



Five years without Primavesi

By Virginia Mendonça Knabben. Source: Brasil de Fato.

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On that visit to the field, the farmer was harvesting the large, beautiful potatoes he had planted. With his X-ray gaze, [Ana Primavesi](#) knew that the potatoes were that way because of the use of agrochemicals and nitrogen fertilisation, which resulted in a lack of calcium. Potatoes like this were rich in a substance, solanine, which burns the throat. Ana asked, "Are these potatoes okay?" The man turned around and replied in amazement: "Jesus! These potatoes aren't for eating!" "But what did you plant them for?" - Ana responded: "To sell!".

Ana Primavesi's account shows exactly how soil has been treated: a mere support for fertilisers, something to be exploited and worked on, without considering its geological nature, its genesis, and importance. "Agriculture has been the art of exploiting dead soil," she said. At every lecture, class, or course she attended, Ana showed the step-by-step [dynamics that kept the soil alive](#), with pores for air and water to enter, root penetration, and good nutrient circulation.



Soil is decomposed rock, and it takes around 400 years for 1 cm of soil to form. Ana wrote: "Soil is not a support for fertilisers, irrigation water, and crops, but a living organism, whose skeleton is the mineral part, the organs are the microbes that live there and the blood is the aqueous solution that circulates through it. It breathes like any other living organism and has its own temperature. It needs plants as much as plants need it." The defence of soil life was the great bulwark of this scientist's life.

In the 1950s, Ana and her husband Artur Primavesi were invited by a group of agronomists to "make the land of Sorocaba (in the interior of São Paulo) fertile again". The farm for which they intended to plant, a wasteland, had extremely degraded soil.

The challenge was not only to recover the soil: they had to plant wheat, because bread was eaten, but the cereal was not grown in Brazil and had to be imported. It was a revolution. The wheat harvested was of the highest quality and the soil was fully recovered. The feat called into question a very important aspect of agriculture: that it is an extractive process. In order to plant, we must exploit the soil. The Primavesi have now proved in practice that farming involves reciprocity: I take care of the land, I give it all the conditions to produce, and it gives back with bountiful harvests, both in quantity and, above all, in quality. The agriculture they practised maintained the cycle of soil fertility, like an ever-flowing spring.

Ana Primavesi never saw nature as a natural resource to be exploited; when she was once invited to visit an oil rig, her guide took great pains to show her how everything worked, and how great the work was. Finally, they arrived where the sap of progress was gushing out. It was then that she made the only - and definitive - comment of that visit: "Very well, you take all this from the earth, but what do you give in return?".

When Ana saw that the potatoes were large, and not up to the expected standard, she knew that there was, as mentioned above, a lack of calcium. When you read her books, you can easily understand this: all the macro and micronutrients present in the soil act in proportions predefined by nature. The soil has a periodic table of elements in which one activates the other, or deactivates it, depending on the proportions. In living soil, these proportions are balanced. When you fertilise chemically, you increase one or the other, and to maintain the balance, all the others should also be increased in their respective proportions. That's the big problem: Ana listed around 45 elements, including micro and macronutrients, that should be taken into account when fertilising, but less than ten are used. The potatoes planted for sale only received nitrogen, which was lacking in calcium. This happens all the time in agriculture.



This aspect, apparently too technical for those who are not familiar with the subject to understand, is directly linked to our lives: food grown in an unbalanced state does not form the substances it is genetically programmed to produce, "getting in the way", as Primavesi explained. The food becomes of low biological value. They don't nourish, or barely nourish. And so we are feeding ourselves with food grown to sell.

It doesn't stop there. When the plant expresses its deficiency, nature itself tries to correct it: the planet's "health police" spring into action. Insects, fungi, and other creatures will appear, taking advantage of the opportunity to feed. Once again, Ana Primavesi's didacticism clarifies this aspect with simplicity: these beings can't "eat" just any plant. They manage to cut and suck out what their enzymes are capable of digesting. Thus, plants with unfinished substances are a source of food for these beings, who will now be called "pests". And while we busy ourselves annihilating them with agrotoxins that contaminate everything: water, air, plants, soil, insects, birds, and other beings, we regret to report that food is still deficient, sickened by chemical imbalances, now even more so by the pestilential action of poisons.

Ana Primavesi, who was born in 1920 and has always lived in the countryside, following many of the changes that agriculture has undergone, including the Green Revolution (which was not green at all), was adamant that none of this would increase harvests; on the contrary, it would promote a slow and continuous decline in agricultural production capacity. He kept repeating that without healthy soil, plants wouldn't be healthy either. And, of course, without healthy plants and food, we couldn't have health and vigour. Some listened to her and these, we can say with absolute certainty, prospered with health and humility, because they understood that just as a woman needs nine months to bear a child, the earth has its time to gestate all the multiplicity of life it makes possible. Humility is a basic word in agricultural practice, because, in its etymological root, it means to connect with the earth.

Today, without the presence of this woman who revolutionised the agricultural sciences with her knowledge, we are seeing a boom in adherents to this respectful, living, biodiverse, inclusive, and [agroecological](#) agriculture. We hear new words and terms all the time, such as regenerative agriculture, agroforestry, syntropy, biological control, bio-inputs, and others, which are nothing more than new guises for what the wise old Primavesi taught.

Nomenclatures aside, the great news is that the world has woken up to the soil and its life. Agroecology is becoming increasingly popular and hundreds of students are embarking on technical or academic courses inspired by Ana Maria Primavesi. But while she lived, she received the most criticism and faced opposition, envy, and, above all, discredit.



It wasn't possible for Ana to witness the Agroecological Spring that she sowed in her lifetime. But wherever she is, the feeling that must prevail is one of fulfillment.

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