The attempts to make a commerce in ground limestone are sometimes lamentably absurd. Recently a party has proposed to introduce into Connecticut a "fertilizer," composed essentially of ground limestone which is quarried in Northern New York. No doubt it would do good on many a Connecticut farm, but carbonate of lime can be quarried in Connecticut itself, and can be brought from points in New York State much nearer than Lake Ontario. The persistent attempts that have been made to sell the shell marl of Central New York and other localities under various extraordinary names, as "The Bird Guano and Fertilizer," "Albemarle Fertilizer," "Lacustrine Fertilizer," and of course at an extraordinary price ($30 per ton), have not met with much success, for the simple reason that pulverized carbonate of lime is a very common substance and is therefore worth, commercially, but a very few dollars per ton.

For many years leached ashes have been extensively transported from Northern New York and Canada, to Long Island and Southern New England. In 1881 more than 250,000 bushels, or 4,500 tons, of this fertilizer were sold in Connecticut. Leached ashes contain two thirds per cent of magnesia, and about one per cent each of potash and phosphoric acid, with 35 per cent of moisture and worthless matters. They cost about $10 per ton, and their efficacy, which is often conspicuous and often imperceptible, chiefly lies in the 60 per cent of carbonate of lime which is their characteristic ingredient, and which they contain in a state of extreme subdivision and therefore prepared for immediate action.

Ordinarily, ground limestone cannot be nearly so quick a fertilizer as leached ashes, because its pulverization is comparatively very rough and imperfect. In fact, it is probable that for use as a fertilizer it is generally cheaper to burn the limestone than to grind it, especially when much transportation has to be undertaken, and for three reasons, viz.: 1. because 60 pounds of burned lime are equal to 100 of limestone; 2. because when slaked it is pulverized to a degree that no mill can possibly imitate or approach, and, 3, because a small dose of slaked lime—say 1,000 pounds or 20 bushels—equals for immediate effect five times or more that amount of ground limestone, besides benefiting some kinds of soil in a way not manifested by the latter. (1)

In conclusion, ground limestone may be in many cases an excellent fertilizer, but it cannot be indiscriminately recommended, and ordinarily cannot be sold for more than a few dollars per ton or be subject to any considerable transportation except at a loss to the consumer.

From Rural New-Yorker.

(1) The whole value of the article lies in this paragraph. A.R.J.F

De Omnibus Rebus.

I have always held that the analysis of soils was, as far as our present knowledge is concerned, time and expense thrown away. Professor Johnson, of the Connecticut Experiment Station, confirms me in my opinion.

"*Analysis of soils.*—Two samples of soils were sent to the station for analysis—one taken from different parts of a twenty-five-acre meadow, the other from a four-acre lot—to ascertain what fertilizers would be best for it. The first mentioned consists of black, moist earth, a foot deep, with some blue clay below and a gravel bed. Grass does not grow well on it, and the cause of the failure was desired. An analysis showed the presence of all the elements of plant-food, in sufficient quantity, and in as large a percentage as in some of the best wheat soils of Illinois. Unfortunately the analysis gave little information respecting the state of availability of the substances found, and gave no clue to the course of treatment for improving it. Prof. Johnson said, after making an analysis of the soil of the four-acre lot: "I cannot find in these figures any satisfactory explanation of its poverty. Everything required by crops is there. Some very productive western soils are no richer in potash. We have no satisfactory means of learning the availability of the substances present." In addition to the physical qualities and texture of the soil, which often have a controling influence, simple drainage and deep tillage may have a most important effect, and a flooded land, with a heavy manuring, may be of little value. Prof. Johnson remarks that a calculation will show what a chemist cannot possibly do. A hundred pounds of best guano has made all the difference between a poor and a good crop, although with but fifteen pounds of essential ingredients, and constituting, when dissolved and absorbed a foot deep, less than a hundred-thousandth part. But chemical analysis will not certainly show a ten thousandth part, and analysis may not distinguish between two soils, one of which has had a dressing of 1,000 pounds of the best Peruvian guano to the acre, and the other nothing. A similar course of reasoning was adopted by the writer of these remarks in an article published thirty-seven years ago in the Transaction of the New-York State Agricultural Society, where it was stated that a hundred pounds of gypsum to the acre had doubled the clover crop, constituting when dissolved only a fourteen-thousandth part of the soil, and that ten pounds had produced a very visible effect, although but a hundred and forty-thousandth part." *

* At that time, extravagant claims were made by some writers for what soil-analysis would accomplish, and the State Agricultural Society awarded to this essay a prize of $100, although not offered by the writer for any prize. See N. Y. Ag. Trans. for 1845.

I have made lots of superphosphate on my farms in England. To avoid the chance of injury to the clothes or person of the workmen, I found it desirable to place the carboys of acid on a raised platform, and empty them by means of a leaden syphon. A wooden tub of proper size does to mix in.

Home-made superphosphate.—A simple mode is described in the report for making superphosphate on the farm, when the materials are at hand and the sulphuric acid is easily procured. But the practice is not recommended for common use. The difficulty in avoiding injury from the acid by persons not thoroughly accustomed to handling it, and the defective character of the material manufactured, would usually constitute sufficient objections. An instance is described where everything appeared to be unusually favourable. A ton of bone-char was bought at iron works for eight dollars, and over half a ton of sulphuric acid was obtained at a cent and a half per pound. A bed like a mortar bed received 500 pounds of the bone-char and 15 gallons of water, and 300 pounds of acid were added from the carboy. The eyes of the operator were kept averted to avoid the spattering of the acid. The materials were worked over with a hoe, the escape of steam and carbonic acid producing much frothing. The ton and a half of superphosphate obtained cost $30, which was much less than the market cost of the fertilizer.

The report quotes the remark of Pro. Hilgard, of San Francisco, on the practice formerly recommended to use gypsum in reducing bones with ashes, that the gypsum destroys the solvent effect of the ashes on the bone tissue, yielding carbonate of lime and sulphate of potash, which have no effect on the bone."

Analysis, at the Connecticut station, showed that ensiled corn fodder suffered no change in the albuminoids, but there was a loss in sugar and other carbhydrates.

The following extract from one of the American agricul-