WHAT I WOULD CHANGE

by Mike Mason

What I would change is peoples' awareness of a problem which is as serious, if not more serious, than that of global warming. The problem is the depletion of agricultural soil – the source of vital minerals and trace elements essential for human health. Tests in the UK between 1940 and 1991 showed an average decrease in trace elements of around 40% - and the reduction must have continued since then. This is a catastrophic situation since if the soil lacks trace elements then the crops we eat lack trace elements. Already about one third of the British population is suffering from malnutrition. Malnutrition leads to increased susceptibility to disease. For example, the recommended daily amount of selenium is at least 150 micrograms but the average intake is only 35 micrograms. A deficiency of selenium can lead to cancer, arterial disease and arthritis. There are no warning signs of selenium deficiency. Just think of the National Health Service savings which could be made if the malnutrition problem could be overcome and people became healthier! We need to raise public awareness of the situation so that politicians will be spurred to act.

How has the problem come about? In 1946 there was an abrupt change in agricultural methods. Throughout history farmers had practised mixed agriculture, in other words the rearing of animals and the growing of crops. Manure from the animals was returned to the soil to maintain fertility. What was probably not realised at the time was that returning manure to the soil also returned vital trace elements so that mineral depletion was not too serious. What then happened in 1946 was the advent of chemical farming. Artificially-produced nitrogen-rich fertilisers became available and farmers found they could nearly double their crops. It was a bonanza and farmers were encouraged to use fertilisers containing what were thought to be the three vital elements nitrogen, potassium and phosphorus instead of animal manure. Hence the prairies of Eastern England with no animals in sight – thus no animals to provide manure. Farmers elsewhere reared livestock, usually in huge sheds. The age of specialisation had arrived.

What was wrong was that crops extracted vital trace elements from the soil which were no longer replaced. This was happening all over the planet, so even if part of our diet was sourced abroad our diet was still deficient in trace elements. It could be that a contributory factor to the galloping obesity in recent years has been a desire to eat more - because our food is not containing all the trace elements we need. Organic food suffers from exactly the same problem.

Agricultural soil in the UK is now becoming really impoverished. If one plants trees in what were farmers' fields about 40% of the trees die in the first year. They are starved to death because the soil is impoverished, and decades of ploughing and the application of herbicides, fungicides and insecticides has decimated the essential micro-organisms in the soil which help roots source the trace elements they need. Because of the unremitting applications of artificial fertiliser the humus in the soil is depleted. The land is becoming desert-like, a mixture of sand, stones and clay and no longer rich dark loam full of humus.

What can be done? As with global warming the solution is not easy. Animal manures need to be returned to all agricultural land. Vegetable waste needs to be composted and returned to the land. All methods of conserving the precious trace elements need to be considered. The trace elements originally came from rock dust ground off mountains during the last ice age, so we should consider applying rock dust to fields to replace vital trace elements already lost. Restrictions should be placed on the nascent biofuels industry to require the returning of ash and thus minerals to the land after crops have been burned or processed. For all this to happen governments will have to be involved, changing the law here, changing financial incentives there, to coerce farmers and industry to do what is vitally necessary for human health.

Because the depletion of agricultural soil has been very gradual over a long period people have not noticed what has been happening. Therefore what is needed is publicity. Your reading this is a step in the right direction of raising awareness. Alert your friends! Alert your MP!

Good gardening!

MIKE MASON