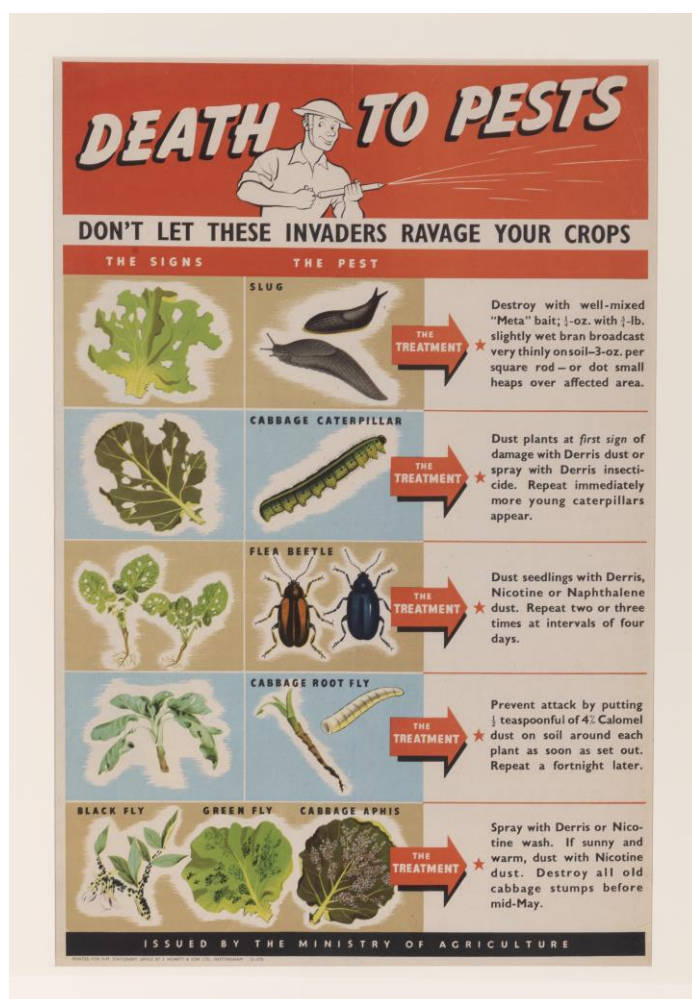


14. Death to Pests

In this response, Dr Sabine Clarke of the University of York, provides expert commentary on an official poster about pest control. Her current research explores pest control in Britain after 1945 and insecticide use in colonial contexts. In this piece we learn what treatments were commonplace in the evolving world of 1950s farming.

Ministry of Agriculture and Fisheries, Death to Pests poster, 1951

This poster was issued by the Ministry of Agriculture and Fisheries (MAF) in Britain in 1951. Its purpose was to encourage vegetable growers to tackle common pests that affected their crops.



1951 poster featuring the warning 'Don't let these Invaders Ravage your Crops' (MERL 2010/149).

The wartime drive to increase domestic food production was followed in the post war period by a far-reaching government programme to expand the output of British agriculture. The aim was to ensure that the country was less dependent on food imports than it had been at the outbreak of the Second World War. War had disrupted food supplies to Britain, raising the spectre of shortages. Government

responded by creating a system of bulk purchasing, introducing rationing and increasing domestic agricultural production. After the Second World War politicians said that greater self-sufficiency in food would mean that the population of Britain would never again be vulnerable at a time of national crisis. In addition, in the immediate post war period, growing more food at home would help Britain save on expensive food imports at a time of economic difficulty for the nation. A substantial expansion in the output of British agriculture was encouraged in a number of ways after 1945. In 1947 the Labour Government passed the first post war Agriculture Act that guaranteed farmers a minimum price for a number of key crops such as wheat, barley and potatoes. In return for government support farmers were expected to farm responsibly and reduce wastage. One thing that they were encouraged to do was to protect against the loss to their yields caused by pests. The Ministry of Agriculture urged farmers to take appropriate measures against insect pests through posters, leaflets and lectures. Advisors from MAF's new National Agricultural Advisory Service visited farms in person to offer advice and recommend products.

The MAF "Death to Pests" poster evokes continuity between the experience of the Second World War in which farmers had rallied to the call to increase outputs and feed the nation, and the post war period where yet again they were being asked to do their part in ensuring the security and wellbeing of the British people.



As this detail shows, military imagery made its way into informational post-war posters (MERL 2010/149).

A figure in a steel helmet wields a spray gun, often called a Flit gun after the brand of pesticide that was most associated with its use in the interwar period. Spray guns of this type had been used to kill houseflies and mosquitoes before WWII. They then became part of the iconography of the Second World War after they appeared in numerous photographs documenting the lice control campaigns organised by British and American troops between 1943 and 1945. The most famous of these was carried out by the Allies in Naples over the winter of 1943/44. An outbreak of typhus had occurred amongst the civilian population who were living in appalling conditions without adequate food, drinking water, clothes and shelter. A series of interventions bought the epidemic under control; the most celebrated of which was the dusting of large numbers of people with louse powder containing DDT. DDT had been released to the Allies in 1942 by the Geigy Chemical Company, and after testing

in laboratories and in the field, it was taken up by the armed forces for the control of lice and mosquitoes. When Allied forces invaded Europe in June 1944, troops were wearing DDT impregnated



shirts and carried a special anti-lice powder to protect them from typhus.

This image shows a U.S. soldier demonstrating DDT hand-spraying equipment while applying the insecticide (<http://phil.cdc.gov/details.asp?pid=2620> PHIL 2620).

In the MAF poster, a handheld spray gun that would have been familiar from household and wartime use is shown being deployed in the fight against the pests who threaten Britain's food supply. Insect pests such as the flea beetle and cabbage root fly are described as 'invaders'; a menace who have no natural place on the farm (indeed, some pests that affected crops in Britain were brought in on the wind from elsewhere, including across the Channel). The layout of the poster is intended to help the farmer make a connection between obvious and visible damage that they might see to the leaves of their cabbages or lettuces, the sometimes unseen pest that was responsible, and the right treatment to get rid of it.



Careful graphic design serves to link the names of specific pests to visible and recognisable signs of crop damage. These are then set alongside descriptions of appropriate treatments (MERL 2010/149).

By the early 1950s, a number of government surveys had been carried out to investigate the incidence of some major agricultural pests in Britain, including cabbage aphid mentioned here. The focus of the surveys was on pests that were likely to be economically significant but had not traditionally been treated on a large scale by farmers in Britain, often because farmers did not see any great value in doing so. Pest treatment could be very labour intensive and time consuming, and it added to the costs of farming. If a crop did not fetch a very high price in the first place, then farmers often accepted in some years there might be some damage to their produce. Pesticides were mainly used by hop and fruit growers before WWII as these were high-value crops, and in the case of fruit, an unblemished appearance was important.

The government-funded pest surveys of the 1940s aimed to produce the first clear picture of the losses to crops in Britain through pest damage. Government scientists and advisors hoped to use this information to make farmers more aware of the different pests that might affect their crops, the conditions in which they were likely to appear and the methods available to control them. The lectures and literature provided by NAAS frequently contained images that allowed farmers to identify insects as a prelude to treatment. During the 1950s this sort of educational work was accompanied by increasing references to the costs of pest damage to farmers and the savings that therefore could be gained through proper treatment.



An example of a later-twentieth century hat from The MERL collection, designed to promote ICI plant protection products (MERL 96/100).

The timing of this poster is interesting as it shows that while DDT and similar synthetic pesticides such as the ICI (Britain's largest chemical company at this point) product called BHC or "Gammexane" were now available for agricultural use, neither are recommended here. Farmers are encouraged to use more traditional pesticide chemicals that had been around since before the Second World War. Slugs should be treated with metaldehyde ("Meta"), a chemical that poisons molluscs and had been in use since the 1930s (but is now banned). The poster also recommends

“Derris”, a natural insecticide that is based on rotenone derived from vine and bean plants, and which Britain imported from Malaysia. The poster also mentions nicotine from tobacco plants, and naphthalene, a chemical from coal tar that was once the key ingredient in moth balls. The recommended treatment for cabbage root fly is Calomel – a preparation that contained mercury.

The most likely reason why the newer DDT or BHC-based products are not recommended here is that formulations based on the new chemicals were still in development or had not yet been fully evaluated by the scientists and advisors of MAF – MAF only recommended the treatments created by chemical firms after testing them first in trials. While we might get the impression that the release of DDT at the end of the war was quickly followed by rapid uptake in farming, the truth is that it took a lot of work to investigate the effectiveness of DDT against all the pests that might be important to agriculture. In addition to work across farms at home, experiments were carried out in the British Colonies of Tanganyika, Kenya and Uganda to test the effectiveness of new insecticides against tsetse fly, mosquitoes and locusts. A great amount of testing was done outside of Britain, in the British Empire, on chemicals and new approaches to their application, such as aerial spraying. One outcome of the numerous experiments done with DDT in the 1940s was the finding that it was not actually the panacea that some had previously claimed. Not only did it not fully protect against aphids, for example, its use could make a problem much worse as it killed the natural predator of the aphid, the ladybird.



Shell sign promoting ‘Chemicals for Agriculture’. Shell developed this side of its business in the run up to the 1950s and later sold a number of DDT-based products (MERL 2009/51).

Beyond testing new insecticides to see if they were effective, work also had to be done to identify the best way to apply the chemicals. DDT and BHC were only the ingredients in a wide range of rather different products such as smokes, oil or water-based sprays, powders, and seed dressings. As the

poster shows, insecticide products, both old and new, needed to be used in a particular way, and at the right time. Some needed to be applied at the “first sign of damage”, others had to be used when it was “sunny and warm”. The discovery of DDT and BHC was in fact only the first step in a long process of testing, experiment and trials that finally resulted in new products for farmers and gardeners.

“Death to Pests” shows us that pest control was not a straightforward business. The poster asks farmers to be observant, checking their vegetables for signs of damage, and the presence of pests. Correctly identifying the insect that was eating the crop was important, as different pests required different treatments. Each treatment had its own optimal moment, mode of treatment and frequency of application. It is no wonder that farmers complained as time went by that they were not always sure exactly which product they should be using and when. During the 1950s, the range of chemicals available grew bigger and more diverse. By the end of the 1950s, the treatments recommended here had been supplemented and sometimes supplanted by an expanding list of new pesticides based on organochlorines such as DDT and BHC, and a new range of organophosphates. The role of MAF continued to be important in encouraging farmers to use pesticides to protect their crops and to use new products effectively and also, increasingly, with safety in mind.

Further Information:

For information about the poster see – [MERL 2010/149](#)

**The poster was acquired as part of the Museum’s Collecting Twentieth Century Cultures project, which you can read more about here – <http://collecting20thcruralculture.blogspot.com/>;
<https://merl.reading.ac.uk/collections/collecting-20th-century-rural-cultures/>**

For an online exhibition referring to chemical use in farming see – <https://merl.reading.ac.uk/explore/online-exhibitions/farming12k/>

For more information about Dr Sabine Clarke, her research, and publications see – <https://www.york.ac.uk/history/staff/profiles/clarke/#profile-content>

To read more about her research project about ‘The Chemical Empire’, which is carefully unlocking the intersecting histories of insecticide use in Britain and British colonial contexts, see – <https://www.york.ac.uk/history/research/majorprojects/the-chemical-empire/>

And finally...

In discussing her contribution to 51 Voices, Dr Clarke kindly took time to look online at some of the different types of crop-spraying devices that we hold at The MERL. Many of these form part of the Zeneca collection. She described knapsack sprayers:

'These were popular in colonial locust control in East Africa after the Second World War. A sprayer would walk along spraying the 'hoppers' (immature locusts) on the ground with pesticides before the hoppers could develop their wings and take off in search of new crops to eat. This was one way to stop locust plagues from spreading further. These sort of handheld sprayers hold questions for us now as they brought individuals—often badly paid farm labourers or peasants who wore little or no protection—into regular and intimate contact with some dangerous chemicals in a way that a driver of a tractor avoided'.

This is a perfect example of why we need the help of experts like Sabine Clarke and others in better understanding and interpreting the Museum's collections, and in connecting these to hitherto underexplored histories of Empire.



Three examples of different knapsack sprayers in the Zeneca collection (left to right: MERL 94/15, 94/23, 94/2).

For information about sprayers in the Zeneca collection see –

https://rdg.ent.sirsiidynix.net.uk/client/en_GB/merl/search/results?qu=zeneca&qf=UR_FORMAT%09Format%09OBJECT%09Object&lm=MERL2