the absence of organic matter, more nearly so than with phosphorus.

In this connection it is of interest that the successful production of bananas is closely associated with available supply of phosphorus. Bennett's suggestion of pH is only correct in as far as the desirable pH is incidental to a high available supply of phosphorus.

The problem of the South and the Tropics of maintaining the fertility of their soils is one of maintaining a high amount of available phosphorus. The incorporation of organic matter is highly important with a judicious application of mineral plant foods. In other words, the partial and sometimes complete failure of fertilizer, particularly superphosphate, is usually due to lack of organic matter in the soil.

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INSECTS AS POLLEN CARRIERS

IS it an instance of inheritance of acquired characters that we descendants of thrifty Yankee ancestors insist on finding "uses" for various objects in the universe? Nature, viewed by man, is the primary waster, in rather sharp contrast to the exactness with which her work is done. Dr. Frank Lutz, in a recent *Science Service* radio talk, "In Defense of Insects," deplores the method, wasteful and inefficient, of the production of vast quantities of pollen which is never used by anemophilous plants, only an occasional pollen grain finding a logical home. Dr. Lutz seeks to show the usefulness of insects in the economy of man, citing, in his argument, various plants, edible and otherwise serviceable, which depend for their genetic continuity upon insects that bring about cross pollination. Dr. Lutz, no doubt, knows his insects but perhaps he gives them somewhat too much credit for their beneficent attitude toward man so far as cross pollination is concerned. All important vegetable garden plants except corn, he tells us, come, directly or indirectly, from seeds resulting from insect pollination. This includes such plants as lettuce, the tomato, pepper, peas and beans, all of which are known to be self-pollinated, cross pollination by insects being the exception. The three textiles, linen, cotton and wool, are claimed by him as due to insects, the latter only indirectly. As a matter of fact, both the cotton and the flax plant are pollinated only occasionally by insects, depending mainly on their own resources and evidently well able to get along without insects at the present time. As for wool, practical sheepmen are *not* seriously concerned about clover in their pastures and no doubt many of the native legumes are self-fertilized. An important clover in New Zealand, *T. subterraneum,* is non-seed-bearing, while common red clover is not one of the important legumes in the lush New Zealand pastures. Tobacco is another plant specifically mentioned by Dr. Lutz as insect-pollinated, but here again this plant, if it ever depended on insects, has learned to "roll its own"; pollen carrying insects are less its concern than are the aphids which carry its mosaic. Coffee, tea and cocoa plants may be insect-pollinated but judging by the above examples, which have really turned out to be "horrible," perhaps the chances are only even. Dr. Lutz scarcely mentions the part insects might have had in the phylogeny of the higher plants, but his statement that there was no extensive growth of land plants before insects became well established means nothing, except to a teleologist, for the primitive plants of the early land floras, which built the coal measures, could not have depended upon insects for progeny. Perhaps pollen-carrying insects have been important to plants mainly from an evolutionary standpoint and only incidentally do they remain important as accessory to seed production. Plant evolution would have proceeded without insects, but quite certainly the plant world is richer and more complex because of insect cooperation.

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AWARDS FOR SCIENTIFIC RESEARCH BY THE CONGRESS

AT the annual meeting of the Illinois State Academy of Science in Peoria, Ill., on May 8, the president made this statement:

I hope that the time will come when our government will establish not merely medal awards but substantial money prizes to be given annually to Americans who have made the most noteworthy and valuable research contributions and that present limitations on the time of ardent research workers will be removed.

I have reason to believe that a bill establishing such awards will be introduced by an Illinois member at the next session of Congress, and I trust that this organization will be the first to approve it, not from any selfish motive but as a grateful recognition of a great service rendered.

Later in the session, the following resolution was reported by the committee:

> Realizing the large value and great importance of research along many lines and the benefits accruing to the people from inventions, explorations and discoveries in science, often the result of patient, persistent and painstaking endeavor,
>
> *Resolved,* that the Illinois State Academy of Science, while fully appreciating the recognition accorded such work, would respectfully recommend that Congress add