

*Small
farms*



Fertility Farming

by Newman Turner

Chapter 6

Making Use of Weeds and Other 'Pests'

Weeds

At every stage in the rotation we make the fullest possible use of weeds. There was a time when I accepted the orthodox view of weeds as the enemy of the farmer and gardener. But that point of view need now be held only by those who lack the skill to use weeds. There is no better contribution to soil fertility, and the health and abundance of domestic crops, than to allow a thick covering of weeds between crops, and to allow the limited growth of some weeds even in association with the domestic crop.

Nature never leaves the earth uncovered. This is an example which we could follow with benefit in our farming; one which I have found to be the most abundant source of free fertility. The orthodox farmer coming to my farm would probably consider me an untidy farmer. For I have long ago outgrown the desire always to be killing weeds as fast as they appear on my land. The weedless farm is still considered the ideal in orthodox modern farming, and the farmer who allows a dock to exist in the middle of a field is reckoned to be a lazy farmer. But to my mind, the farmer whose destructive instincts are perpetually turned on the weeds of the farm is a wasteful farmer.

The shallow-rooting weeds like chickweed and groundsel contribute great quantities of green manure if allowed to grow to a stage of flowering, provided they are disced in before seeds are set. Further, they achieve a quick coverage of the soil and help to retain moisture at times when a bare soil would dry and crack and allow the sun to destroy the valuable organisms of the surface soil.

Chickweed thrives in the winter when little else will grow, and it forms our main winter green manure, which also contributes to the diet of the cattle during the hungry time of the year. Apart from its nutritional value at a time when little other natural green food is

available, it has a medicinal property which makes it almost a crop to cultivate for that reason alone.

Through the winter I carry my young stock on the weed growth of the disced stubble, with the additional food and shelter of a stack of oat or wheat straw harvested from the same field, threshed in the corner of the field, with the straw stacked there for winter consumption. The cattle are allowed to pull away at the straw stack through the winter months, sleep around it at nights, and accumulate dung which is mixed with the small amount of straw which is trampled under foot. When spring comes and the straw is finished we have the makings of a compost heap already partly mixed. The remains of the stack, together with the droppings, are forked up into a heap and allowed to mature through the following summer in readiness for application to the same field in the autumn.

Without these weeds, food would have to be purchased for the outwintering cattle, for even the best pastures will rarely take a large number of cattle through the winter without supplementing with hay. So that the farmer bent on weed destruction at every opportunity, not only has the expense of cultivations necessary to destroy the weeds at intervals throughout the winter, but the cost of purchased food which is necessary to feed the cattle which do not have this free diet of weeds allowed to grow.

Of course we have found that this abundant and quick growth of weeds has only reached the dimensions of an extra free crop since the fertility of the soil has reached a fairly high level. In the early days the growth of weeds during the winter was slight. The time for weeds to flourish was in a drought, and then mainly the deep-rooting weeds which have little grazing value. Chickweed and other bulky soil coverers are attendant upon a high humus content and their winter growth is stimulated by the winter warmth of active soil organisms in a soil rich in organic matter. Poor soils do not have this green coverage, though year-by-year maintenance of the organic matter on top, with additions as often as possible, again to the surface and not ploughed in, quickly builds up the surface skin of spongy material from which good winter growth may be expected.

The deep-rooting perennial weeds on the other hand serve the farmer in a different way. I value the dock and the dandelion, for instance, for their penetration of the subsoil from which they draw minerals which are deposited on the surface, later to be used by the domestic crop. I am sure that all crops grow better in association with others than alone. And to allow a small proportion of docks and dandelions to grow with any cereal or leguminous or root crop, provided the so-called weed does not get the upper hand, brings nothing but benefit to the domestic crop. If there is danger of an excessive seeding of the associated weeds we walk through the field and remove the flowering heads before harvest.

I used to be one of those farmers who are unable to walk through a field without stooping to pull a weed every few yards. My father always carried a walking stick with a 'spud' on the end, with which he would dig out the deep-rooting weed, or at least cut it off below

the crown. I proudly imitated this habit, feeling the walking-stick spud was the mark of an efficient farmer. I have since come to realize that it is rather the mark of a thoughtless and unobservant farmer. For when I stopped, before cutting out a dock from my field of wheat, and said to myself, maybe this plant has a purpose, I soon found the answer and withheld the hand of destruction.

Other 'Pests'

This little action illustrated to me the extremely unintelligent way in which most of us approach nature -- indeed the whole of the universe. If it is not blatantly obvious that a plant or an animal or any other phenomenon of nature has a value to our commercial activities, then we attempt its destruction without further thought. If anything appears in the least way to obstruct, or indeed fail to serve, our artificial activities, our main desire is to be rid of it -- to remove it from the face of the earth. It is this flaw in human intelligence which has allowed us to destroy vast areas of fertile land and, in a smaller way on our own British farms, to bring upon ourselves untold pests and diseases which would have remained under the control of nature had we not thoughtlessly destroyed that part of nature whose purpose it was to control the pest or disease. Not only weeds which help to maintain the fertility of our top soil, but all kinds of birds and animals are relentlessly destroyed, because we, in our lack of wisdom, consider that they bear no obvious human benefit.

Mine is the only farm for miles around which harbours a rookery. Mine is the only farm I know where the hare and partridge live in peace, and are not made the objects of mine or anyone else's lust to kill something.

Rabbits are generally considered to be utter and complete vermin, but on British farms at least they have a place in small numbers, and may be taken as an indication that there is waste land on the farm that could be used to some better purpose, or that there are hedges and banks that need to be cleared of undergrowth and ditches that need to be cut back and cleaned. When I first came to Goosegreen the farm was infested with rabbits; but so were the hedges and ditches overgrown and infested with brambles and briars, and Ball Hill was covered with gorse and brambles, providing a perfect cover for the free multiplication of the rabbit colonies. When Ball Hill was cleared and reseeded, and all hedges cut back and ditches cleaned, the rabbits quickly disappeared. For years they were almost non-existent, but gradually returned with the new growth of rubbish along the bank below Ball Hill. As soon as they became brave enough to venture out into my wheat and oat crops for food, I knew it was time I got to work on the hill and hedges and banks again, to remove the excessive cover in which they were once more freely breeding.

It is interesting to note that the preservation of the hare seems to discourage the rabbit. The two species don't seem to hit it off together. And as the rabbits increase the hares become less evident. I do not know the explanation of this, for there does not appear to be

any active warfare between them. It is merely that on my farm, at any rate, they do not live happily together.

Foxes which were once troublesome on my farm have completely disappeared since, at the beginning of the war, the hunt ceased in the district.

Let no one think that I am advocating indiscriminate freedom for all wild life, though I am sure this would be the ideal to which to cultivate one's moral courage. I have yet to find a use for the rat, and I must say that I am not hopeful of finding one. I do find it necessary to take measures to keep down the rat population. But here again the simple method of reduction is to take advantage of natural controls. I have found no better means of keeping down rats than keeping up dogs and cats, and above all, allowing no accumulations of rubbish and scrap of the kind in which rats delight to gather.

But what I do advocate is a more thoughtful approach to all natural manifestations. It is wrong to conclude that because there is no clearly apparent human use for a natural phenomenon, it is therefore our duty to destroy it. Destruction is a deadly boomerang. Nowhere is this more apparent than on the farm, in my experience. And of course in this plea for the protection of nature I include bacteria of all kinds. I often think it is man's desire to destroy that creates within him the fear which gives rise to the belief that nature has destructive intentions against man. It is just not true. Nature destroys only the useless and unhealthy, and we serve no permanent good by attempting to preserve what nature has decided should go back to the earth from whence it came. Nature serves the universe in the whole, of which man is an integral part. It is when man stands apart from the universe and regards himself as its lord, that nature finds it necessary to bring him to heel. Let man fit himself into his rightful place, and take no action contrary to nature and the best interests of the universe as a whole, without thought of its consequences even to the least of his fellow-creatures, and he will then know nature to be on his side.

Disc Harrows and Weed Control

The question most often asked in connection with organic surface tillage, and particularly regarding the use of the disc harrow as the main implement of cultivation and seed-bed preparation, relates to the control of weeds. 'Don't you find that the disc harrow spreads docks and couch grass?' and 'How can you keep down weeds without ploughing' are the questions which practically everybody asks when discussing my farming methods.

My advocacy of the use of weeds should not be regarded in any way as an indication that I am happy to practise methods which result in the spread of weeds. It is important therefore that I should say emphatically that organic surface tillage does *not* spread weeds, but rather has the effect of gradually eliminating them and allowing the controlled use of a selected few; that the disc harrow is dangerous only when it is inadequately used.

For reasons which I have elaborated elsewhere in this book, to refrain from ploughing-in

weed seeds which have been deposited on the surface soil and to work them lightly into the surface soil where they will germinate and ultimately be destroyed by subsequent cultivations, is the quickest way of achieving the permanent elimination of weeds. Once germinated, everything on the surface may be destroyed, leaving to grow with the crop only the few weeds that may be deposited annually by wind and birds.

A moment's thought by any intelligent farmer will reveal at once that the use of the plough is the surest way of preserving and multiplying weeds. Seeds are placed below the top soil and preserved until the next ploughing when they germinate freely on the surface, often in numbers too great for the good of the domestic crop. Having ploughed down all immediately offending weeds, the average farmer, believing that he need not wait for further weed destruction on the upturned soil, proceeds quickly to prepare a seed-bed which is equally as good for the upturned weed seeds and the sown domestic seed. But the weed seed has been moistened and softened by a year under soil and gets away much more quickly than the sown crop. Where docks are evident in any numbers, ploughing cuts them up or at least turns up the whole dock plant, which is subsequently cut up by the disc harrow into largish pieces, which are capable of further growth on the seed-bed then prepared. This is where the disc harrow *does* spread weeds such as docks and couch grass. For after ploughing, the disc harrow is rarely used as thoroughly as with surface tillage, and is used on a loose under-soil where the chopping up of dock and couch plants is not thorough enough to achieve complete destruction beyond the power of further growth.

With surface tillage, on the other hand, the crowns of dock plants are thoroughly disintegrated while the plant is still in its growing position, and on a firm base which allows a complete kill. The root of the dock remains in the soil to decay, aerate and feed the soil for the good of the domestic crop. But discing must not be skimmed. It is the inadequate use of the disc harrow which spreads weeds and, above all, the inadequate use of the disc harrow after the process of ploughing which exposes whole plants of the kind that will multiply when lightly chopped up.

Where there is a heavy infestation of weeds the only solution is a summer fallow, including the use of the disc harrow and the cultivator. I have seen effective summer fallows on very heavily weed-infested fields with the use of disc harrow only, but the cultivator helps to expose couch grass and other creeping weeds so that they may subsequently be chopped up and baked in the sun. I do not favour the type of summer fallow which seeks to expose a coarse ploughed furrow to bake in the sun. For by this method not only is the furrow baked and the weeds killed, but so are numerous valuable soil organisms -- and so is the humus, which loses all its moisture. The repeated use of the disc harrow to destroy weeds that have germinated and been allowed to grow no further than the flowering stage, or the alternate use of cultivator and disc harrow throughout the summer, allowing intervals for the growth of the weeds between workings, is the most effective means of cleaning a badly infested field.

Where a small area of land is being dealt with, and sufficient sawdust is available, nothing

is more effective for controlling weeds than a dressing of sawdust to a depth of two to four inches. I tried this on a field of spring oats. When the oats had reached a height of about three inches I spread a strip right across the field with two inches of sawdust. My object was to observe the effect of a top dressing of sawdust on the crop at various stages and at harvest. There was no apparent difference in any respect as far as the crop was concerned. But the absence of weeds in the strip that received the sawdust was remarkable. Many visitors remarked on the sawdusted strip long after there was no sawdust remaining on the ground. Incidentally, it is interesting to note that the sawdust disappeared completely before we finished harvest, and when the field was cleared, the only means of recognizing the strip which had received sawdust was by the absence of weeds in comparison with the rest of the field.

Similarly, dressings of compost, in which all weed seeds have been killed in the compost heap, also has the effect of reducing weeds in a field. Or perhaps it is that the beneficial effect of the compost on the sown crop tends to discourage the weeds by sheer process of competition.

The only permanent means of tackling a field with dock infestation is to pull them by hand. There is no short cut for fields that have been allowed to get out of hand. All short cuts have to be paid for in the long run. Nothing but good farming can achieve good results, and chemical weed killers come not into the category of good farming, but of industrialism and destruction, without good purpose. If weeds are not wanted in a particular field, they can be eliminated in a manner which will make good use of their remains, as a contribution to the humus content of the soil of that field: either by discing them into the surface soil or carting them off and using them in the compost heap. To scorch them out of existence by means of chemicals is merely to evaporate them into thin air, with all else that lives around them. This is where industrialism becomes a blight on humanity, for our resources are limited and we cannot afford to burn them up in this way without paying in some way sooner or later. The way in which we shall have to pay may not be immediately apparent, but we may rest assured that it is certain. For inevitably the boomerang of destruction will operate again.

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