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AGRICULTURAL

GUANO.

Answers to Inquires.

To the Editors of the Richmond Whig:

Since the publication in the Whig a month or two past of the article on guano, I have received various enquiries relative to its use, on points which were not treated, perhaps with sufficient clearness. I have been asked

1. What is the best time to put it on the land? Should the ground be first fallowed, or may it be spread on grass land and then turned in?

Guano should be applied as nearly as possible at the time of seeding. If the land has been already fallowed, it should be got in with the wheat, and by the same operation; but intsead of the harrow, a shovel plough or trowel hoe should be used.—These implements stir the soil to the depth of three or four inches, and thoroughly incorporate the guano with it. The action of the harrow is too superficial. Much of the guano would unavoidably be left on the surface, and its volatile ingredients pass off into the air. A beautiful preparation would be to re-fallow with a single horse plough, covering the seed and guano at the same time. All land ploughed for Wheat in September and subsequently, might have the guano turned in at that time, for at such a depth there would be little or no loss.

2. Should the guano be ploughed in as soon as it is put on the land, or will it remain on the surface a short time without loss?

It should be covered or mixed with the soil as speedily as possible. The carbonate of ammonia is exceedingly volatile, and it constitutes one of the most active ingredients of guano.

3. Does guano afford a permanent improvement to the soil, or does it act on the first crop, and then leave the land as poor as it was before?

If guano is used injudiciously or in inadequate quantities, the effect will not remain beyond the first season. It is used injudiciously when not sufficiently mixed with the soil, or covered at a depth of several inches. It will in no case answer as a top-dressing for wheat or grass, in our climate If it is only applied to land in small quantities, though it may be used in the best manner, the first crop will take up the whole. If permanent effect, not less than 200 or 250 pounds to the acre should be used, and the wheat should invariably be succeeded by clover. If weeds alone are permitted to occupy the land after the wheat has been removed, even this quantity of guano will fail to add any decided improvement to a subsequent crop. But with the aid of clover, which establishes itself during the growth of the wheat, a rapid system of improvement is within the reach of every farmer. Guano will not only pay for itself twice over in the crop of wheat, but will also produce a luxuriant crop of cover for the benefit of after crops of grain as has been proved in hundreds of instances. By this means one application of guana at the commencement of every rotation, will amply serve for every crop during the continuance of that rotation. If the course of cropping be wheat, clover, corn, it is readily perceived how the corn crop is benefited, Or if the farmer would prefer a rotation of five years—which would certainly be more profitable—and put his corn-ground in oats, there would be strength enough in the soil to perfect the three crops of grain, provided the land has the benefit of two years of clover: for any land in tolerable heart will yield a good crop of oats after corn.

But with the assistance of guano there is no necessity to have any regular rotation. A grain crop may be taken from the land every year, if yearly applications of guano are made. I know for instance, of a lot which has been seeded to wheat for several years in succession, the product of which has been greater and greater every year.—Thus, if a farmer wishes to change his course of cropping—or if he wishes to seed an extra quantity of land in wheat—or make an alteration which may be desirable—it is entirely within his power to do so by the aid of guano, at the same time that his outlay in that article will be repaid by one hundred per cent of nett profit.

All things taken into consideration, there never has been a period in the history of our country when the farmer has had it in his power to realize so much clear profit from his land as at this time. It is true that agricultural products have sometimes, from temporary causes brought, enormously high prices, but the farmer has seldom derived any permanent benefit from them, since he was under the necessity of supplying his own wants at prices proportionably high. It is no longer indispensible to be the owner of fertile lands to make the cultivation of the earth a profitable business By means of guano and the various artificial fertilizers which the spirit of the age has brought into requisition, all distinctions between a poor soil and a rich one are capable of being levelled. He who uses none of these agents, is absolutely behind the times; and it makes no odds how soon he is laid upon the shelf, that he may give place to others more active than himself.

As applicable to these remarks, and for the encouragement of those who may not have determined to use guano this fall, on their wheat, I will state the results of one or two trials on the crop lately harvested, which were made by some of my nearest neighbors. One of them put guano on a portion of his field at the rate of 250 pounds per acre. The wheat was not seeded till the last of November, and did not vegetate until the warm weather immediately preceding Christmas. By accurate measurement with the chain, the quantity of land is 11¼ acres; and by the receipts of the miller the product was 242 bushels, being 20½ bushels to the acre.—Had the crop been sowed at the best season, we are at liberty to conclude it would have been greater. On the land immediately joining, to which no guano was applied, the product could not have exceeded 5, or at most 6 bushels to the acre. A part of the guano portion was sowed in clover, which has taken well, and now presents a luxuriant appearance. Another of my neighbors, whose land is light and sandy, and who has not been in the habit of growing wheat, sowed 11 acres, the greater part was very poor, and none of it rich. He had 600 lbs of guano, which he scattered over the thinnest parts. The product was 130 bushels being nearly 12 to the acre. Let these products be compared with the crop of another gentleman, immediately adjoining, who has for a number of years been carefully improving his farm by liberal applications of manure, until he has brought it to a high state of fertility. He used no guano; and though his wheat was beautiful and luxuriant, and highly creditable to his skill as a farmer, yet he reaped only 14½ bushels to the acre.

Will not facts like these induce every farmer who can possibly spare the money, or even borrow it, to make a liberal use of guano? J. S. PLEASANTS.

Petersburg, Sept. 1849.

On the Mismanagement of Stable-Dung Manure, especially as regards Exposure to Rain.

—Whilst, at a vast expense, the farmer is importing bones from the shores of the Black Sea, nitrate of soda from South America, guano from the cost of Peru and from the African coast, he is, in oo many instances, negligent of the manure that his stable and stalls supply. This negligence has been pointed out, and emphatically dwelt on, by every recent writer of authority on agriculture. As regards exposure to rain, and the injurious effects of it on the kind of manure just alluded to, examples of it, in this part of England (Westmoreland), where an unusual quantity of rain falls, are of every-day occurrence, and almost every where to be met with; the instances of neglect constitute the rule; of care and attention, the rare exception to the rule. The farm-steadings here are commonly on declivites; the Dung-heap is usually placed on a declivity, often by the side of a road, and, in consequence, after every shower of rain, the water that runs off, percolating through the manure, robs it of some of its most valuable ingredients, especially its soluble salts, and soluble animal and vegetable matter, tending to starve the fields and polute the roads. I have had the curiosity to collect portions of such drainage, and subject them to examination; and I now purpose to give the the results, as they show, in a very marked manner, the injurious effect and how great is the loss to the farmer in consequence. The first portion collected was from a heap of Stable dung, fresh from the stable just before a heavy fall of rain, the accompaniment by a thunder-storm, nearly an inch falling in three hours. The water which ran from the dung-heap was of the color of a weak diffusion of coffee, of sp. gr. 1002, to pure water as 1000. With the peculiar smell of stable dung, it had just perceptible smell of ammonia, which was rendered more distinct by the addition of lime. Under the microscope, it was found to contain, besides a fine granular matter, and many minute vegetable fibres and scales, particles resembling grains of pollen, and two or three different kinds of animalcules. Evaporated to dryness, it yielded 2.6 per 1000 of brown matter, which partially deliquesced on exposure to a moist atmosphere; emitted a very faint smell of ammonia when mixed with lime, indicating that in the process of evaporation, most of the ammoniacal salt had been expelled, and was therefore carbonate of ammonia; and when incinerated afforded as much as 51 6 per cent of grey ash—48.4 per cent of the extract having been destroyed by the fire. which may be considered as animal and vegetable matter. The ash was found to contain the sulphuric, phosphoric and carbonic acids, and chlorine, with potash, soda, lime and magnesia, chiefly in the form, it may be inferred, of carbonate of potash, phosphate of lime, sulphate of lime, sulphate of magnesia, and common salt.—The proportional quantity of the sulphate of lime was large, as was also that of the fixed a kaline salts, whilst that of the phosphate of lime and the magnesian salt was small. The next specimen examined was from a much larger and older dung-heap, after a fall of 1-12 inch of rain in about 12 hours. The fluid was of a darker brown than the preceding, very similar in its appearance under the microscope, of higher sp. gr., viz: 1008, and yet less rich in ammoniacal salts for when mixed with lime, it gave only a very faint smell of ammonia; and its extract obtained by evaporation, when mixed with lime, had no smell of the volatile alkali. It yielded, on evaporation, 10.4 per 1000 solid matter, similar generally to that obtained from the first portion in its qualities, abounding, in like manner, in salts, and those of the same description. The third specimen collected for examination was from the same dung heap, after a fall of 2-79 inches of rain, in 24 hours. It differed so little from the preceding, that it is not necessary to describe it particularly. As might have been expected, it was more dilute, its sp. gr. being 1004. The last specimen I shall notice was one procured from the same dung-heap, after four days of dry weather following the heavy rain last mentioned. It was oozing out in small quantity; was of dark brown hue, nearly transparent, and almost destitute of smell. Under the microscope it exhibited a few particles and fibres, a very few minute crystals, without any animalcules. I had expected to have found it a concentrated infusion of the dung-heap, as such, of nigh specific gravity; but it was otherwise; its specific gravity exceeded very little that of the preceding, and was less than that of the second portion, being only 1005, leading to the conclusion that the manure was nearly exhausted of its soluble matter. The weather, during the four days without rain, was comparatively cold for the season (it was in September) with a northerly wind—the thermometer, even by day, below 58°, and at night once or twice approaching the freezing point This low temperature must have checked or put a stop to fermentation, which, in its turn, might have prevented the further formation of soluble matter. The infusion mixed with lime indicated the presence of ammoniacal salts; it emitted a pretty strong smell of ammonia; and, judging from the effects of other reagents, its composition was very similar to that of the preceding portions, it probably contained a larger proportion of vegetable matter, humus, humic acid, than the earlier dreinings; it gave a very copious precipitate with the acetate of lead. The bearing and application of these results hardly require to be pointed out. As the drainage of the dung heap exposed to rain contains some of the best—the chief ingredients of active manure, (excepting always the insoluble phosphates,) it follows, that the more the dung is exposed—the more it is subjected to the washing and percolation of rain water—the greater must be its loss, the more exhausted it must become; and that shelter from rain is essential as a prevention; such a shelter as can only be well secured by a shed, under which the manure, if too dry, may be watered with the liquid that may have run from it, received into a tank; and be subjected to such treatment, from admixture or otherwise, as has been found by experience likely to render it more efficient. These results, moreover, I need hardly remark, are perfectly in accordance with the experience of intelligent farmers, in many instances on record, of the extraordinary fertilizing effects of irrigation with waters—the washings and drainage of the farm yard and dung heap.

[John Davie, M. D in the Edin. Phil Journal.—The Oaks, Ambleside, October 12, 1844.

MANURE FOR ONIONS.

For the information of "J. C. C.," of Exeter, (p. 225,) I beg to say that last year I had one of the finest crops of Onions I ever saw; they were cultivated as follows:—The ground (which is a stiff loam on the lower oolite,) was ridged up before winter In the middle of March the ridges were levelled, and about 3 inches in thickness of compost was spread and pointed in so shallow as to be only barely covered with earth. The seed was immediately after, wards sown in drills 9 inches apart, and between every five rows was an alley 18 inches in width. Waterings were frequently applied during the early growth of the crop; and it was twice watered with water in which guano was dissolved, The compost consisted of about one-third well-rotted hot-bed dung, one-third old night-soil, and the remainder of wood ashes, and black woollen manure, from clothing factory in equal quantities; the latter contained a considerable quantity of oil. The whole had been well mixed together some months before it was applied. [Cultor.

Cure for Cancer.—Perhaps I can confer a favor on some of your subscribers, by giving a very simple and effectual cure for Cancer The extract of wood sorrel, used as a plaster through the day, and slippery elm at night, will cure any cancer that has ulcerated, or that has not live skin over it; in that case the skin should be broken in some way. To burn a piece of punk on the place is a good method, then apply the salve as before directed. The extract is obtained simply by pounding the common sorrel in a morter or other vessel, and pressing out the juice, then put it in a pewter dish or basin, and place it in the sun until it dries to the consistence of tar, when it is fit for use. [*Indiana State Journal.*

Remady for Lockjaw.—When one runs a nail or sharp iron in any part of the body, take a common smoke-pipe, fill it with tobacco, light it well, take a thin cloth or silk handkerchief, place it over the bowl of the pipe, and blow the smoke through the stem into the wound; two or three pipes full will be sufficient to start the wound discharging. I have tried it on myself and five others, and found it to give me immediate relief.—If the wound has been some days standing, it will open it again if the tobacco be good. Try it, any one who may chance to get such a wound.

Cure for Rheumatism.—The following are said to be good lotions for the evils of rheumatism. As they are simple, they can be fairly tried by those afflicted with those evils.

Inflamatory,—Half an ounce of alum, half an ounce of pulverized salt-petre, put in half a pint of sweet oil; Bathe the parts affected.

Common Rheumatism.—Take a pint of the spirits of turpentine to which add half an ounce of camphor. When dissolved rub it on the part affected, and it will never fail of removing the complaint. Flannel should be applied after the part is well fomented with turpentine. Repeat the application morning and evening.

Cure for the Piles.—The following simple application will certainly cure this most distressing complaint. It has been tried by many and found successful:

Take three ounces of pulverized alum, and place it in a belt made of cotton drilling, two inches in width, and wear the belt around the body above the loins. It should be worn next the skin. Its operation is slow but certain.—*Salem Ob.*

THE USE OF FLOWERS.

BY MARY HOWITT.

God might have the earth bring forth.
Enough for great and small—
The oak tree and the cedar tree—
Without a flower at all.

We might have had enough, enough
For every want of ours,
For luxury, medicine and toil,
And yet have had no flowers.

The ore within the mountain mine
Requireth none to grow,
Nor does it need the lotus flower
To make the river flow.

And clouds might give abundant rain,
The nightly dews might fall,
And the herb that keepeth life in man
Might yet have drunk them all.

Then wherefore, wherefore were they made,
And dyed with rainbow light,
All fashioned with supremest grace,
Up-springing day and night—

Springing in valleys green and low,
And on the mountain high,
And in the silent wilderness.
Where no man passeth by!

Our outward life requires them not—
Then wherefore had they birth?
To minister delight to man—
To beautify the earth—

To comfort man, to whisper hope
When'er his faith is dim;
For, whoso careth for the flowers.
Will much more care for Him.

The following facts are worth the consideration of the Members of Clubs.

Destruction of Sparrows and other Birds.—Mr. Bradley, in his general treatise on Husbandry and Gardening, shows that a pair of sparrows during the time they have their young to feed, destroy on an average every week 3,360 caterpillars. The calculation he founded on actual observation, having remarked that the two parents carry to the nest forty caterpillars, &c. &c., in an hour. These birds likewise feed their young with butterflies, and other winged insects, each of which, if not destroyed in this manner, would be the parent of hundreds of caterpillars.—[A correspondent of ours, who has paid much attention to the rearing of butterflies, &c. in order to obtain perfect specimens for entomological cabinet, had 840 caterpillars hatched from the eggs laid by one female, of this tribe of insects, in the course of a few days.]—A gentleman writing on the use of birds, in the "Horticultural Register." states that the gold-crested wren, willow-wren, or hay-birds, and chiff-chaff, eat insects only.—Where they may be plentiful they may be of great use in thinning, on their first appearance, wheat-flies, blue-dolphin, hop-flies and the tea-plant aphides.—This is important, for one of these insects killed on their first appearance will prevent the breeding of thousands, Gardeners are prejudiced against the hay bird or cherry chopper, but it does not taste either cherries or strawberries, but the cherry pant louse which ravages cherry leaves in April. Nightingales eat insects only; so do the win-chat, the stone-chat, wheat-ear, pippits and wagtails. Every means should, therefore, be taken to encourage them to breed, by protecting their nests. The principal insect-eating birds, which partially eat fruits or seeds, are the common wren, house and hedge-sparrows, red-breast chaffinch, black-cap, garden-warbler, and the greater and lesser white throats, also the tomtits. The march-tits eat insects chiefly, but also eat farinaceous seeds as those of the sun-flower, or peck a bit of ripe pair or apple; but such damage is trifling, and is a reward which should not be grudged, considering the great good which they do both to the farmer and gardener.

BOMMER METHOD.

From the Germantown Telegraph.

Converting Vegetable Matter into Manure.—Various methods have been devised of late for converting leaves, baulm and other vegetable substanses into manure. These, doubtless may be rendered of immense importance to the farmer, by their conversion into the food of plants—a result which, by the ordinary process of putrefactian and decomposition, is accomplished slowly, and not unfrequently with great loss to the farmer as much of what in reality constitutes the most valuable part or essence of the decomposing materials, is unavoidably dissipated and borne off.

The system of Bommer, together with numberless others of a cognate character, promisses to be of great advantage to the agriculturist, and is, in my opinion, entitled to a much higher degree of consideration and respect, than it has yet received. It is nevertheless true, that those who avail themselves of the benefits of this system, are required to pay, a small amount for the right; but in this catchpenny world, *all* things of real value, as well as many things of *no* value—have their price; but in recommending a system by which a farmer is enabled to secure to himself an immediate and unquestionable advantage from what is usually considered a useless incumbrance to the soil—even though it subject the operator to some expense in procuring the "*right*"—I feel that I am amendable to no charge or imputation which a single breath is not sufficient to refute.

I am persuaded that—if results are to be relied on, Bommer's manure is eminently deserving all the praise it has received, and that Bommer himself should be contemplated, not by any means as a crafty speculator, or empyric in agricultural chemistry, as some pretend to designate him, but as a man of profound experience, and a perfectly safe adviser in the great business which he has undertaken. Still, no one can avail himself of the advantages resulting from the discoveries made by him without a disbursment; and this I have no doubt, although *a small objection, in itself considered* will be the means of deterring hundreds—ay, thousands from participating in the good it is calculated to effect.

In this way it is certainly possible for the farmer to avail himself of a very efficient and valuable assistant, and at comparatively small expense. If, indeed, we look at the increased value of the pasture lands, which may be cleared of extraneous herbage, and deteriorating vegetables of all kinds to supply the decomposable organic materials for the combustion, the process will appear any thing but expensive. Many of our pastures are almost wholly covered over the extent of their surface with shrubs and other species of worthless vegetation, which greatly circumscribe the range of food, and materially detract from their value—all of which by this process, may be converted to a valuable use and made to contribute an important and lasting benefit to the soil.

I hope the numerous readers of the Telegraph, who are interested in agricultural improvement, will candidly ponder this suggestion; it is worthy of their attention, and cannot be examined too carefully, or *too soon.*

A Montgomery County Farmer.

PRECIOUS METALS.

The amount of gold and silver in the world is generally estimated at ten thousand millions of dollars, whilst the annual consumption, or rather demand, is supposed to be one half of one per cent. of this sum, that is fifty millions dollars. There appears to be no accurate date as to the annual protection of these metals; the whole is a subject of speculation. From the best sources of information that are open to us, the yearly production of silver may be set down at twenty-five millions, and of gold from fifteen to twenty millions. Starting from this point, which may be considered as approaching accuracy, the expected yields in the California mines will only about keep the stock in the world good. No perceptible change in the value of gold has ever been produced by the large quantities which have been hitherto acquired amounting to one hundred and twenty-five millions from Russia alone, within a quarter of a century. Whatever may be the amount raised from California, the result will be to enlarge the consumption for purposes of art and luxury, whilst its commercial uses will remain unchange.

Willis & Co's Bank Note List.

ALUM.

The uses of alum are manifold and important; incorporated with paper it presents a hard smooth surface, fit for writing upon; furriers employ it in the preservation of the hairy covering of skins, it retards putrefaction in animal substances, and hardens the tallow used for candles. Its astringent properties, are valued in medicine, and its costic properties, as calcined alum in surgery. But it is in dying that the use of alum is most important and most widely diffused. It is rare that coloring matters present any affinity for the substances to be died; most of them would disappear with the first washing were there no medium by which they could be fixed. The substance employ for this purpose is called a *mordant or biter in*, and in this respect alum holds a pre-eminent rank.—This mineral is also made subservient to other less praiseworthy purposes; bakers use it to give a good color to bad flour, and to swell a comparatively small lump of dough into a large loaf; iced ginger beer and lemonade, offered for sale at railway stations and other places in England, if narrowly inspected, will be found imbedded with lumps of alum which pass very well for ice.

From the Scientific American.

CRAPE SHAWLS.

There are many who may not know how the Canton Crape is made, and a short sketch may not be out of place. When the crape shawl comes from the weaver's loom, it is perfectly smooth and resembles gum silk cloth. But the thread with which this cloth is formed are made with one thread harder than the other, and for deeper craping the warp is harder twisted than the welt. The difference of twist in the warp and welt as the crapes are twilled, forms all the crimping of the crape, but not until it undergoes the process of boiling. This is done by boiling the shawls in fine white soap for a considerable time, which removes the gum from the silk and by the warp swelling more than the welt the shawls come out of the boiler with that fine crisp so much admired. All this crisp can be shaken out again by stretching the shawls on stenters—hence in the dressing operation care must be exercised not to stretch them too much.

The embroidery of these shawls is performed after the gum is removed. For this purpose the pattern is printed on the shawls with fugitive blue, and the flowers are then wrought with the needle. After this the shawls are sent to the dyers to be dyed and dressed. Sometimes they are embroided before the gum is boiled off, but this is good method, a silk is deteriorated in lustre by boiling in soap any longer than merely to remove the gum, and to embroider with spun silk on the gummed fabrick, would require the embroidery silk to receive two much boiling, and thus dim its lustre.

The use of soap to remove to the gum of raw silk cannot be recommended, but it is the best and the cheapest with which we are acquainted. Many of our fair ones will no doubt be surprised to be told that their crape shawls have been boiled for two or three hours in soap. Many suppose that boiling in soap would utterly destroy any silk fabric. This in a measure is true; the operation is a nice one—but there is not silk dress worn in our city that has not in the yarn been boiled in soap.

The reason why the Chinese finished silks have a finer lustre than the English and French, is owing to the gum being removed by a tedious and expensive process of steeping the silks in a cold spirious liquor. In the raw state before the gum is removed the crape is of a dirty yellow collor, but the boiling in soap removes the yellow gum, and the whitish silk appears.—But still it is not yet white. It has to be dyed for this purpose. Some may think this strange, but it is a practical fact. It takes red, blue and yellow rays of light to form a white ray—a trinity, like the great Author who created what Milton terms

——Holy light,
Offspring of Heaven's first dawn.

The dyer, to make his crape shawl white, uses in clean soap for that purpose a little archil and fine indigo strained through a cloth. These colors, mingling with the yellow of the shawl, form a white, which is further cleared up by the shawl's being washed out of the soap in cold water, and afterwards submitted to the fumes of sulphur in a close room.

Crape veils are very expensive, and containing, as they do, so little silk, this seems unreasonable—but the fine crape manufacture is in the hands of a few foreign houses, and the art of dressing the crape is both a tedious and a troublesome process.

In the last volume of the Scientific American a patent process for dressing fine crape shawls was described. It was to use a small quantity of dissolved gum copal and borax, along with liquid glue to stiffen the crape. This composition, if rightly made and applied, we have reason to know, is good and is worthy the attention of those in this and other cities of our country, whose business it is to redress damaged goods.

MARRIAGE.

I never knew a marriage expressly for money that did not end unhappily. Yet managing mothers and heartless daughters are continually playing the same game. I believe that men more frequently marry for love than women, because women think they will not have a better chance, and dread being independent. Such marriages, no doubt, prove comfortable, but a greater number would have been far happier single. If I may judge by observation of such matters, marrying for home makes that home a very tiresome one. [*Mrs. Child,*