WATER!!

by Mike Mason

When you come to read this article the weather may be grey, wet and windy. The memory of the summer of 2006 may be fading. But what a summer! In central England July was the warmest month since records began in 1659 – nearly 350 years! And that followed two dry winters. So we had hosepipe bans and the drudge of frequent watering by hand to save our gardens and crops. So it is topical that this article is devoted to the subject of water.

Things are expected to get worse. The trend seems clear. Nine of the ten warmest years on record have occurred in the last ten years. The UK Climate Impacts Programme indicates that by the end of the century the average temperature will be 2 to 3.5 degrees centigrade warmer. Summer soil moisture content will be reduced by 40% from current levels by the 2080s. I know that seems a long time ahead but it will probably become a little more difficult every year from now on – ½ % less soil moisture every summer, a slow squeeze of the sponge.

What can we do in our gardens and allotments to conserve moisture? I offer 5 measures:

1. Weeds. As well as extracting, and wasting, valuable nutrients, weeds extract precious water from the soil. Therefore removal of weeds has to be a top priority. Easier said than done, I know, but essential. Use of the hoe when the weeds are tiny is the easiest and most effective method.

2. Mulching. Covering the soil with a layer of home-made compost or farmyard manure is the ideal way to reduce the evaporation of moisture from the soil. A layer 2 to 3 inches deep is necessary. The worms will drag it down over a season or two but such mulches will be enriching the soil as well as conserving moisture. Alternatives are grass cuttings, landscape porous plastic sheeting, and even stones. I have mulched since the year 2000, following the no-dig method, and neighbours will confirm that I never water – except when transplanting, or raising plants from seed in the middle of summer.

3. Cracks. Cracks enable moisture deep down in the soil to evaporate – bad news. Therefore fill in the cracks as soon as they appear. I usually have no cracks on my allotment but in the truly exceptional hot dry conditions of 2006 I had a few.

4. Perennials. Grow perennials where practicable. Perennials have had the time to develop deep root systems so should not require watering even in the driest summer, thus leaving more of your time and energy to transport water to annuals that do need it. On the allotment or vegetable plot grow perennial vegetables such as asparagus, Good King Henry, seakale, sorrel, Welsh onions, globe artichokes and ciboule. At present I am experimenting with perennial salads such as burnet, lovage and buckshorn plantain. So far so good and I am going to try others.

5. Sow Early. We usually have reasonable amounts of rain up until the end of May then the drought starts. It therefore makes sense to sow early so that a good proportion of the growing period is over before the lack of rain can shrivel the plants. This also means that plant root systems will be deeper into the soil before the drought starts. It is of course necessary to protect young plants from frost and to create warm conditions so that seed will germinate. Out in the open I protect sowings of broad beans, carrots, potatoes and parsnips with horticultural fleece, doing most of such spring sowing in March, but I do not protect onion sets as they are hardy enough. I also, wherever possible, start young plants in warmth indoors then transplant into the allotment, garden or greenhouse when conditions allow. I usually sow beetroot, brassicas, tomatoes, leeks, celery, celeriac and peas in warmth at the end of February for planting out or transplanting at the end of March. I sow runner beans, French beans, the

marrow family, cucumbers, peppers, aubergines, sweetcorn and okra in warmth in early May for planting out in early June. The ultimate in early sowing comes with the planting of garlic, shallots and overwintering onions in early October.

The Future

What about when the weather becomes a lot drier? In July 2006 I visited an island off the French Atlantic coast where it does not rain at all in summer. There are no weeds- they are all dead. I looked at one vegetable garden with great interest. Each plant was watered daily. There were hosepipe systems everywhere to ease the task of evening watering. Crops such as aubergines, tomatoes and the marrow family had upended plastic mineral water bottles inserted into the soil near the roots so that water could be directed where it was most needed. I was really intrigued at the sight of tomatoes and the marrow family on mounds with impermeable black plastic sheeting all round. Of course, if it rained the water would run off and be of no help to the plants. However, if it never rains that is no problem! Clearly the impermeable plastic was there to reduce moisture loss by evaporation from the soil.

Here is an idea of mine. Since 2004 I have been growing the marrow family on my allotment in the following way. Where the plants are to grow I slightly rake the soil so that there is a very shallow depression a yard square centred on where each plant is to be grown. Then the whole area is covered with impermeable black plastic and a hole made in the centre of each depression for a plant. The result is that when it rains all the rain goes to the roots of the plant. The black plastic sheet also prevents weeds from growing and greatly reduces evaporation from the soil. We may have to come to rely more and more on such measures as summers become ever drier. Good gardening!

MIKE MASON