



Your Living Environment

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AMBASSADOR RESEARCH INTO SOIL MANAGEMENT

It is now almost three years since the beginning of our Agriculture Department. Its main job, (in conjunction with Big Sandy) is to research proper management of the environment in which God has placed mankind.

Food production is of prime importance in this research programme -- first, because our immediate survival depends upon it -- and furthermore, because wrong methods of producing that food have exercised the most powerful of all destructive influences upon the environment of man through 6,000 years!

Coupled with Big Sandy, we have the unique distinction of being the only Agricultural Research Centre in the world whose work is entirely based upon the understanding and application of God's laws!

And in this issue of our Research News, we want to tell you a success story about soil management. It concerns work we have done here at Bricket Wood and tested in the Vegetable Section of The Agriculture Programme.

Bricket Wood Trials

It was the prior work and partial understanding of two or three other people that triggered us off in the specific direction of top-cover experimentation.

Many local inhabitants have been intrigued by what they have seen over the fence as they drive past our Vegetable Section. And according to reports that filter in, human reaction ranges all the way from enthusiastic expectation, through cynical skepticism, to outright sour condemnation!

One man who works near Ambassador College has made quite a habit of eating his lunch in his parked car opposite our

Vegetable Section. This enables him to see what we are doing and he openly admits to being fascinated!

Contrast this man's interest with the attitude of those who will maintain that millions through many milleniums have understood the importance of plant matter in soil management. The fact is that the whole earth is deeply scarred with evidence to the contrary! Regardless of his understanding -- man's actions have always tended to destroy his immediate environment -- Viscount Townsend, Robert Bakewell and Jethro Tull not withstanding!!

Bring Back That Top-Cover!

We don't think there is much future in chipping and hoeing weeds in order to keep the ground bare. That allows it to dry out and need watering, which in turn grows more weeds, for the next hoeing, and so on!

In the Vegetable Section of our Agriculture Programme we are now growing much of the produce, (used by the College Catering Department) through a heavy layer of straw mulch. So far we have experimented with different times and rates of application -- according to the various crops being raised.

The first effect we noticed with this covering of organic matter showed up before crops were even planted. It tends to maintain soil-moisture and temperatures at a relatively constant level. And that means ideal conditions for millions of living organisms in the soil.

The treated ground literally came alive. Earthworms appear to have quadrupled over-night! Between the rows of soft-fruits we put over six inches of straw in February. This was expected to last well into next year, however in only three months the earthworm population had mixed 50% of our organic soil blanket into the soil! In some places they were depositing their castings on top of the straw layer.

These worms literally did the ploughing job for us in a manner and speed that surpasses anything we had ever seen! Our soil under the mulch became loose, black, highly water absorbant and very fertile! (Now we are in the process of harvesting a record-breaking crop of large raspberries, in a year when dry weather has pushed their price to astronomical levels).

Since the soil is so loose and fertile under the mulch, there will be no need for laborious seedbed preparation. Next planting season we will simply draw back the straw and plant the seeds in the moist soil underneath. Tedious digging and raking have been eliminated!

Lower Costs -- Through Labour-Saving

The job of growing potatoes is even simpler. We just plant them on top of the level unprepared ground, but under the layer of organic material. No digging is required. The potato being a strong plant, forces its way through the mulch to the sunlight.

Harvesting is equally simple and advantageous. Since the seed potato was planted on top of the soil, that is just where the new crop of tubers will be located -- under the straw, but on top of the soil!! You simply part the straw to collect the potatoes.

Since the soil is protected from frost, planting can be done three to four weeks earlier than on the conventional old bare-ground, hilling system.

Not only can planting be done early, but the mulch application also. We covered almost two acres in preparation for the College potato crop back in the middle of last winter. At that time labour was plentiful because outside jobs were strictly limited. This is just one more point to show how the system dove-tails with other work.

It also favours better year-round use of available labour, because (as has been pointed out) the action of the deep layer of mulch virtually eliminates weeding and hoeing. These two jobs are tiring, back-breaking, repetitive and bite deeply into spring and summer man-power, just when it is needed in every area of the garden at once!

A Long Wet Winter

By the time our potatoes were planted at the end of winter, the curiosity of many was fully roused and then followed weeks of anxious waiting. We were not unduly anxious, but others were. During this time, well-intentioned people even consoled us over the great big mistake we had made in the potato area!

They still don't know -- but we had already proved the system on a small scale the previous year!

However, the way the season worked out this year, others' potatoes were up and away, while our field continued to look like an inert soggy mass of dead straw. And that's about what it was too! But with a drier late winter the situation would have been very different.

You see, the higher soil temperature under the mulch would normally cause plant growth to begin earlier than it does on near frozen, bare, windswept ground.

Drought Strikes!

Anyway our little old "spuds" finally began to poke their noses up through the straw and it was not long before the weather in England took a dramatic turn in the opposite direction.

It came out hot and dry! And I mean weeks and weeks of dryness! Crop producers around the nation soon began to cry about drought slashing some yields by more than 50%. But it was then that our heavily mulched potatoes began to come into their own. When others were parched -- ours had ample soil moisture.

Some of our own vegetable crops are still on the old bare-ground system and also outside the scope of our very limited water supply. After four weeks of continuous hot dry weather these had not only stopped growing, they were deteriorating rapidly like everyone elses.

Protection Pays Off!

By this time the whole of the verdant Bricket Wood Campus was burning up rapidly! But visitors were just dumbfounded on stepping through into our areas with a heavy top-cover. Here they could not believe the way plants were growing vigorously in adequate soil moisture. No shortage of plant nutrients either! Chemical fertilizers, artificial stimulants and hormone weed-killers have no place in a God-planned system of soil management.

Every day the dry weather continues, our plants on protected soil go further ahead, while those on bare ground stagnate or deteriorate.

It is worth noting that plants on the bare-ground system with the best chance of surviving drought are those that make enough top-growth to cover the soil around them before the dry weather starts. Their shade ensures their own survival by reducing evaporation of precious soil moisture.

That in itself ought to tell the keen observer something about the all-important role of ORGANIC SOIL-PROTECTION!

Top-cover -- A Natural Phenomenon

Protecting soil with a covering blanket of plant material is nothing new. We did not discover it! And neither did anyone else! It is a God-given law that has been staring man in the face since Creation!

Walk into any forest that has been undisturbed for a number of years. There you will find that the forest floor is completely covered in a deep mulch layer of leaves and twigs. The bottom of this protective layer is being continuously decomposed by billions of live soil organisms to feed the trees.

A similar thing also exists on the good grasslands of the plains. Every well-established healthy pasture has a layer of dead grass on the surface that feeds the plants growing through it.

Soil is meant to be covered and it is high-time for man to wake-up to the fact that bare ground is NOT a natural or desirable phenomenon.

Life-cycle In Man's Hands

The only bare areas in most productive climates are rendered that way by human action! And only by self-deception has man been able to ignore the fact that since creation, God's system always works toward covering bare soil.

Plants are specifically designed to supply a yearly top-dressing of organic cover to the soil around their own roots. Take away that annual mulching and you smash the cycle of life -- ALL LIFE -- NOT JUST PLANT LIFE!!

First to disappear are the soil organisms, (the agents of decomposition.) When they die the soil dies. Then the supply of available plant nutrients ceases. Therefore surface-rooting plants disappear and finally the deep-rooting ones die-out too.

Because no animal can survive on this now barren, wind-swept plain, man himself has to hurry off over the horizon, before he too is overtaken by starvation and death! It's as simple as that to destroy God's creation!

A New Understanding

The Agriculture Department in Bricket Wood has felt sure for two years that it understood the real purpose behind the one great over-riding agricultural law that God instituted to protect man's environment. That is the Sabbatical Year! And at that time we were in the middle of observing it ourselves.

We believed it was primarily to give a temporary boost to the all-important level of organic residues IN the soil.

Now as the story just told shows, we have for the past year also been attaching great importance to the level of organic matter ON-TOP of the soil. But only now, during the preparation of this report, has "the penny dropped." This is the true purpose of the Year of Rest!

How blind we are! With the Sabbatical Year, God is obviously confronting man with a visual reminder after every six years. Though we have not been able to see it, He is rubbing our nose in the fact that we need to keep a permanent protective blanket of vegetation over every part of the earth for which we are individually responsible!!

As for the old point about putting organic residues back INTO the soil -- that is automatically accomplished by living organisms, if only we provide the vital protective layer for the TOP of the soil.

In the past we have been so pre-occupied with the very important need to get large quantities of plant material back into our ground, that we failed to see that KEEPING THE SOIL COVERED IS THE GREAT OVER-RIDING LESSON OF GOD'S SABBATICAL YEAR!