjects, and never arrive at any size or weight for their age. These extremes should be carefully avoided, and they should have an open-barred door, permitting a current of fresh air incessantly to set in and purify the place, conducing to the animals acquiring a vigorous habit and a doubly-increased size. Too much cleanliness cannot be observed; for nothing tends more to their well-doing than dry feet, a dry bed, and sweet air."

The dung of swine is a cooling, rich manure for dry sandy ground, but from their eating numerous weeds, which pass too soon through their intestines to allow of their seeds being destroyed, this manure is not fit for arable lands, but is very good for the roots of fruit trees. Some time ago the Duke of Portland commenced strengthening and promoting the growth of trees in the grounds about Welbeck, by putting pigs in the plantations, and confining them within certain space till they had rooted up the ground at the foot of the trees, and of course manured the soil. They were then removed to the other parts of the plantation, and confined in the same way, and were fed meanwhile upon potatoes, large quantities of which were bought for that purpose. Mr. J. Hawkins tells us that a method has lately been adopted in some parts of the United States of procuring oil and spermaceti from pigs. They are killed and boiled altogether, to extract all their lard, which is then converted into *stearine* and *elain*. The oil thus procured is of a remarkably fine quality, and well adapted for lubricating machinery.—*Agriculturist Monthly Journal*.

EMPLOYMENT OF ARSENIC IN AGRICULTURE.—The following is the result of the investigation of a commission appointed at Rouen in Dec. 1842, having for its object to determine the best process of preventing the smut in wheat, and to ascertain whether other means less dangerous than arsenic and sulphate of copper (both of which are extensively employed in Great Britain), were productive of equally good results. The commission is of opinion—1. That it is best not to sow seed without steeping. 2. That it is best to make use of the sulphate of soda and lime produce, inasmuch as it is more simple and economical, and in no way injurious to the health of the sowers, or inimical to the public health, and that it yields the most productive and soundest wheat. 3. That as arsenic, sulphate of

copper, verdigris, and other sulphate poisonous preparations can be advantageously replaced by sulphate of soda and lime, the use of the poisonous preparations should be interdicted by the Government.—The proportions of sulphate of soda (Glauber's salts) and lime recommended as a substitute for arsenic in the prevention of the smut are as follows:—Dissolve 22 oz. of sulphate of soda in hot water, and slake 4½ lbs. of fresh and well-burnt quicklime in the ordinary way, by pouring on it small quantities of cold water; place 22 imperial gallons of the seed wheat in a cask or other suitable vessel, and thoroughly water it with the solution of sulphate of soda, stirring well the whole time, so that the whole of the seed may be well moistened, and there be a slight excess of liquid left; then sifted in the slaked lime, stirring well until each particle of seed be covered with lime. The seed is now ready for sowing. Should the seed be kept for a few days after it has undergone this preparation, it will be advisable to stir it occasionally, to prevent heating. Carefully conducted chemical analyses show that wheat, the produce of seed prepared with arsenic, does not contain any of that deleterious substance, whilst wheat, the produce of seed steeped in a solution of sulphate of copper (the most efficient preventive of smut), contains a notable quantity of copper. The cheapest way is to purchase the anhydrous, or dry sulphate of soda, of the alkali manufacturers, which contains twice as much real sulphate as the crystals, whilst it may be obtained at about the same price. In this case, half the quantity of sulphate of soda above mentioned will suffice, and additional water may be supplied, equal in weight to that of the dry sulphate employed, thus compensating for the water of crystallisation contained in the crystals. The proportion of water above indicated may then be added, and the process followed out. Thus, instead of 22 oz. of crystals, use 11 oz. of dry sulphate of soda, and 2 galls. 11 oz. (or rather better than 2 gallons and ½ pint imperial) of water.—*E. Henry Durden*.

PURCHASE OF HORSES.—*Nothing requires more caution than the purchase of horses*; and we give the following hints, which are extracted from the excellent volume "On Horses," published by the Society for the Diffusion of Useful Knowledge:—

"In the purchase of a horse, the buyer usually receives, embodied in the receipt, what is termed a *warranty*. It should be expressed thus: 'Received of A. B. forty pounds for a gray mare, warranted only five years old, free from vice, and quiet to ride or drive.' It is important to observe that the age, freedom from vice, and quietness to ride or drive should be mentioned, because warranty as to soundness alone does not include these. Many disputes have arisen as to what ought to be termed sound or unsound. A horse is sound in whom there is no disease, nor any alteration of structure which impairs his natural usefulness, and he is unsound if he labours under any disease, or had any accident that has impaired his natural usefulness by an alteration of the structure of any part of his body. The term unsoundness does not apply to any original defect in the temper of the horse, or any deficiency in the strength and powers of the animal. The principal circumstances which constitute unsoundness, besides the great number of actual diseases, are *broken knees*, which may indicate a stumbler, though not always; for any horse may meet with an accident, and the knee may now be quite well, though it requires great judgment to distinguish in this case. *Contraction of the foot* is sometimes, but not always, unsoundness; for it is occasionally natural, and not a fault. The following defects are considered to indicate unsoundness; *Lameness*, through any cause; *pumicid foot*; *sand-crack*; *spavin*; *spelit*;