



# Some Significant Truths About The Good Earth

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Soil is the accumulated record left of the original rocks as worked over by the variable weather.

Soil is merely a temporary rest stop by the rocks on their way to solution and to the sea.

Soil is the creator of nutrition from the dead rock of the earth's crust below it, for the life forms within and upon it.

The soil is the starting point of the assembly lines of food production and of the creation of all that we call agriculture.

Postmortems never contribute very much to the good of the fellow who gives the information on that occasion.

Food is fabricated soil fertility.

We farm the soil, not the weather.

Crop juggling is no substitute for soil fertility in the proper climatic setting.

The new agriculture is asking the question, "Are we growing products only for sale or for better nutrition?"

We have been content with practices propagandized by the majority of prescribers, who usually have something to sell.

Plants are distributed over the surface of the earth according as they are nourished to provide the particular chemical compositions which they, as species, represent.

In our crop introductions, the so-called "new" and "imported" crops have been hailed as successes. This has rested too often on their ability to take less from the soil but more from the air, water and sunshine above the soil and to hide more cleverly their lower value as forage feeds than the crops they have displaced.

The declining supply of soil fertility has been pushing out of our crops their production of proteins and mineral-rich complexes. It has been pushing into agricultural prominence the carbohydrates so easily appreciated by present-

ly accepted criteria considering only weights, volumes and calories.

According as the kind of forage is one which falls lower in the fertility of the soil it requires, apparently it is likewise one that not only tolerates wider fluctuations in its chemical composition to be more deceptive in its feed value but is also "easier" to grow.

Much that may appear to be science taking the lead in agriculture is only science following to explain some of the age-old empiricisms in the art of agriculture.

As the soil fertility declines, the particular plant species in dominance shift to those making more use of air, water and sunshine, and less of the soil, in the construction of their bulk.

In agricultural production we are slowly coming to consider the higher nutritional quality in our foods and feeds grown on fertile soils as more important than our transitory reactions to questions of price and monetary earnings only.

The soil fertility on an individual farm can be depleted enough through failure to return manure, crop residues and other fertility forms in a single human generation to shift that farm from a place of good health to one of deficiency diseases for the farm animals and for the farm families on it.

The fringes of soil fertility are also the fringes of nutrition.

Man has not thrived and multiplied much in the tropics. He scarcely survives except as he keeps intact his lifelines reaching to the rivers and to the sea. Carnivorousness is the dominant order of wildlife there, hence also cannibalism is not unexpected as the occasional order of man.

The American bison didn't get his cal-

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cium from the mineral feed box. He preferred to stay where it came from the soil via the grass, like that in the Kentucky horse area, the limestone valleys of Pennsylvania or the plains of the West.

The time and the information have come for us to forget that we are putting limestone as a carbonate on the soil to fight acidity. We are putting it on as a calcium and magnesium fertilizer.

Should we be startled by the fact that better bodies of boys going into the Army from Missouri are related to the better soil just as the bigger and better bodies of her cottontail rabbits are?

Unless the clay of the soil carries plenty of calcium or lime, that clay may be *taking*, rather than *giving*, other nutrients to the plant roots.

We have often been told that "armies march on their stomachs." We have not been told that our stomachs feed us according to the fertility of the soil growing the food.

The cow, as the foster mother of the human race, gives support to its babies according to the soil fertility that supports her.

The advances in our knowledge about soil processes carry with them the concept that soil acidity is not detrimental to crop production because of the incidence of acidity, or of the hydrogen ion. Rather, the detriment by soil acidity results because of the exit from the soil of the fertility replaced by the hydrogen ions. Excessive soil acidity is merely a pronounced depletion of the plant nutrients from the clay.

Lime in the soil is related to the quality of the food which that soil delivers.

We are about to appreciate the fact that our soil fertility is the place where we may undergird rather than continue to undermine the national health.

Quality rather than quantity as the criterion for agricultural production is

taking on increasing importance.

It has now become hopeful to link man to the soil and the soil fertility, in spite of his nomadic wanderings and much of his nourishment from far-flung food sources.

Aids in overcoming distance and time have encouraged us to wander on to soils where either insufficient rainfall and improper temperature have not made them fertile enough, or where excessive climatic forces have destroyed the soil's fertility in relation to our complete nutrition by the products grown there.

Like the young and inexperienced hound, we run within the pack of humans in place of smelling out the trails of nature.

Water has been the great alibi. We have believed the plant concerned only about its drink. We have simply not seen the soil, nor the plant's concern about something that is truly plant nourishment for biosynthesis by it of proteins and higher food values.

Under variable weather the plants lose water according to the soil and meteorological conditions and not according to the plant species or plant pedigree.

The inorganic nutrient elements within the soil, like the fish in the stream, are not victims of the plant's transportation current. They move either with or against it according to the forces controlling them.

Lower densities of populations of any life are ecological suggestions that its representatives are suffering nutritional deficiencies, or are even disappearing. This takes place because they have been pushed on to those soils where the particular combination of climatic forces made soils which are failing to provide the fertility required for growing the complexities that nourish them.

Balanced farming is built on balanced fertility of the soil.

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