

GARDENING IN WAR-TIME ENGLAND.

(Abstract of talk given by Mr. J.P.Hudson on May 20th.)

Pre-war Planning: Before the war little more than a quarter of all the food consumed in the United Kingdom was grown there, and cattle, pigs, poultry, as well as human beings, lived largely on foods imported from all over the world. It was realized as far back as 1936, that, if war came, Great Britain's overseas food supplies would be in jeopardy, and that the shipping position might become even more desperate than in the last war. The whole question of the nation's food was therefore considered, both by the dietician, who calculated the amount and type of food which would be required to keep the nation fit, and by the agriculturist, who considered what steps would have to be taken to enable the farmers to produce as much of these foods as possible.

The Dietician's Contribution: Before the war, grain, meat, dairy produce and fruits were imported in vast quantities to supply carbohydrates to provide energy, proteins needed for body building, and vitamins to keep the body working efficiently. The principal meal of the pre-war day was apt to consist of a large helping of imported meat, with (largely home-grown) potatoes and vegetables as mere culinary adjuncts, and a sweet made from some form of imported cereal, probably flavoured with a foreign dried fruit and garnished with imported corn-flour custard.

Bulk foods, especially cereals, required most shipping space, and the first essential would obviously be to grow vastly more wheat at home, and to grow and encourage the people to eat more vegetables than ever before. The principal war-time meal would have to consist of a large helping of home-produced potatoes and vegetables, flavoured with meat and occasionally relieved by entirely vegetarian dishes such as "vegetable hot-pot" and "vegetable curry". The sweet would have to be made from home-grown flour, flavoured, if at all, with English fruits, and often with no sauce or custard at all. This diet has maintained the people at home in health and strength, thanks, perhaps, to the care with which it was balanced and the vitamin content was maintained.

Full use had to be made of "home-grown" vitamins. The production of tomatoes under glass was doubled, and during the war glasshouse growers were compelled to devote at least 90% of their houses to tomato and other food crops. Black currant and rose-hip syrups were issued to mothers for their children. The greatly increased use of fresh vegetables ensured that the population was not starved of vitamins.

The Farmers' Contribution: As a necessary preliminary to planning, a survey was made of all the agricultural lands and resources of the United Kingdom in 1939-40, the first since the Domesday Book in 1084! More than 7,000,000 acres of grassland was ploughed up, much of it for the first time in a century. At first there was a scramble for machinery, but now British agriculture is the most highly mechanised in the world, with one tractor for every holding of 50 acres or over. It was common to see tractors and ploughs working all night.

The potato acreage was doubled - enough to supply about a pound a day per person throughout the year! An anxious watch was kept for an invasion of Colorado beetle, a most serious potato pest already well established on the shores of France and Belgium. During the war altogether thirteen centres of infection were found, but in all the pest is believed to have been completely stamped out, thanks to extraordinarily thorough steps taken by the authorities.

Another pest, wireworm, may lead to failure of a cereal crop sown on newly broken up grassland. A system was devised whereby the wireworm population of a paddock could be estimated and the farmer advised whether or not to sow a cereal.

In the earlier years of the war there was an acute onion famine, but later the British growers were producing splendid crops - 100,000 tons in 1944. Amongst the varieties grown was "Pukekohe Longkeeper" from seed supplied by New Zealand. The acreage of carrots was nearly trebled, with the help of the entomologist in controlling the carrot fly.

Land (often the very best) lost to cultivation in airfields, fortifications, etc. was more than replaced in area by reclamation of bog, fen, and moorland. Even the lawns at Sandringham made their contribution to the nation's larder - on Norfolk sand which is proverbially so poor that it will only carry "one blade of grass and two rabbits fighting for it".

The Gardeners' Contribution: There was a great increase in the interest taken in the home kitchen garden, guided and encouraged by a vigorous "Dig for Victory" campaign; but a big proportion of householders in the United Kingdom have either no garden at all or only a small patch of impoverished soil, deeply shaded by buildings. The way out of this impasse was found in the last war by the foundation of those typically British institutions "allotments". The allotment now accepted as standard is a piece of land 30 yards by 10 yards. In and around every city, town and even village will be found paddocks set aside for allotment gardeners. In some a central building was provided, with tool lockers for each member. During the war temporary allotments were produced by the tens of thousands by ploughing up public open spaces and parks. In the London Council area alone about 20,000 new allotments were formed in this way. Every possible help and facility was given by means of lectures, demonstrations, films, competitions, and radio talks.

In the hands of an expert an allotment should yield about 15 cwt. of produce a year, valued at about £20 - enough to provide all the vegetables, except maincrop potatoes, for a family of four, with a choice of at least two vegetables every day of the year. One and three-quarter million allotments were being gardened in 1944 (including 10,000 by women), representing an area of over 100,000 acres, all cultivated by the sweat of man's brow! This gives some idea of the magnitude of the effort.

Many of the best English garden practices were based on an abundant and regular supply of horse manure. Even now, the most successful market gardeners use up to 30 tons of animal manure, together with a ton or more of hoof and horn or other fertilizer of organic origin, every year. It is not uncommon to see vast piles of straw being converted into compost - e.g. 1,000 tons of straw being composted on one market gardener's holding. Sometimes, after a raid, growers would buy and compost scorched carpets, tobacco, and other damaged merchandise from blitzed warehouses. The householder was less fortunate, but gardens or allotments had compost piles where vegetable refuse of all sorts was rotted down. A move was made to dry town sewage and convert it into an easily handled fertilizer; more may be heard of the type of manure.

Labour and Seeds: By far the most important innovation regarding land labour was the formation of the Women's Land Army, and the girls who joined this organization deserve the warmest thanks for their work, much of which was heavy, and before the war, would hardly have been considered suitable for women.

Before the war, a British seedsman's shop represented, literally, the fruits of the earth. Outbreak of war cut off supplies of much seed. The shortage had to some extent been foreseen, and the position regarding vegetable seed was met in three main ways: - by increasing production in the United Kingdom of those seeds which could be grown there, by encouraging Empire seed production, and by import of seeds from America under the lease-lend agreement. New Zealand made a substantial contribution, especially of onion and pea seed, whilst a seed industry was even founded in Malta.

Storage and Sale of Produce: Attention was paid to improved methods of home storage and preservation of vegetables, and also to the use of those varieties which keep best. Garden Produce Committees organized the disposal of surplus vegetables, some to local markets and British Restaurants, some to hospitals, and by a regular arrangement, to mine-sweepers. By 1944 combined forces were gardening 20,000 acres, and produced food worth £650,000.

Effects of Enemy Action: In one county 70,000 bombs and several hundreds of aeroplanes all fell on farms and gardens within a period of six months, but farming and gardening went on. Whilst awaiting the invasion time and trucks were found to evacuate 55,500 sheep from Romney Marsh to a safer place, the largest animal migration ever arranged in Britain.

One of the most notable and moving relics of the blitz is the Garden of Remembrance in Plymouth Parish Church, which lost its roof in an early air raid. The floor of the church, now open to the weather, but surrounded by the ancient walls, has been laid out in beds filled with those flowers most closely associated with England's history.

The gardeners of Britain, no less than the farmers, have a war-time record of which they may well be proud, and without the material and spiritual contribution made by them the nation would have been less able to respond to Mr. Churchill's demand for toil and sweat.

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BOTANY AT AUCKLAND UNIVERSITY COLLEGE.

Dr. V. J. Chapman took up his appointment as Professor of Botany at Auckland University College in March last. The following notes are copied from the Auckland Botanical Society's Quarterly News Letter of March 1946 (Vol. 3, No. 2).

"Dr. Chapman is a man of very wide experience having taught and botanized in many different parts of the world. He received his academic training at Cambridge University becoming Doctor of Philosophy in 1935 and Master of Arts in 1936.

From 1932-1935 he taught at the University of Cambridge, and from 1935-36 he was Henry Fellow at Harvard University, during which time he took the opportunity of Botanizing in many parts of the States.

From 1936-37 he was again in England teaching and lecturing at Manchester University. Then from 1936-44 he was once more at Cambridge, this time as Drosier Research Fellow though during this period he also carried out teaching work, and from 1939 to the time of his present appointment he was University Demonstrator in Botany. But since 1937 he has been by no means all the time pursuing the even tenor of his way undisturbed at Cambridge. On the contrary, in 1939 he organised the Cambridge University Expedition to Jamaica, while the outbreak of war brought him further activities and responsibilities. In 1940 he organised a voluntary research party in connection with the Forestry Commission Fellings in East Anglia, being personally responsible for soil analysis and soil reports.

In 1942 he was called on by the Ministry of Supply to organise and conduct a survey of Marine Biological Resources. In 1943 he was made Production Manager at a group of Ministry of Supply Factories using algal material. From 1944 he acted as consulting Botanist to the Scottish Research Association, while in 1945 he was called on to act as Botanist attached to Supreme Headquarters of the South East Asia Command.

During all these years Dr. Chapman has published much research dealing more particularly with maritime Botany. His book "An Introduction to the Study of Algae" is to be found in the College Library, and is already familiar to some of our members. He has also published a large number of papers dealing with the salt marshes and marine algae of Nova Scotia, New England, and Jamaica and the British Isles. His researches include considerable work on the mangrove, Avicennia Nitida. He has also kept a watchful eye on sand dunes!

His interests in the sea shore have not been purely theoretical and he has a book on "The Economic Uses of Seaweeds" now awaiting publication.

Auckland and its vicinity will provide Dr. Chapman with many salt marshes, dunes, and algal communities and we feel sure that before long he will have worked up a flourishing school of Maritime-Botany among us.

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