

# NEW INTRODUCTION

BY WENDELL BERRY

IN 1964 MY wife, Tanya, and I bought a rough and neglected little farm on which we intended to grow as much of our own food as we could. My editor at the time was Dan Wickenden, who was an organic gardener and whose father, Leonard Wickenden, had written a practical and inspiring book, *Gardening with Nature*, which I bought and read. Tanya and I wanted to raise our own food because we liked the idea of being independent to that extent, and because we did not like the toxicity, expensiveness, and wastefulness of "modern" food production. *Gardening with Nature* was written for people like us, and it helped us to see that what we wanted to do was possible. I asked Dan where his father's ideas had come from, and he gave me the name of Sir Albert Howard. My reading of Howard, which began at that time, has never stopped, for I have returned again and again to his work and his thought. I have been aware of his influence in virtually everything I have done, and I don't expect to graduate from it. That is because his way of dealing with the subject of agriculture is also a way of dealing with the subject of life in this world. His thought is systematic, coherent, and inexhaustible.

Sir Albert Howard was born in 1873 to a family in Shropshire, and he died in 1947. He published several books and also many articles in agricultural journals. His best-known books, *An Agricultural Testament* (1940) and *The Soil and Health* (1947), were addressed both to general readers and to his fellow scientists.

*An Agricultural Testament* and *The Soil and Health* are products of

Howard's many years as a government scientist in India, during which he conceived, and set upon sound scientific footing, the kind of agriculture to which his followers have applied the term "organic." But by 1940, when the first of these books was published, the industrialization of agriculture had already begun. By 1947, when *The Soil and Health* was published, World War II had proved the effectiveness of the mechanical and chemical technology that in the coming decades would radically alter both the practice of agriculture and its underlying assumptions.

This "revolution" marginalized Howard's work and the kind of agriculture he advocated. So-called organic agriculture survived only on the margin. It was practiced by some farmers of admirable independence and good sense and also by some authentic nuts. In the hands of the better practitioners, it was proven to be a healthful, productive, and economical way of farming. But while millions of their clients spent themselves into bankruptcy on industrial supplies, the evangelists of industrial agriculture in government and the universities ignored the example of the successful organic farmers, just as they ignored the equally successful example of Amish farming.

Meanwhile, Howard's thought, as manifested by the "organic movement," was seriously oversimplified. As it was understood and prescribed, organic agriculture improved the health of crops by building humus in the soil, and it abstained from the use of toxic chemicals. There is nothing objectionable about this kind of agriculture, so far as it goes, but it does not go far enough. It does not conceive of farms in terms of their biological and economic structure, because it does not connect farming with its ecological and social contexts. Under the current and now official definition of organic farming, it is possible to have a huge "organic" farm that grows only one or two crops, has no animals or pastures, is entirely dependent on industrial technology and economics, and imports all its fertility and energy. It was precisely this sort of specialization and oversimplification that Sir Albert Howard worked and wrote against all his life.

At present this movement (if we can still apply that term to an effort that is many-branched, multicentered, and always in flux) in at least some of its manifestations appears to be working decisively against such oversimplification and the industrial gigantism that oversimplification allows.

Some food companies as well as some consumers now understand that only the smaller family farms, such as those of the Amish, permit the diversity and the careful attention that Howard's standards require.

Howard's fundamental assumption was that the processes of agriculture, if they are to endure, have to be analogous to the processes of nature. If one is farming in a place previously forested, then the farm must be a systematic analogue of the forest, and the farmer must be a student of the forest. Howard stated his premise as an allegory:

The main characteristic of Nature's farming can ... be summed up in a few words. Mother earth never attempts to farm without live stock; she always raises mixed crops; great pains are taken to preserve the soil and to prevent erosion; the mixed vegetable and animal wastes are converted into humus; there is no waste; the processes of growth and the processes of decay balance one another; ample provision is made to maintain large reserves of fertility; the greatest care is taken to store the rainfall; both plants and animals are left to protect themselves against disease.<sup>1</sup>

Nature is the ultimate value of the practical or economic world. We cannot escape either it or our dependence on it. It is, so to speak, its own context, whereas the context of agriculture is, first, nature and then the human economy. Harmony between agriculture and its natural and human contexts would be health, and health was the invariable standard of Howard's work. His aim always was to treat "the whole problem of health in soil, plant, animal, and man as one great subject."<sup>2</sup> And Louise Howard spells this out in Sir Albert Howard in India:

A fertile soil, that is, a soil teeming with healthy life in the shape of abundant microflora and microfauna, will bear healthy plants, and these, when consumed by animals and man, will confer health on animals and man. But an infertile soil, that is, one lacking sufficient microbial, fungous, and other life, will pass on some form of deficiency to the plant, and such plant, in turn, will pass on some form of deficiency to animal and man.<sup>3</sup>

This was Howard's "master idea", and he understood that it implied a long-term research agenda, calling for "a boldly revised point of view and entirely fresh investigations."<sup>4</sup>

His premise, then, was that the human economy, which is inescapably a land-using economy, must be constructed as an analogue of the organic world, which is inescapably its practical context. And so he was fundamentally at odds with the industrial economy, which sees creatures, including humans, as machines, and agriculture, like ultimately the entire human economy, as an analogue of an industrial system. This was, and is, the inevitable and characteristic product of the dead-end materialism that is the premise of both industrialism and the science that supports it.

Howard understood that such reductionism could not work for agriculture:

But the growing of crops and the raising of live stock belong to biology, a domain where everything is alive and which is poles asunder from chemistry and physics. Many of the things that matter on the land, such as soil fertility, tilth, soil management, the quality of produce, the bloom and health of animals, the general management of live stock, the working relations between master and man, the *esprit de corps* of the farm as a whole, cannot be weighed or measured. Nevertheless their presence is everything: their absence spells failure.<sup>5</sup>

This understanding has a scientific basis, as it should have, for Howard was an able and conscientious scientist. But I think it comes also from intuition, and probably could not have come otherwise. Howard's intuition was that of a man who was a farmer by birth and heritage and who was a sympathetic as well as a scientific observer of the lives of plants, animals, and farmers.

If the farm is to last—if it is to be "sustainable," as we now say—then it must waste nothing. It must obey in all its processes what Howard called "the law of return." Under this law, agriculture produces no waste; what is taken from the soil is returned to it. Growth must be balanced by decay: "In this breaking down of organic matter we see in operation the reverse of the

building-up process which takes place in the leaf." <sup>6</sup>

The balance between growth and decay is the sole principle of stability in nature and in agriculture. And this balance is never static, never finally achieved, for it is dependent upon a cycle, which in nature, and within the limits of nature, is self-sustaining, but which in agriculture must be made continuous by purpose and by correct methods. "This cycle," Howard wrote, "is constituted of the successive and repeated processes of birth, growth, maturity, death, and decay."<sup>7</sup>

The interaction, the interdependence, of life and death, which in nature is the source of an inexhaustible fecundity, is the basis of a set of analogies, to which agriculture and the rest of the human economy must conform in order to endure, and which is ultimately religious, as Howard knew: "An eastern religion calls this cycle the Wheel of Life . . . Death supersedes life and life rises again from what is dead and decayed."<sup>8</sup>

The maintenance of this cycle is the practical basis of good farming and its moral basis as well:

[T]he correct relation between the processes of growth and the processes of decay is the first principle of successful farming. Agriculture must always be balanced. If we speed up growth we must accelerate decay. If, on the other hand, the soil's reserves are squandered, crop production ceases to be good farming: it becomes something very different. The farmer is transformed into a bandit.<sup>9</sup>

It seems to me that Howard's originating force, innate in his character and refined in his work, was his sense of context. This made him eminent and effective in his own day, and it makes his work urgently relevant to our own. He lacked completely the specialist impulse, so prominent among the scientists and intellectuals of the present-day university, to see things in isolation.

He himself began as a specialist, a mycologist, but he soon saw that this made him "a laboratory hermit," and he felt that this was fundamentally wrong:

I was an investigator of plant diseases, but I had myself no crops on which I could try out the remedies I advocated: I could not take my own advice before offering it to other people. It was borne in on me that there was a wide chasm between science in the laboratory and practice in the field, and I began to suspect that unless this gap could be bridged no real progress could be made in the control of plant diseases: research and practice would remain apart: mycological work threatened to degenerate into little more than a convenient agency by which—provided I issued a sufficient supply of learned reports fortified by a judicious mixture of scientific jargon—practical difficulties could be side-tracked.<sup>10</sup>

The theme of his life's work was his effort to bridge this gap. The way to do it was simply to refuse to see anything in isolation. Everything, as he saw it, existed within a context, outside of which it was unintelligible. Moreover, every problem existed within a context, outside of which it was unsolvable. Agriculture, thus, cannot be understood or its problems solved without respect to context. The same applied even to an individual plant or crop. And this respect for context properly set the standard and determined the methodology of agricultural science:

The basis of research was obviously to be investigation directed to the whole existence of a selected crop, namely, "the plant itself in relation to the soil in which it grows, to the conditions of village agriculture under which it is cultivated, and with reference to the economic uses of the product"; in other words research was to be integral, never fragmented.<sup>11</sup>

If nothing exists in isolation, then all problems are circumstantial; no problem resides, or can be solved, in anybody's department. A disease was, thus, a symptom of a larger disorder. The following passage shows as well as any the way his mind worked:

I found when I took up land in India and learned what the people of the country know, that the diseases of plants and animals were very

useful agents for keeping me in order, and for teaching me agriculture. I have learnt more from the diseases of plants and animals than I have from all the professors of Cambridge, Rothamsted and other places who gave me my preliminary training. I argued the matter in this way. If diseases attacked my crops, it was because I was doing something wrong. I therefore used diseases to teach me. In this way I really learnt agriculture—from my father and from my relatives and from the professors I only obtained a mass of preliminary information. Diseases taught me to understand agriculture. I think if we used diseases more instead of running to sprays and killing off pests, and if we let diseases rip and then found out what is wrong and then tried to put it right, we should get much deeper into agricultural problems than we shall do by calling in all these artificial aids. After all, the destruction of a pest is the evasion of, rather than the solution of, all agricultural problems.<sup>12</sup>

The implied approach to the problem of disease is illustrated by the way Howard and his first wife, Gabrielle, dealt with the problem of indigo wilt:

In fifteen years £54,207 had been spent on research, at that time a large sum. Yet the Imperial Entomologist could find no insect, the Imperial Mycologist no fungus, and the Imperial Bacteriologist no virus to account for the plague.

The Howards proceeded differently. Their start was to grow the crop on a field scale and in the best possible way, taking note of local methods. Their observation was directed to the whole plant, above and below ground; they followed the crop throughout its life history; they looked at all the surrounding circumstances, soil, moisture, temperature. But they looked for no virus, no fungus, and no insect.<sup>13</sup>

And it was the Howards who solved the problem. The plants were wilting, they found, primarily because the soils were becoming water-logged during the monsoon, killing the roots; the plants were wilting and dying from starvation. It was a problem of management, and it was solved by changes in management. But it could not have been solved except by studying the whole plant in its whole context.

Because he refused to accept the academic fragmentation that had become conventional by his time, Howard, of course, was "accused of invading fields not his own,"<sup>14</sup> and this he had done intentionally and in accordance with "the guiding principle of the closest contact between research and those to be served."<sup>15</sup>

Agriculture is practiced inescapably in a context, and its context must not be specialized or simplified. Its context, first of all, is the nature of the place in which it is practiced, but it is also the society and the economy of those who practice it. And just as there are penalties for ignoring the natural context, so there are penalties for ignoring the human one. As Howard saw it, the agricultural industrialists' apparent belief that food production could be harmlessly divorced from the economic interest of farmers needlessly repeats a historical failure:

Judged by the ordinary standards of achievement the agricultural history of the Roman Empire ended in failure due to inability to realize the fundamental principle that the maintenance of soil fertility coupled with the legitimate claims of the agricultural population should never have been allowed to come in conflict with the operations of the capitalist. The most important possession of a country is its population. If this is maintained in health and vigour everything else will follow; if this is allowed to decline nothing, not even great riches, can save the country from eventual ruin.<sup>16</sup>

The obligation of a country's agriculture, then, is to maintain its people in health, and this applies equally to the people who eat and to the people who produce the food.

Howard accepted this obligation unconditionally as the obligation also of his own work. He realized, moreover, that this obligation imposed strict limits both upon the work of farmers and upon his work as a scientist: First, neither farming nor experimentation should usurp the tolerances or violate the nature of the place where the work is done; and second, the work must respect and preserve the livelihoods of the local community. Before going to work, agricultural scientists are obliged to know both the



place where their work is to be done and the people for whom they are working. It is remarkable that Howard came quietly, by thought and work, to these realizations a half century and more before they were forced upon us by the ecological and economic failures of industrial agriculture.

In India he used his training as a scientist and his ability to observe and think for himself, just as he would have been expected to do. But he also learned from the peasant farmers of the country, whom he respected as his "professors." He valued them for their knowledge of the land, for their industry, and for their "accuracy of eye."<sup>17</sup> He accepted also the economic and technological circumstances of those farmers as the limit within which he himself should do his work. He saw that it would be possible to ruin his clients by thoughtless or careless innovation:

Often improvements are possible but they are not economic. . . . In India the cultivators are mostly in debt and the holdings are small. Any capital required for developments has to be borrowed. A large number of possible improvements are barred by the fact that the extra return is not large enough to pay the high interest on the capital involved and also to yield a profit to the cultivator.<sup>18</sup>

The reader may wish to contrast this way of thinking with that of the Green Revolution or with that of the headlong industrialization of American agriculture since World War II, in both of which the only recognized limit was technological, and in neither of which was there any concern for the ability of farmers or their communities to bear the costs.

Howard's solution to the problem was simply to do his work within the technological limits of the local farmers:

The existing system could not be radically changed, but it might be developed in useful ways. This must never exceed what the cultivator could afford, and, in a way, also what he was used to. This principle Sir Albert kept in mind to the very end . . . his standard seems to have been the possession of a yoke of oxen; when more power was needed, the presumption was that the second yoke could be borrowed from a neighbor. Thus the maximum draught contemplated was four animals.<sup>19</sup>

By the observance of such limits, Howard was enfolded consciously and conscientiously within the natural and human communities that he endeavored to serve.

No university that I have heard of, land-grant or other, has yet attempted to establish its curriculum and its intellectual structure on Sir Albert Howard's "one great subject," or on his determination to serve respectfully and humbly the local population. But a university most certainly could do so, and in doing so it could bring to bear all its disciplines and departments. In doing so, that is to say, it could become in truth a university.

At present our universities are not simply growing and expanding, according to the principle of "growth" universal in industrial societies, but they are at the same time disintegrating. They are a hodge-podge of unrelated parts. There is no unifying aim and no common critical standard that can serve equally well all the diverse parts or departments.

The fashion now is to think of universities as industries or businesses. University presidents, evidently thinking of themselves as CEOs, talk of "business plans" and "return on investment," as if the industrial economy could provide an aim and a critical standard appropriate either to education or to research.

But this is not possible. No economy, industrial or otherwise, can supply an appropriate aim or standard. Any economy must be either true or false to the world and to our life in it. If it is to be true, then it must be *made* true, according to a standard that is not economic.

To regard the economy as an end or as the measure of success is merely to reduce students, teachers, researchers, and all they know or learn to merchandise. It reduces knowledge to "property" and education to training for the "job market."

If, on the contrary, Howard was right in his belief that health is the "one great subject," then a unifying aim and a common critical standard are clearly implied. Health is at once quantitative and qualitative; it requires both sufficiency and goodness. It is comprehensive (it is synonymous with "wholeness"), for it must leave nothing out. And it is uncompromisingly local and particular; it has to do with the sustenance of particular places,

creatures, human bodies, and human minds.

If a university began to assume responsibility for the health of its place and its local constituents, then all of its departments would have a common aim, and they would have to judge their place and themselves and one another by a common standard. They would need one another's knowledge. They would have to communicate with one another; the diversity of specialists would have to speak to one another in a common language. And here again Howard is exemplary, for he wrote, and presumably spoke, a plain, vigorous, forthright English—no jargon, no condescension, no ostentation, no fooling around.

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