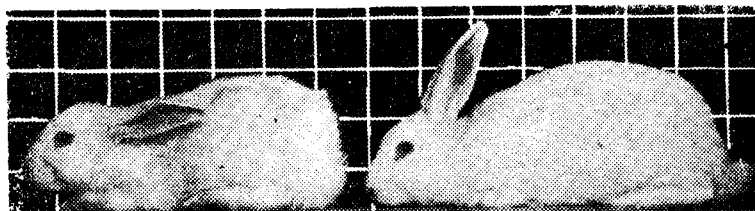


# "We Are What We Eat"



PICTURED ABOVE ARE FOUR STACKS OF HAY, THE ONE AT LEFT GROWN ON SOIL-TREATED LAND, THE OTHERS ON LAND THAT WAS NOT TREATED. COWS, WITH ACCESS TO ALL FOUR STACKS, ATE FROM THE SOIL-TREATED HAY, IGNORED THE OTHER STACKS.



THE RABBIT AT RIGHT, HEAVIER AND HEALTHIER THAN THE ONE AT LEFT, WAS FED FOOD FROM SOIL-TREATED LAND. THE ONE AT LEFT RECEIVED THE SAME AMOUNT OF FOOD FROM SOIL THAT HAD NOT BEEN TREATED.

Out of the Soil Comes the Weal or Woe of Living Things, Believes Dr. W. A. Albrecht, Scientist at University of Missouri

By F. A. Behymer

A Staff Correspondent of the Post-Dispatch

COLUMBIA, Mo., June 25.

IT'S what we eat that makes us what we are. Eating the right food is good for us and eating the wrong food is bad for us. And that goes for domestic animals and wild life, the birds, the fishes and vegetation. The right food is the fruit of the soil's fertility. The wrong food is the fault of its infertility. Out of the soil comes the weal or woe of living things.

"Most everything is as it eats," says Dr. W. A. Albrecht, chairman of the Soils Department of the College of Agriculture of the University of Missouri, who has devoted himself to a study of soil constituents, their effects upon crops and, ultimately, upon animals and humans who consume the crops, during a considerable part of the time since he became a member of the faculty in 1916.

Out of his study has come the concept, supported by countless experiments and observations, that

soil fertility, as variously constituted for its various purposes, is the source of life's good and that its impairment or destruction is the cause of a great many of life's frustrations and ills. There is more to be learned and much to be done, but under the leadership of Dr. Albrecht and others following the same line of research, there is the beginning of a back-to-nature movement that gives promise of correcting many of the mistakes of man in his efforts to improve on nature.

Through the ages, before man came along, Mother Nature ran things and did a pretty good job of it. By tried and proved processes—the weathering of the rock, its disintegration and the distribution of its elements, the growth of vegetation and its decay, the procession of the seasons, the gifts of the sunshine and the air—she created and maintained the

fertility that was needed for all the forms of life. The plants tasted of the richness that touched their roots and found it good and flourished, each according to its fashion. The wild life of the forest fed upon it and was satisfied. The birds found the seeds that were suited to their needs and the fishes fed upon the nutrients that were washed from the land into the water.

Then along came man, looked upon what Mother Nature had done, and, true to the nature of the breed, found fault with it. The old girl had done the best she could, but give him time and he would show her a better way. Slowly through the years he supplanted her processes or bent them to his will and in the time of trouble, when wars raged and great was the need for the earth's products, there was want in the land, for the devices of man had failed.



DR. W. A. ALBRECHT OF THE UNIVERSITY OF MISSOURI.

There was dispersal of wild life and afflictions were visited upon the beasts that served man and even upon man himself.

These things happened because Mother Nature is shy. She doesn't fight for what she knows is best. Before man came she dwelt in peace with her plants and her wildlife. But when man found fault and set himself up as smarter than she and turned to ways of his own, she withdrew, as she always does when she is opposed, and left man to make his mistakes. Perhaps, after he had tried to improve on her and had suffered for his conceit, he would return in humility to her and place himself at her service.

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IT was a long time coming, for there was much richness stored in the earth, not quickly squandered by profligate spending. Man, not lacking in cunning, pitted his talents against the plagues that he had brought upon himself and sought the remedies that gave best promise of removing them. Then at last the wisest of the wise men found that the remedies that were best were to be found in the medicine chest of long-scorned Mother Nature.

Wild life, the wise ones say, has been diminished by migration and death, because of the disappearance of the foods that they require. That, in turn, has resulted from the depletion of the soil. Restoration starts with the soil and the production from it of the foods that were prevalent before man upset Mother Nature's provision for her feathered and furred children.

Birds and animals, says Dr. Albrecht, cannot be re-established where they used to be by such a simple expedient as planting, hatchings and colonies unless the soil where the plantings are made can produce the food upon which they live and without which they cannot live. Wild things are wiser than the wisest men. They know what foods they need to keep them alive, and select it unerringly if it is to be found. Whether it is to be found depends upon what has happened to the soil which grows the foods. They cannot be fooled by substitutes that are deficient in nutrients. They will eat these if they have to rather than accept the

alternative of starvation, but they will not thrive.

Tests have shown that animals pick the foods that they need, not merely those that they like. As Prof. Evard of Iowa State College has observed, a pig will make a hog of itself, if permitted its choice of foods, quicker than man can make a hog of it by forcing it to take the foods that are offered. For that reason it has become the common practice to provide self-feeders from which the growing pigs can select the foods that are best for them. It has been demonstrated that in making the selection they are not guided by taste but a deeper knowledge of their needs.

Cows, too, know what is good for them and make their selection by a perception more acute than test tubes provide. This has been proved by an experiment on the E. M. Poirot farms at Golden City, Mo. A prairie grass field was treated to restore to the soil nutrients that it had lost. At harvest time hay taken from 10 acres of treated land was mixed with hay taken from 15 acres of untreated land and this mixed product was stacked apart from the rest of the crop taken from untreated land.

There were four stacks in all. Three of them were so placed that the cattle had to pass them daily in going for water. The fourth, composed of the mixed hay, was placed beyond the other three. The animals passed the three stacks and went on to the fourth and fed upon it until it was consumed and then looked around for more of the hay from the treated soil. They fed at the other stacks only when there was no alternative. This has happened annually since 1936, when the first and only treatment was applied. Though the treatment was not heavy its effects in restoring nutrient elements to the soil have survived this long.

Dr. Albrecht recognizes in all living things a capacity for the selection of the foods they require to flourish, and that the required food values derive from the soil, so that not only vegetation is a soil crop but the members of the other kingdoms, birds and animals, fish and humans are also crops of the soil. This is something that all the other crops have always understood and the man crop is beginning to understand.

Wildlife understands it best and is more nearly a reflection of the soil than human life and domestic animals. In the natural state, with soil unimpaired, and supply ample, the choice of foods is unrestricted, whereas the feeding of domestic animals is directed by man and man's own feeding is subject to his caprice. ★ ★ ★

**E**VEN the fish, although water is their element, subsist on the food that is supplied by the soil, nutrients washed into the streams. Ponds can be made to support fish by fertilizing the adjacent land. So fish, though it seems strange, are a land crop.

Not long ago it was discovered that dental decay can be prevented with the right kind of soil. The discovery was made at Hereford, Tex., which came to be called the town without a toothache. The reason was sought and was found in the soil. Chemists found that foods grown in the area were astonishingly high in phosphorus, probably the most vital of all soil minerals. The conclusion was reached that it so vitalized the teeth that decay did not occur and aches did not have to be endured.

The theory is that tooth decay and many other structural impairments are due to phosphorus deficiency in the soil, brought about by bad farming, removal of crops and failure to replace the loss with fertilizer. It is believed that many diseases are the result of the inability of under-nourished bodies to resist.

"Perhaps," says Dr. Albrecht, "we shall eventually see that the animal and the human physiological pictures the world over are one and the same, blended in colors of brighter success or darker failure and pathos according to the soil selected wisely or unwisely for its fertility supply."

A better breed of men is visioned by Dr. Albrecht as a result of the restoration of the soil and a turning to it for the nourishment that is not found in sufficiency elsewhere. "Let us," he says, "entertain the hope that man, in good nutrition, balanced physiology, and resultant good health, may manifest his appreciation of and respect for life and that he may demonstrate the finer attitude and the nobler spirit."