

## NEWS □ FARMING AND THE NUCLEAR WINTER

What happens to farming if some nation or other is insane enough to start a nuclear war? The matter was discussed at a conference — "Farming and the nuclear winter" — at Roxburgh, sponsored by the Defence Research Trust. Douglas MacSkimming reports.

## Unable to feed the survivors

FARMERS may well be incapable of feeding many of the survivors of a nuclear attack on Britain.

Devon farmer, Mr Brendan Butler, told the conference that the best the industry could realistically expect would be a form of primitive subsistence agriculture.

Farmers caught up in a nuclear blast would see the bulk of their stock dying in the 14 days after the bomb.

Taking an 80ha (200-acre) mixed farm with dairy, rearing ewes, extensive forestry and arable crops as an example, he said that the farmer and his family would need to stay in a radiation-proof shelter for 14 days after the blast.

"That would involve producers having to listen to their animals in distress without being able to do anything to help," said Mr Butler.

Stock which survived would be given feed and water only with extreme difficulty.

Adding that the National Farmers' Union had tried to find out more about the latest information with no response from official circles should a nuclear war occur, Mr Butler stressed that he was not part of a "campaigning peace movement".

"I just want the agricultural industry to understand what the reality of a nuclear war would be," he added.

# Much more advice needed from State

THE Government must give UK farmers more advice on how to deal with the possible outcome of a nuclear war.

The almost complete lack of such advice was revealed at the conference. Speaker after speaker pointed out that projections of the aftermath of a nuclear conflict far outstripped any official advice.

Most scientists who had been working in this field in Europe, the US and the Soviet Union, now agreed that a sizeable nuclear war would lead to vast amounts of smoke and dust being trapped in the upper atmosphere blocking out about 95 per cent of the sun's light and therefore totally cutting off photosynthetic activity in plants and creating sub-zero temperatures for weeks or months.

Yet the most recent advice from the Government was a pamphlet *Home defence and the farmer*, first published in 1958, only moderately updated a few years later, and now out of print.

Mr John Hay, Scottish NFU vice-president, said the farmers' unions on both sides of the border were campaigning for more up-to-date information on the subject.

As for the possibility of a Government-funded stocking of agricultural surpluses in readiness for nuclear war, Mr Hay stressed that only the country's political leaders could answer such a question.

Although the prospect appeared bleak, Mr Hay said there could be a case for continuing to keep strategic food stocks "by carving food Fort Knox out of the hillsides" for the storage of supplies.

However, this would also require research into guaranteed safe storage techniques.

Mr John Home Robertson, MP for East Lothian who attended the conference, said he would appreciate the receipt of "pertinent questions" on the subject so that these could be brought up with the Minister of Agriculture and other Government departments at a later date.

## All the world's crops at risk

EVEN with a relatively "small" nuclear attack, all world food crops would be at risk from the predicted drops in temperature although the scale of the damage would depend partly on the time of the year.

This was claimed by the convener of the conference, Dr Alan Longman, who said that the smoke and the dust that would be created in the upper atmosphere would be so dense that they would blot out more than 95 per cent of the light cutting out any chance of photosynthesis in any plants which survived the initial blast.

This would last for anything from two weeks up to two months. And temperatures far below freezing point would last even longer.

Dr Longman, a scientist with the Institute of Terrestrial Ecology at Edinburgh and one of the technical advisers in the recent BBC television documentary *Threads*, added: "Even looking at this in the most favourable light, the least bad scenario would occur if the holocaust happened during the winter.

"At least then plants might have had some time to become winter hardy. But it is unlikely that even these would survive the

tremendous cold."

He predicted that at best people would become hunter-gatherers instead of farmers.

"But I don't think there is any hope of finding what might be called food crop varieties that would survive a nuclear winter. They have all been too highly bred and have a marked need for fertilisers which would not be available."

Dr Longman has carried out his own experiments in attempting to grow feed grain varieties under conditions of low light intensity with some shattering conclusions though he stresses that these are trials only.

The spring wheat variety, Regal Durum, was grown in large pots in a heated glasshouse except for the periods of one to six weeks of dim light treatment down to about 1 per cent of normal.

At the young stage where the plants were two weeks old, the dim light quickly stopped the growth of plants and after one or two weeks the plants started to fall over. The few that survived as long as six weeks were very small and pale in colour. "Though they can recover when restored to full light, they are so much delayed that they are unlikely to yield," said Dr Longman.

## 16 to 76 per cent grain loss in first attack

BETWEEN 16 per cent and 76 per cent of Britain's grain production would be destroyed from the immediate effects of a nuclear attack depending upon whether the attack occurred in winter or just before the harvest when crops are at their driest.

This was pointed out by Mr George Crossley, of Bradford University, who added that direct livestock losses might amount to 20 per cent nationally, again varying according to the time of year.

He based his figures on a scenario involving the explosion of approximately 450 warheads on a mixture of military and important political and economic targets with a total explosive power of 260 megatons.

That sort of devastation would be followed by a lack of the inputs on which the farming industry has come to depend so heavily, namely fuel, fertilisers and pesticides.

Mr Crossley said crop yields would probably be only half today's average while producers would also need to defend what they grew against marauders if seed, corn and potatoes were to be available for future generations.

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