

I'm a manure connoisseur. Good quality manure is not offensive and I'm happy to see a field full of cow pies (so are the earthworms). Manure has too much nitrogen to rot properly; we can smell this as ammonia. So we look around the farm for carbon to add to the manure, and we find old hay and rotted forest products. Along with good garden soil to guide the composting process, we create the stable humus that our livelihood depends upon. I love to stick my hands in the pile. It shouldn't be too hot to the touch because valuable beings live there that we don't want to cook. Life needs moisture and air, so I like it damp, like a rung out sponge. When it's done it smells woody and feels silky. It looks like chocolate cake. Just for the record, I do not eat it.

"We must gain a kind of personal relationship to all things that concern our farm work, and above all a personal relationship to the manure, especially to the task of working with the manure."

What makes a soil soft and fluffy, rich and fertile, dark brown and full of humus? The answer is life. We engender life in the soil by turning in compost and cover crops, by increasing biological diversity, and by gentle, conscious tillage. Compost kindles life; this is where numerous visible and invisible benefactors for the soil propagate. Soil microbes enhance the ability of the plant roots to assimilate nutrients and moisture because they're getting fed by root exudates. In a live soil humus the roots are extended by fungal activity and there is no hard and fast line between the roots and the soil. We grow a wide variety of crops which insures a wide variety of microbes, and we plow slowly so they don't get too disturbed.

Anything alive has nitrogen, and when it dies the nitrogen becomes available for plant growth. Atmospheric nitrogen is brought into the soil by the symbiotic relationship of specific bacteria and the roots of legumes. A continual exchange of nitrogen is happening in good soil, from life to death again and again, with the crop taking what it needs as it needs it.

"Manuring and everything of this kind consists essentially in this, that a certain degree of livingness be communicated to the soil, yet not only livingness. For the possibility must also be given to bring about in the soil what I indicated yesterday, namely to enable the nitrogen to spread out in the soil in such a way that with its help the life is carried along certain lines of focus."