



# PERSPECTIVE...

## Economic Evolution and Changing Needs

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**S**IGNIFICANT FACTS that will dominate our future turn the pessimists' gloom into thrilling promise for tomorrow. We are already practicing methods that will extend all the various assets and resources of our planet far beyond any possible vision of ours, as we have seen. The pessimistic view is largely based on continuing our present needs and desires unchanged into the future. But that can only be true for a limited period. Now more than ever before, the whole basis of our economy is undergoing continuous evolution. Slow change affects our needs for various commodities and gradually alters their importance to us. The rise of automotive transportation sharply reduced our need for hay, once essential to feed draft animals. At the same time, it created a new need for gasoline to fuel internal combustion engines. In a similar way, other shifts are sure to come in our needs for commodities that are vital to us now as hay was to transportation half a century ago. These shifts may occur because this or that necessity becomes scarce and high priced; but, more likely, they will come about because some other newly discovered means will do a better job than the old one. Thus we shall, in the future, avoid famines for commodities by: (1) stretching our existing resources; and (2) shifting our needs to other materials before scarcity can approach starvation.

⌋ We must accustom people generally to think, as chemists do, not of coal, or oil, or farm land as what we need, but rather of heat, energy, and nutrition. Only in the particular terms of anthracite, or petroleum, or potatoes can our problems of the future become insoluble. In the broader view of heat, power, and food, no one can now foresee any remote time when these things shall become vital problems because of scarcity. Any conclusions

that we can now reach about the probable lives of our assets broadly defined and wisely used are not worth entertaining. Not only are great reaches of time involved, but what is more important, we are always dealing in any forecast with a shifting base, a changing economy.

Agriculture is just now ready to emerge from haphazard dependence on chance and variable seasons. Our small pilot-plant ventures into hydroponics are already shifting emphasis away from the soil, which supplies moisture and minerals, to sunshine, the true source of plant energy. We cannot yet discern the manifold implications of this shift, but certainly it will give new directions to agriculture and food production as soon as economic forces justify it. Perhaps the most striking effect will be to move "farms" in the new sense from deep and fertile valleys up to high ground, even to mountain tops. This apparently silly move would ensure that the sunshine reaching the leaves of plants is not filtered through thick, energy-absorbing layers of dusty air. Moreover, specially designed systems could be built to hold rain water at high levels to supply these hilltop "farms" and let the excess drain downhill through power-producing machinery. River-bottom farms will gradually lose their importance with the dwindling need for soil and its native fertility. Implications of that single change in food production tax the imagination. Its indirect and remote consequences are beyond our power to foresee on the basis of our present meager experience of hydroponic farming.

*(Excerpts from "Two Ears of Corn, Two Blades of Grass," by D. H. Killeffer. Copyright 1955, D. Van Nostrand Co., Inc., New York, N. Y.)*