

MEETING WITH THE SCIENTIFIC SUB COMMITTEE ON  
TOXIC SUBSTANCES OF THE PSPS ON 13 FEBRUARY 1973

SUMMARY

The Scientific Sub Committee (SSC) were not visibly impressed by PPL's rate of progress to market a safer formulation. The stench formulation appears the most favoured contender as the committee considered the thixotropic an interesting and novel formulation but a longer term project. The SSC is to request the Poisons Board to take immediate action to place paraquat in Schedule V of the Poisons Rules to ensure its purchase only by professional users. More vigorous investigation - and prosecution - will be recommended to the Poisons Board of instances where 'Gramoxone' is supplied in unlabelled bottles. Also, the possibilities will be explored of amending regulations to make it obligatory for farmers to store poisonous agrochemicals under lock and key.

MAIN REPORT

PPL were invited to present to the SSC a progress report on the production of a safer formulation of paraquat. (Footnote)

The following attended from PPL/IHRL.

Dr J T Braunholtz  
Mr T Waring  
Mr J Winchester  
Mr A Waitt  
Dr D Ferguson (IHRL)

The meeting was opened by Dr Cohen who expressed thanks to the PPL party for attending. He continued that members of his committee were very concerned at the continuing fatalities with paraquat and these deaths do reflect on pesticides in general and the responsibilities of his committee. He said that his committee would continue to give PPL its support on paraquat but to do so they require information on the company's activities to reduce fatalities. He was therefore anxious to have a progress report on the thixotropic formulation and on any other formulation which we may be considering.

NOTE Dr Braunholtz issued a policy note (Appendix) for a meeting to brief the representatives before the meeting with the SSC. In addition to those named above the meeting was attended by Dr Schumacher of Product Planning Department.



Dr Braunholtz opened by expressing his thanks for the opportunity to meet with the SSC and his appreciation of the support received from the committee. He emphasised the importance of any action taken locally by either the company or the authorities to our world market. Dr Braunholtz then introduced the members of his party and the topics on which each would speak briefly.

Mr Waring summarised the results of field work done to date with the thixotropic formulation and the general acceptance by farmers of its handling properties and its satisfactory biological effect. He explained that the 1973 programme would involve the sale of 5,000 gallons of the thixotropic formulation - a ten fold increase on 1972 - and would be sold into a restricted area. If the survey from this exercise proved satisfactory and unforeseen problems did not arise 50,000 gallons could be sold in 1974. In addition he provided details of the comparative exercise being carried out in Eire with the stench and thixotropic products. He believed that the stench formulation could be introduced as soon as the problems of taint and palatability were overcome. Mr Waring then gave a background to the Public Relations activities with which we were involved and drew attention to the latest label which had been drawn up in agreement with the PSPS.

Mr Cohen then asked Dr Goulding (Head of the UK Poisons Centre) to speak.

Dr Goulding felt that there was an urgent need to do something now to reduce fatalities not only from accidents but also from suicides. He believed that the majority of people who try to commit suicide do not really wish to die and in these cases it was frustrating for a doctor not to have a specific treatment - "a hopeless therapeutic exercise". He said it was now increasingly difficult for him to champion 'Gramoxone' which he had done for many years. "'Weedol' was not a problem". He stated that in 1972 his centre had received 59 calls for advice on paraquat; six fatalities were recorded of which 2 were children. He reiterated his plea for "something to be done in a hurry".

Dr Braunholtz thanked Dr Goulding for his remarks and in particular for the new slant on suicides.

Dr Ferguson stated there were no additional toxicological problems from either the thixotropic or stench formulations.

As no antidote had yet been found or new methods of treatment Dr Cohen felt it unnecessary to continue this aspect of the presentation.

Mr Waitt referred to the work which the company was doing but put before the committee three suggestions for their consideration.

- (1) Under Regulation 6 of the Poison Rules it was possible to prosecute where a poison was supplied in an improperly labelled container. It was suggested that firmer application of this rule be made.
- (2) It was necessary to ensure that merchants sell only to professional users and, contrary to our earlier decision it was now proposed that paraquat be placed in Schedule V of the Poisons Rules under the Poisons Act.
- (3) In view of the increasing carelessness by farmers of poisonous chemicals in their possession it would be contributory to safety to make it obligatory under the Agricultural (Poisonous Substances) Regulations the separate storage, under lock and key of all poisonous agrochemicals.



These requests would be in keeping with present legislation available in some member countries in the EEC. In respect of paraquat they would ensure:

- (1) 'Gramoxone' would be restricted to professional users.
- (2) Ensure the farmer must take proper care of 'Gramoxone' once it is in his possession.
- (3) Make the farmer, or other person liable to prosecution if he decants and gives it in an improperly labelled container.

Dr Cohen welcomed these points and thought they should be given further consideration and in particular the reference to the storage and handling of poisonous chemicals which is of concern amongst members of his committee.

Dr Goulding agreed with the need to control the supply to the correct user, through the proper channels, and endorsed the request for scheduling and for firmer application of the Poisons Regulations. But he thought it unlikely that there would be any prosecution of a bereaved person who would already 'have learned his lesson'.

Mr Winchester remarked that there were 11 staff involved full time on work involved with safer formulation and he outlined the problems which the thixotropic formulation presented.

- (1) The problems of scaling up the formulation process.
- (2) The variation in batches of 'Kelzan' and the lack of a specification for it.
- (3) The difficulties in obtaining a viscostatic formulation with a polysaccharide and a strongly ionic solution.

In addition, he mentioned the packaging problems of the present stench formulation.

Dr Cohen expressed his thanks for this information and indicated that he had not previously appreciated some of the technical difficulties. He thought a stench was required with the thixotropic formulation particularly as children are liable to shake bottles, eg lemonade.

Dr Ashworth considered that 'Gramoxone', a vital product, was in jeopardy if accidents continued. He went so far as to say that it may only need one major accident at home or in another country to bring serious action against it. He believes the thixotropic formulation is a novel type but because of technical problems it is a long term research project. He favoured a strong and repulsive smell which would be a big deterrent to decanting or drinking. He thought we had not done sufficient studies on other stenching agents. He repeated his request for urgent attention to be given to the early production of a stench formulation.

Mr Winchester asked the committee for its views on stenching agents. Dr Barnes did not believe that the smell had to be strong as long as it was "sufficiently different".

Dr Ashworth thought some of the ortho-cresols type smells should be considered.

Dr Braunholtz remarked that smell is highly subjective and there is no assurance that any new smell could be readily formulated with paraquat.

Mr Winchester stated that research work on safer formulations is continuing and included investigations into solid paraquat, stench, colour and bittering agents.

Dr Barnes requested more information on the scheduling and Poisons Rules. It was agreed that the request to the Poisons Board should not follow the standard, slow procedure but as there was soon to be a meeting of the Board an immediate and direct request should be made.

Dr Cohen agreed with Dr Barnes.

Mr Waters asked for more details on the amendment for handling and storage of poisonous pesticides under the Poisons Act.

Mr Waitt believed it would be best included under the Agricultural (Poisonous Substances) Regulations as it could then be policed by the MAFF Safety Inspectors. It was appreciated that this would probably require an amendment and the addition of a new section to the Regulations.

These points were accepted.

Dr Cohen expressed his thanks for the information on the two formulations but pressed for early action by PPL. His committee would continue to give their support and he requested that they be kept informed of progress.

Dr Braunholtz thanked the committee for their consideration and help and invited the committee or their representatives to visit Jealott's Hill to see at first hand and discuss the programme of work on safer formulations of paraquat.

NB This offer has now been accepted by Dr Ashworth on behalf of the SSC.

AWW/AES  
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## APPENDIX

MEETING WITH SSC ON TUESDAY 13 FEBRUARY 1973

## INTRODUCTORY NOTES

In attending this meeting we should bear in mind that the SSC are under real pressure of political/environmental origin and are unlikely to feel that we have helped them simply by pointing out that accident rates are not increasing. I believe that they are likely to press questions on the 'simple' steps that we might by now have taken in particular the addition of stench and the marketing of a 'Weedol' type product and to be especially interested in how we propose to follow up this year's trials in the UK and Irish Republic.

I understand that SSC wish to open up a discussion of paraquat fatalities with us and may, therefore, not look for a formal presentation from PPL; subject to this and to matters raised at our own meeting at IC House I propose that we should follow the programme set out in Arthur Waitt's note of 7 February. We will not circulate papers or reports to the SSC unless specifically asked to do so as a follow up to the meeting, nor will we demonstrate samples of different formulations.

In my introduction I will refer very briefly to progress since last January and will introduce the other members of our party. I will in addition make one or two important points of a general nature.

- (a) Formulation is only one of a number of approaches to this problem
- (b) This is a specific case of a matter for general concern - the mis-handling of chemicals in the home.
- (c) Any proposal to change formulations leads to serious production problems which are aggravated by the world importance of paraquat and the very diverse market and climatic condition in which the product is required.

It will be our intention as a group to show the considerable attention that is being paid to this problem and the genuine progress that is being made not only in formulation but also with other approaches; nothing must be said that restricts or pre-empt's the company's future decisions on policy or gives the impression that we will soon be able to introduce widely a safer formulation of 'Gramoxone'.

Sgd. J T Braunholtz