

NOTES ON A VISIT TO CORNWALL

Visited Truro, Cornwall, with Mr. F.A. Secrett on October 11th and 12th, 1935.

We reached Truro at 9.58 p.m. by the 3.15 from Paddington and stayed at the Red Lion Hotel, Truro. Comfortable hotel, close to the Cathedral.

Interview with Mr. Speers, Clerk of the Cornwall

County Council, at 10 a.m., 12.10.35: Mr. Secrett and the Chairman of the Agricultural Committee of the Cornwall County Council ^(J.G. Seale) present. We discussed the utilization of the Municipal Wastes of Truro and other Cornish towns for the benefit of horticulture. He had read my memorandum on Town Wastes and wanted to know about mechanisation. I suggested we should begin on a small scale by hand and only mechanise when necessary. If we start on an ambitious final programme we are certain to waste money. We should employ as many men as possible and spend our income from ^{Sales} ~~subscriptions~~ on wages. All agreed not to get mixed up with patents. F.A.S. said he would wash his hands of the scheme if Sams were brought into the matter. I explained that I did not want any post or salary as I was interested and wanted to get the process taken up in England and that Cornwall was a good place to start as they had a growing

Visit to Cornwall.

(and had the Suffolk
F.A.S.)

2.

flower and vegetable industry, ~~and~~ were short of ^{humus} ~~business~~.

It was agreed to call a Conference on October 30 of representatives of the N.F.U., the vegetable and flower growers, etc. I promised to prepare a memorandum and to let him have it by 22.10.35. This would be circulated and discussed.

F.A.S. will
hold a
prel. meeting
of the N.F.U.

Afterwards we saw ^{ei} Abbiss and ^{ei} Grigg (Agricultural organiser) for a few minutes. ^{ei} Grigg seemed keen.

Visit to Mr. Secrett's farm at Little Treworder, Kenwyn (Tel. Truro 383). This farm lies on rolling ground a few miles from Truro, -- good communications -- . Fields small, separated by walls with hedges on the top. Very useful as wind-breaks.

We saw fields of broccoli, anemones (just in flower), and bulbs (just planted). All crops excellent, as would be expected.

We discussed making humus from waste products: the following wastes are available -- broccoli stalks, hedge trimmings, trimmings from the banks, f.y.m. and leaf mould, etc., from the woods. There are very useful strips for composting on the road sides and in the corners of the fields. Sludge and sea sand (high in lime) are available. Rain ample and well distributed. *Temperature favourable.*

The broccoli stalks and hedge trimmings could be disced before composting with sludge, sea sand and f.y.m. I

explained that in this way the f.y.m. would do double duty.

Secrett agreed to begin and ^{R.H.R.} Atkinson, the manager, seemed keen. They will compost all their waste products, using sludge and f.y.m. as starters and sand as a base. Woody materials can be prepared with a disc. Large quantities of hedge trimmings and bank trimmings are available, which would supply the lignified cellulose. The scrapings from the woods would also be useful.

Afterwards on the way back to London we discussed the best way of dealing with the town wastes, and S.S. of Truro, and agreed that a small scale trial, under cover, at Secrett's farm would be the best thing. In this way we

should have everything at one centre *and under control. We could then show people interested actual results & then have another making. F.A.S. slightly perturbed about the possibility of making a strike.*

LABOUR AND HORTICULTURE. The wages bill at Little Tre-
worder farm ^{was} ~~were~~ £5. before Secrett purchased the place.

It is now £70. a week. Hence the solution of the humus question in Cornwall will increase employment on the land.

Extra men will also be needed in making humus *at Truro &c.*

PLOUGHING UP LEYS FOR HORTICULTURE. Mr. Secrett keeps his leys down for two years, manures the land in the autumn and ploughs in strips so that the turf of the turned furrow falls on a strip of unbroken turf with f.y.m. in between. The Indore process is now at work in strips; the turf soon rots down and the fields are then disced. Such fields give good crops of brocoli. He agrees with Hosier and

*Sent
Atkinson 1/2/35
Lepus in
humus in
13. 10. 35.*

Visit to Cornwall.

4.

Stapledon that we have to exploit the ley. Stapledon does it with artificials (nitro-chalk and phosphates), Secrett with f.y.m. Secrett's method is the better one.

Returned to Paddington at 9.p.m. by the 2.10 from Truro. A most useful visit. A great change in the temperature was noted as we passed into Devonshire at Plymouth.

19 Oct. 1935⁴⁴

THE UTILIZATION OF WASTE PRODUCTS

IN CORNWALL

TOWN WASTES

The waste products of urban areas -- sewage and town refuse -- are looked upon as troublesome materials which have to be got rid of as quickly as possible. Whatever method is adopted, the process is very costly and there is little or no return in the shape of revenue.

A method has been devised, known as the Indore process, by which wastes can be converted into humus for the benefit of the land. This method is in use at a number of centres in India, Ceylon and East Africa. Town refuse and night soil are transformed into humus in about a month in such a manner that the fly trouble has been abolished and all nuisances effectively suppressed. This is brought about by copious aeration of the mixed refuse and night soil during the early stages of the fermentation. Provided the supply of air and moisture is properly adjusted, the fermenting mass darkens in colour, and a finely divided humus results which is exactly what the soil needs for the raising of vegetables and flowers. There is no smell.

An account of the Indore process, as applied to agricultural wastes, is to be found in the printed memorandum appended which was drawn up for use on the tea estates in India and Ceylon. An account of the process, as applied to town wastes, is also in existence. A copy has been sent to the Clerk of the Cornwall County Council.

The cost of converting the wastes at these centres is less than the sale proceeds of the humus. with failure. Any
 My proposal is that a small scale trial of the Indore process should be carried out near Truro in which the following materials are used:- town refuse, sewage sludge and sand containing broken-up sea shells. This latter is required to neutralise the excessive acidity. Where this cannot be obtained, a small quantity of soil can be substituted. I suggest that the first trial should be made under my personal supervision on Mr. F.A. Secrett's farm near Truro. He has very kindly promised to supply, at his own expense, the use of an open shed and the labour needed. He is also prepared to pay the municipality for the wastes which will be needed and also for any transport required. The resulting humus will naturally become his property and will be used on his farm. The results of the trial, however, will be brought to the notice of the County and Municipal authorities in Cornwall and to the horticultural and farming interests. It will then be possible to call a second meeting to formulate practical schemes for carrying on the work on a much larger scale.

The advantages of a small scale trial in the first instance are many and obvious. The municipalities of this country have been inundated in the past with costly schemes for dealing with wastes which often involve patent rights

and which have led to nothing except disappointment. The past history of the subject is strewn with failure. Any new method, therefore, must prove its worth by the one unanswerable argument -- S U C C E S S . . . A practical demonstration of the Indore process, as applied to town wastes, is the only way of getting away from the wreckage of old schemes and at the same time furnishing a convincing reply to the kind of questions which are bound to suggest themselves in a matter of this kind.

My proposal, therefore, as regards the utilization of town wastes in Cornwall is that a small scale trial should be made near Truro, at no cost to the city, the results of which, in due course, will be brought to the notice of all who are interested.

A practical demonstration of the conversion of farm wastes into humus is needed in Cornwall. Mr. Secrett has decided to convert all the wastes on his farm - such as broccoli stalks, hedge and bank trimmings, weeds, scrapings from the woods and so forth - into humus and has asked me to supervise the work. The results obtained will be on view about the time the trials with town wastes have been completed.

The proper utilization of the miscellaneous wastes of the farm will lead to a result which will appeal to the

FARM WASTES

agriculturist. ~~The~~ organic matter will be greatly increased. The farm-yard manure will also be made to do double duty: (1) to rot the farm wastes and (2) to raise the fertility of the land. No waste of manure is made of the waste products of the farm itself -- farm-yard manure and all kinds of vegetable wastes. These can be converted at small cost into humus by the Indore process.

Agricultural wastes are being turned into humus by this method all over the world. Many of the great plantation industries such as tea, coffee, sugar, sisal, maize and cotton have taken up the Indore process. An account of the progress made during the last three years will be given in a lecture to the Royal Society of Arts on November 13th next. I propose to offer 50 copies of this lecture, free of charge, to the Clerk of the County Council for distribution in Cornwall.

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HUMUS FROM LEYS

agriculturist. The volume of organic matter will be greatly increased. The farm-yard manure will also be made to do double duty: (1) to rot the farm wastes and (2) to raise the fertility of the land. No waste of manure is involved in all this. On the contrary, there is often a gain in nitrogen in the compost heaps by fixation from the atmosphere.

will provide food for stock and straw for manure. When they have finished their work, will provide humus, especially if they are properly decayed. In this matter the Ley has unconsciously adopted the Indore process and has already proved its value in Cornwall. He mowers the clover ley before it is ploughed up in strips so that the inverted turf and the undisturbed strip come together with a layer of farm-yard manure in between. The Indore process is then set in motion above and below the layer of manure. The turf is rapidly converted into humus. When the ploughed field is cross-disced, the humus is incorporated in the soil, the land is prepared for vegetables or flowers and the danger of wire worms is reduced.

HUMUS FROM LEYS

There is another source of humus for vegetables and flowers besides the wastes of the town and of the farm. This is the turf of the clover ley.

It is certain to pay to rotate the land under vegetables and flowers with cereals followed by a clover ley. The cereals will provide food for stock and straw for manure. Leys, when they have finished their work, will provide humus, particularly if they are properly decayed. In this matter Mr. Secrett has unconsciously adopted the Indore process and has already proved its value in Cornwall. He manures the clover ley before it is ploughed up in strips so that the inverted turf and the undisturbed strip come together with a layer of farm-yard manure in between. The Indore process is then set in motion above and below the layer of manure. The turf is rapidly converted into humus. When the ploughed field is cross-diced, the humus is incorporated in the soil, the land is prepared for vegetables or flowers and the danger of wire worms is reduced.

HUMUS FROM SEAWEED AND FISH REFUSE

The long coastline of Cornwall is certain to prove of great value in building up the horticultural industry. The harvest of the sea, in the shape of seaweed and fish refuse, can be made an important ingredient in the manufacture of compost. Besides yielding humus, seaweed and fish refuse contain iodine, which appears to be a factor in the development of high quality.

If it can be arranged, I should like to make use of these materials in the trials contemplated at Little Treworder. We should then have everything at one centre.

When this farm was devoted to horticulture, the weekly wages rose from 45s. to 67s.

There will be more produce to export and there will be more money in circulation. The country will help the town. Is it asking too much of the town to help the country by converting its waste into humus for maintaining the fertility of the land?

ALBERT HOWARD.

14, Richard Gardens,
Blackheath, S. E. 3.

19.10.35.

CONCLUSIONS

The advantages which will follow the universal adoption of the Indore process in Cornwall are these:

1. The volume of manure for the land will be largely increased. It will be at least doubled and may even be trebled.
2. Clover leys will be fully utilized as a further source of humus.
3. More labour will be employed on the land. What humus means in wages is shown by the experience at Little Treworder. When this farm was devoted to horticulture, the weekly wages rose from £5. to £70.
4. There will be more produce to export and there will be more money in circulation. The country will help the town. Is it asking too much of the town to help the country by converting its wastes into humus for maintaining the fertility of the land?

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14, Liskeard Gardens,
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19.10.35.