

## **UK CONTROLLED ENVIRONMENT USERS' GROUP**

### **MINUTES OF THE 1997 BUSINESS MEETING**

The annual meeting of the CE Users' Group was held on Tuesday 16 September 1997 at the West Park Centre in Dundee.

The meeting opened at 20:10 hours.

The chairman L D Incoll opened the meeting, welcoming newcomers and explaining the purpose of the meeting.

*Apologies* were received from Roy Randall.

#### **1. Minutes of Previous Meeting**

The minutes of the 1996 meeting, held at Badock Hall at University of Bristol, were circulated to all members. There were two corrections; Minute 15 should read "CEUG" and not "E" and Minute 10. I Baker - Vindon Scientific, said that he did not say that MAKROLON could be used to pass UV-B as it is opaque and should read OXCELL 2 which is transparent to pass UV-B. These amendments being noted, the minutes were then approved.

#### **2. Matters Arising**

There were no matters arising from the minutes.

#### **3. Management, Staffing, Running Costs**

There was no discussion on these subjects.

#### **4. Maintenance, Servicing, Spares**

A Sandford - Campbell Scientific Ltd, spoke about a practical problem he had had with an environmental room (Cincinnati sub-zero cabinet) which, when it came to be serviced, had generated some problems with companies not stocking CFCs. K MacKenzie - Indis Scientific, said that most environmental rooms could be upgraded to use new refrigerants and it was cost effective to upgrade systems to use the new CFC-free refrigerants. The upgrade consists of having the oil separator replaced but most of the work is in having the compressor replaced which is the most expensive item. B Hardwick - Weiss Technik Ltd, warned that there are some refrigerant manufacturers who will say their gas is a direct replacement without the need to change the compressors and the oil separators. The new gas may work for up to 6 months, but you may eventually end up with a compressor failure which could cost £2,000 to £3,000 to repair. A White - Sanyo Gallenkamp Plc, spoke about the aggressive nature of these "drop-in" replacement gases which may cause problems with the rubber seals and cause leaks due to the molecular size. He recommended new condensing unit, new compressor and a new type of synthetic oil was a much better system in terms of cabinet costs in the long term. It was also

mentioned that some of the “drop-in” gases blends were changing as fast as the legislation and some of the blends were only an interim solution.

L Incoll - University of Leeds, noted that G Crowhurst was to supply a list of suppliers used by HRI for chart recorder spares but this list had not been received. I Baker - Vindon Scientific Ltd, spoke of how manufacturers of chart recorders have sub-contracted the supply of replacement pens and charts to other companies who charge what they like. He said he would supply a list of suppliers to add to the minutes. K MacKenzie - Indis Scientific, spoke of the different systems now available.

## **5. Control Systems**

L Incoll - University of Leeds, noted from last years minutes that G Taylor - Sanyo Gallenkamp Plc, was in the course of producing design data for a ‘standard aspirated screen’ and asked him to update the members on this subject. G Taylor - Sanyo Gallenkamp Plc, spoke about chamber performance using standard methods of measuring humidification in a growth chamber. He said that there had not been much progress. He didn't have the data with him but the work is still ongoing and still relevant. A Morgan - HRI, said that they are currently waiting the delivery of an aspirated screen from America. They had been given three different designs and had evaluated them and found that one was a lot better than the others. N MacRae - Indis Scientific, asked what was the purpose of the aspirated screen. G Taylor - Sanyo Gallenkamp Plc, replied that it was a method of passing air over a screen and sensors at the right speed and measuring at a single point.

L Incoll - University of Leeds, spoke about the admirable efforts of NCR 101 who are attempting to compensate in N. America for the deficiency in the current education of scientists. A lack of training means that many people have not seen a standard reference thermometer they don't know the precision or accuracy of laboratory thermometers and in particular they believe the precision with which LCD meters display temperature. Who is going to do this training? K MacKenzie - Indis Scientific, replied from a non-scientific view that he hoped that every laboratory had some kind of calibrated sensor within it. T Tibbitts - University of Wisconsin, said that it should be the chamber that was monitored not the plants and he didn't use standardised instruments but used calibrated instruments. M Hibbert - Rotronic Instruments, pointed out that one of the most inaccurate pieces of measuring equipment is a wet bulb thermometer as it cannot be calibrated.

## **6. Humidification & Irrigation**

M Dixon - University of Guelph, asked if anyone used High Pressure Fog Systems for humidification or is it all steam? He explained that this was 6.9 MPa (1000 PSI) atomised water at less than 10 µm drop size in their growth chambers. This system is used routinely in glasshouses. A discussion then followed on *Legionella*. J Franklin - Rothamsted, said that the horticultural industry does have pump systems but even the smallest system was very expensive for a single cabinet.

## **7. Lighting**

L Incoll - University of Leeds, opened the discussions saying how he had been impressed with T Tibbitts' demonstrations of LEDs, larger arrays and the success in running them. There followed a discussion on LED systems and it was concluded that unless there was more demand for LED systems their cost would remain high. M Bellstedt - York International Ltd, spoke about the safety aspects of microwave lighting. M Dixon - University of Guelph, answered that although the earlier models do suffer from some of these safety aspects, more recent models are simpler and safer.

A Sandford - Campbell Scientific Ltd, warned users about the importance of CE markings on equipment and, if importing equipment, to check that it carries a CE mark. A CE mark is a European Union approval mark declaring that the product design is to the required standard for the designed use, i.e domestic, commercial. M Dixon - University of Guelph, said that in Canada they have their own mark (CSL). They can buy goods from the USA (marked UL) and then get a custom inspector from the Ontario Hydro Company to check them. I Baker - Vindon Scientific Ltd, stated that it is illegal for any manufacturer to sell any products in the EU without CE markings but it was not illegal for them to use unmarked components. He said that CE was nothing to do with safety but defines the limits of the equipment i.e. whether the equipment was suitable for light commercial, industrial or domestic use.

A discussion then followed on HQI lamps. It was concluded that the only one which could be recommended was that manufactured by Osram.

## **8. Instrumentation, Sensors, Monitoring**

There was no discussion on this topic.

## **9. Heating, Reclamation & Energy Management**

There was no discussion on this topic.

## **10. Fabric, Glazing, Reflective Material**

J Franklin - IACR, Rothamsted, asked if anyone knew of a third party that still sold Tedlar film which was used to separate lights from the growing chamber instead of glass. M Bellstedt - York International Ltd, who said he could probably help with supply asked what it was used for.

## **11. New Equipment, Recent Advances**

There was no discussion on this topic.

## **12. Plant Growth Problems, Pests & Diseases**

L Incoll - University of Leeds, opened the discussion mentioning the "phthalate problem". T Tibbitts - University of Wisconsin, asked if the group was aware that the problems of galls on potatoes could be prevented by the use of UV lights. R Hughes, IACR, Long Ashton, spoke of the "Oedema" problem and how it was aggravated by high humidity.

M Balcam - John Innes Centre, said she had a problem with aphids and was not able to fumigate within the growth room. J Franklin - IACR, Rothamsted, said that as from the 13 October it may be possible to use a new product which was a soap and drench pesticide called Intesect made by Fisons. It is already used as an incorporation in compost. M Balcam - John Innes Centre, said she had tried this product in compost form but had no results as yet. She then said that she was having problems with a rice mite which had not been identified which comes from within the seed. It was suggested that Vapor Strips or Ethylene Glycol may be a possible solution.

### **13. Safety**

J Franklin - IACR, Rothamsted, described a portable CO<sub>2</sub> monitor which was useful as a backup safety device, which alarms at 5% and starts to alert with a different tone at 1%. It has an infra-red source sensor. It is an Airwatch PM1500 from Anachem Ltd in Charles Street, Luton, Bedfordshire. It is also sold in the UK by Geotechnical Instruments(UK) of Leamington Spa in Warwickshire.

### **14. Communications**

L Incoll - University of Leeds, reported that he set up a mailing list using the software package Majordomo which meant that members could put a message e.g. enquiries, announcements, out to all other members who subscribe. It has 27 members who have subscribed at the moment out of a possible 63 with email addresses but it has not been used a lot. He asked for feedback on whether or not the information page that was given on joining was helpful. As well as the mailing list, there is a world-wide-web (WWW) page the address of which was issued to members in the January letter. This page includes a notice of the annual meeting, proceedings of last annual meeting, and a list of manufacturers. There were no comments about this page. The future lies with links with other groups. T Tibbitts has given information on N. American web pages and contact had been made with Australia but no reply had been received as yet. P Henley - University of Wales, said it may be useful to have a list of equipment on the WWW, especially redundant equipment within the University and Civil Service areas. L Incoll - University of Leeds, thought this would be better on the mailing list rather than on the web page unless there was a web address for the sources of redundant equipment i.e. the lists would not be in our web site. T Tibbitts - University of Wisconsin, asked if the group communicated with the Japanese publication, *Biotronics*, and thought it would be useful to have the minutes included in it. L Incoll - University of Leeds, replied no, but thought that rather than publish the minutes in *Biotronics* he could just provide them with the WWW address.

### **15. Treasurers Report**

The treasurer, A Nichols - John Innes Centre, read the report of 11 August 1997 which revealed a closing balance of £3125.71. It was moved by J Franklin - IACR, Rothamsted, and seconded by M Balcam - John Innes Centre, that this report, subject to audit, be accepted as read. Carried unanimously. L Incoll - University of Leeds, commented on how the final credit balance had enabled the group to invite T Tibbitts and M Dixon to participate in the meeting and to provide such an interesting afternoon session. He also felt that this credit balance would be useful for supporting future meetings.

## **16. Other business**

L Incoll - University of Leeds, mentioned the CE manual from N. America into which T Tibbitts had a major input. Ten copies were brought by T. Tibbitts to the UK. All had been sold but more copies, could be ordered through P Gill. T Tibbitts - University of Wisconsin, said he would be happy to take back any comments, revisions or suggestions for changes.

B Hughes - IACR Long Ashton, raised the point of involvement of members and how each member was asked three years ago to carry out an energy survey and he wondered if anyone else had carried it out. J Franklin - IACR, Rothamsted, said they had done small areas of it. L Incoll - University of Leeds, - said that members either had little time or lacked commitment.

Ian Baker - Vindon Scientific, pointed out that his own contact with the group was at the meeting as he wasn't on the web site as his company wasn't large enough. He therefore didn't have any addresses of members. L Incoll said he had little sympathy for manufacturers who did not even have an Internet connection i.e. simply an email address rather than a WWW site. It was difficult to see how they could afford to NOT have an Internet connection. He noted that companies were members of the group on condition that they did not use their membership to market their products. Members who subscribe to the mailing list can obtain email addresses by using the command "who". T Tibbitts said that they do give out the mailing list addresses to all members and no-one complains.

## **17. Date & Venue of Next Meeting**

L Incoll mentioned various possible venues, James Morison University of Essex, - , who was a member of the group, had expressed an interest in hosting the next year's meeting but since he was unable to attend this meeting to see how it was organised, this seemed unlikely. Helen Brown - AgrEvo, had also offered to host a meeting. The offer was postponed for a year because they are having new CE installed, which is not yet ready. University of Reading who were foundation members of the group, had been contacted by email in August but had not replied yet. MAFF, CSL at York was suggested. They have impressive facilities. York University could be used for accommodation. J Franklin was asked about the possibility of Rothamsted but he would need to know by Christmas. As usual L Incoll would visit the site and help with organisation. No definite venue was agreed.

L Incoll proposed a vote of thanks to P Gill and Scottish Crop Research Institute for organising the meeting and also to West Park Centre for their accommodation. Ted Tibbitts proposed a special thanks from himself and Mike Dixon for the warm reception they had received.

The meeting closed at 11:00 hours.

Wendy Patterson (SCRI, Invergowrie)  
Recorder  
16 September 1997