

Matthews, Mrs. J. Milligan, C. L. Monckton, J. L. Moore, M. K. Openshaw, Mrs. L. E. Orr, H. Osborne, Miss M. A. Palmer, Dr. D. A. Purdie, Miss N. Raynes, Mrs. H. E. Read, Mrs. F. A. Rhodes, Lady Robertson, Miss V. A. Rucroft, Miss L. W. Shaw, M. D. Smeaton, G. F. Smithers, Rev. T. A. Speer, C. C. Spencer, Mrs. E. Spragg, F. C. Stewart, Miss N. Tanner, Mrs. L. Tavener, Mrs. G. L. Taylor, H. M. Taylor, Mrs. J. Turner, Misses D. M. and N. Ward, Mr. & Mrs. E. J. Weber, R. K. Wilson; at £5 5s. each, G. S. Cooper, Mrs. N. Pearce; at £6 each, R. J. Fairweather, H. Trewby; at £10 each, Anonymous, Mr. & Mrs. J. S. Armstrong, P. H. G. Bennett, I. E. Coulter, Major T. R. Dawe, J. Dickson, Miss M. Dickson, Misses E. and J. Feist, Dr. C. A. Fleming, Sir William Goodfellow, Miss C. M. Gow (2), Mrs. J. B. Green, Mrs. C. Haines and Miss A. N. Eglin, J. A. B. Hellaby, Miss A. M. Hursthouse, Miss H. M. Jenkins, Mrs. K. D. Kirkby, Mrs. L. W. Munro, Miss M. Nicholls, P. Rider, Mrs. O. G. Robertson, R. Robson, Mrs. R. Sunderland, Mrs. W. J. Tripe, The Hon. Mr. Justice and Mrs. Turner, H. D.

Warren, G. H. White; at £10 10s. each, Miss J. Coles (2), Hastings-Havelock North Section, Waikato Section, A. C. Howell; at £11, Dr. Hughes-Johnson (2); at £20 each, Mrs. A. Greville, L. M. Hart, Miss F. Notman; at £25 each, Miss G. A. Craston, Mr. & Mrs. J. H. Holt, Miss D. L. Randel, Mrs. V. Robinson, Mrs. D. M. de L. Willis; at £30 each, A. Hipkins (3), E. E. Williamson; at £50 each, Miss V. M. Ferguson, Dr. & Miss Todd, Wellington Branch; at £52 2s., Mr. and Mrs. J. H. Taylor; at £53, Mr. & Mrs. F. E. Fooks (2); at £100 each, N. Ginn, Miss S. Izard. Total to 8 December, 1962, £1473 12s. 6d.

1st supplementary list. At £1 each, Anonymous, D. E. Cooper, Miss J. Aiken, Mr. & Mrs. De Pontet, R. Halliburton, H. G. Menzies, Miss B. MacIntosh; at £2, B. Teague; at £2 2s., Mrs. E. M. Stevenson; at £5 each, Miss M. Doldee, Mrs. A. R. Legge, Mrs. J. R. Merriman, Mrs. D. Len Arnold; at £10 each, Mrs. G. R. Grace, R. Cresswell, Misses L. M. West & E. E. Ward; at £12 10s., Mr. and Mrs. A. F. Jackson.

Total to 21 December 1962, £1547 4s. 6d.

DANGER IN PESTICIDES

by the President

I have read three lengthy extracts published in the *New Yorker* from Rachael Carson's new book *Silent Spring*. I have discussed it with a number of informed persons and officials, I have read commentaries on it which have appeared in *Time* and *Agricultural Chemicals*, and I have perused material on the subject of pesticides supplied by the international conservation organisations.

There is no doubt that under some circumstances pesticides must be used, but inasmuch as there is certain risk to man and beast in using them, much thought and care is needed to determine when and how they are to be used.

Silent Spring claims that the use of pesticides has caused tremendous havoc among birds and has wiped out all the fish in some waters of the United States. It goes on to describe the effects of organic phosphates and chlorinated hydrocarbons on humans in terms which are frightening, and doubtless it will cause consternation and horror to many of its readers.

There is no doubt that aerial spraying with pesticides has caused heavy mortality among birds and fish in limited areas (we have had reports to that effect from other reliable sources) but here it is well to differentiate

between aerial spraying which covers everything with the poisons, and dropping baits for noxious animals, the poison in the latter case being only on the bait—bait, by the way, not attractive to birds. D.D.T. does kill insects (for a time); birds and fish eat the dead insects, and the D.D.T. builds up in their bodies until a lethal dose has been taken. Worms absorb the poison and the birds eat the worms, and by other means birds and fish can acquire a fatal dose of poison.

Evidence about the effect on humans is contradictory. *Silent Spring* claims that the poisons build up in the fatty tissues with long-term but disastrous effects on the body. On the other hand an article in *Time* describes how when 200 times the normal amounts of D.D.T. were given to 51 convict volunteers, the insecticide accumulated in their bodies for about one year, after which it was excreted as fast as it arrived, without apparent harm to the human guinea pigs.

Many of the substances used are undoubtedly extremely lethal, so lethal that a fatal dose can be absorbed through the skin very quickly. Moreover, as they are synthetic substances, not found naturally, the human body has not had an opportunity to build up an immunity to them. It is not a happy thought that such powerful poisons are sprayed on vegetables and fruit we buy, even if some of them do break down fairly quickly into harmless substances.