



The PIPAH Study Newsletter

January 2014



An agency of the Health & Safety Executive



Hello and welcome to our first newsletter! We have sent this newsletter to you as you agreed to take part in the PIPAH study. When you see what the study has achieved in its first year, we hope you will agree that it has made an excellent start.

Why are we interested in pesticides?

The PIPAH study is trying to better understand the health problems that may occur with regular pesticide use, and how to keep workers who use these safe and healthy at work. The use of pesticides is very important to our lives in many ways, and we are really keen to make sure that when they are used, they are used safely.

Our first year....

City & Guilds began inviting members of NRoSO¹ and NAsOR² to take part in the study in January 2013. Over 3,500 people agreed to take part, and took the time to complete the general questionnaire. This was an amazing response, and we are so grateful to everyone who decided to contribute to this important study. We have almost entered all the questionnaires into our database – a few questionnaires from the January invitations are still being sent in – but we have done some preliminary analysis of the information we have received so far. You can find out about the results in this newsletter.

¹<http://www.nroso.org.uk/>

²<http://www.nasor.org.uk/>

We held two focus group meetings – one with members of NRoSO at the City & Guilds offices in Stareton, and the other with industry stakeholders at the Health & Safety Laboratory in Buxton. There were lively discussions at the meetings, both on the topic of the focus group and on the study itself. The focus groups concentrated on exploring practical ways to assess your pesticide use during the year. Many things were discussed during the two meetings, but perhaps some of the most important points to come out were that:

- We should try to use the electronic records of pesticide use, which many study members keep anyway;
- To get detailed information, we should have a number of smaller sub-studies on specific topics;
- Face-to-face meetings are a valuable and effective way of gathering information;
- January is the best time of year to send the invitation to join the study, and any further questionnaires.



All agreed that developing a process which suits everybody will be very difficult. But we are confident that, with your help, we will be able to put together a method of collecting the data that everyone is happy with. See 'What's next?' for more information.

International connections

We attended EPICOH 2013, an international conference on occupational health, where Anne-Helen Harding gave a presentation about the PIPAH study. While we were there, we met a researcher from New Zealand, who is planning to start a new study of pesticide applicators there; this study will be based on the PIPAH study design.

The PIPAH study has become a member of the AGRICOH consortium. This is an international association of agricultural studies like PIPAH, which is hosted by the International Agency for Research on Cancer in Lyon*, France. The aim of the consortium is to pool data from many studies, so that they can study the relationships between exposures and disease, particularly for rare exposures and/or health outcomes. At the consortium meeting in June, Anne-Helen gave a presentation in which she introduced the PIPAH study to the assembled researchers.

*<http://agricoh.iarc.fr/>



Ongoing recruitment

Size matters! In this type of research study, it is important to enrol as many people as possible so that any findings are meaningful. With this in mind, City & Guilds has begun inviting all the new members of the two professional registers of pesticide users, NRoSO and NASOR, to take part in the PIPAH study. This ongoing recruitment into the study will ensure that it continues to grow into the future.

Collaborations

Professor Neil Pearce from the London School of Hygiene and Tropical Medicine is one of the scientists working with the PIPAH study team. Professor Pearce is an internationally recognised expert in occupational health, and the PIPAH study team has been very fortunate in being able to call on his advice when planning the study.

Professor Pearce is putting together a proposal for a new study which will investigate the links between pesticide exposure and biomarkers of early stages of Non-Hodgkins Lymphoma. He would like to invite a small number of PIPAH study members to take part in this study. We will contact some of you with an invitation later this year. As always, it will be your choice as to whether or not you take part.

This new study is the type of study which members of the focus groups thought would be most useful – small, detailed studies of pesticide use and health. And indeed they are very valuable and can provide an insight which is not possible in the larger studies.

<http://www.lshtm.ac.uk/aboutus/people/pearce.neil>

Chris Boorman, Gillian Frost, and Anne-Helen Harding, who are members of the PIPAH study team, were at Cereals 2013 in Boothby Graffoe, with a PIPAH study table in the NRoSO tent. This was an ideal opportunity for us to meet some of you, and to answer any questions you had about the study.



What's next?

We are planning two important developments this year. The first is the new questionnaire for assessing your pesticide use in the previous year. We have taken all the suggestions from the focus groups about how best to do this, and developed a pilot questionnaire. To test the questionnaire, we have sent it to a sample of the PIPAH study members along with this newsletter, and have asked them for their feedback on the questionnaire. We designed the questionnaire with the aim of collecting enough information to be scientifically valid, while making it quick to complete. The focus groups were very keen that we use the electronic records some of you keep to record your pesticide usage. So we are also asking those study members who complete the questionnaire to send us a download of their electronic records (if they have them). We would like to investigate if we can use them instead of the questionnaire. With the help of the comments we receive, we will modify the questionnaire and send it to all PIPAH study members in 2015. As with all information received by the PIPAH study team, this information will be treated as confidential.

Secondly, in early 2014, we will invite members of an earlier study, the PUHS (see box), to take part in the PIPAH study. These men and women have similar qualifications and jobs as members of NRoSO and NAsOR. Enrolling members of the PUHS into PIPAH will be an important part of our 'size matters' activities.



The Pesticide Users Health Study (PUHS)

In the late 1990s, the Health & Safety Executive established a medical research study, the PUHS, to investigate the health of pesticide users in Britain. Over 65,000 certified pesticide users agreed to join the study, and their long-term health is still being monitored. However limited information was collected about the people in the study. There is no information on diet, exercise, and other factors that can affect someone's health, and so it is difficult to interpret any findings in this study. The PIPAH study was established to address this weakness in the PUHS.

If you would like to learn more about the PUHS, three reports about the study are available on the HSE website

<http://www.hse.gov.uk/research/rrhtm/rr956.htm>

<http://www.hse.gov.uk/research/rrhtm/rr957.htm>

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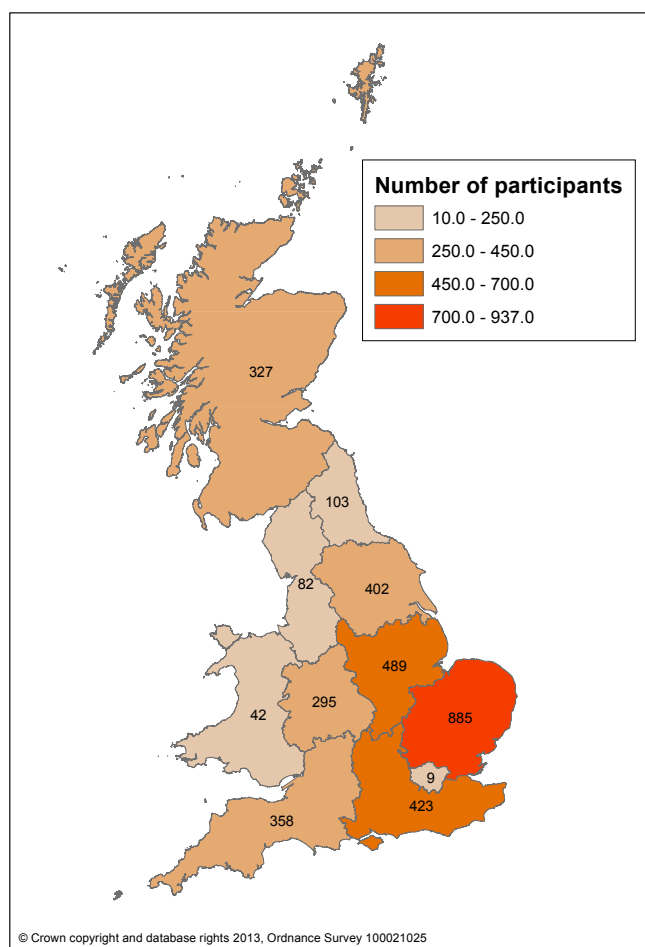
There is also an academic journal publication about the study which summarises two of the reports
<http://occmed.oxfordjournals.org/content/61/5/303.long>

Some results from the study so far.....

We have started analysing the data from the general questionnaire which you completed earlier this year. As you are aware, there is a lot of information in the questionnaire. So for this newsletter, we are focusing on your lifestyle and looking at factors such as physical activity, diet, and social circumstances, which can all affect your health.

PIPAH study members

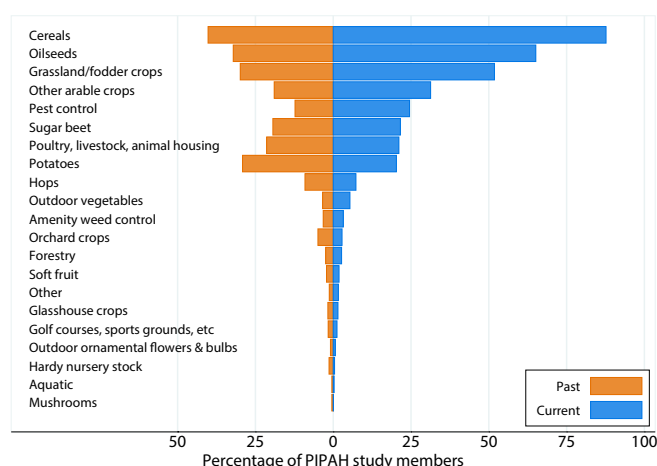
We begin with some facts about the PIPAH study members; these will give you a picture of what the study population is like. So far, an impressive 3522 agreed to take part in the study and completed the general questionnaire. The map shows how the members are distributed throughout Great Britain.



Number of PIPAH study members, by region .

Main areas of pesticide work

The general questionnaires asked you to record your main areas of pesticide work, both current and in the past. Your responses are summarised in the chart. The PIPAH study members work in a very wide range of activities which involve using pesticides. This range is important for the study, since it will give us greater coverage of the pesticides used, and we will be able to compare many different patterns of pesticide use. The number of you working with cereals, oilseeds, grassland and fodder crops, and other arable crops is substantially higher than it was in the past. Other areas of work have declined - potatoes stand out as reducing the most.



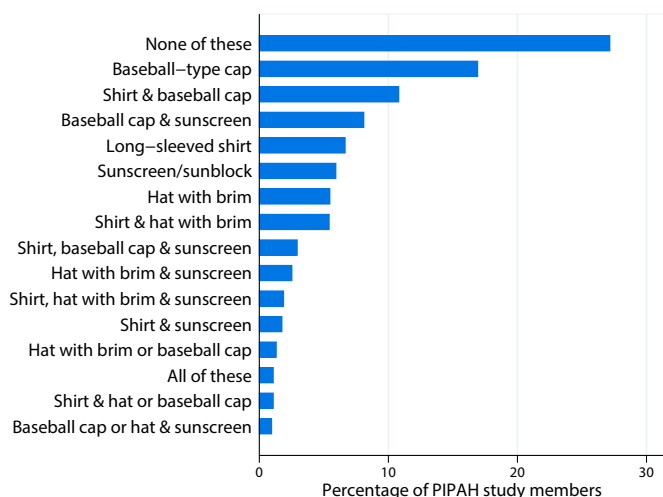
Main areas of pesticide work: current and past

Physical activity

The information you recorded on physical activity shows that the PIPAH study members are more physically active than the British population: 97% of the study members compared with just 56% of adults in England exceeded the government recommended target of at least 2½ hours' moderate physical activity per week. Just over 65% of study members did some moderate or vigorous physical activity on at least five days a week throughout the year.

Sun exposure

Much of your work with pesticides is outdoors. In Britain, protection from the sun becomes important during the summer. Nearly 70% of study members work outdoors in the middle of the day when the sun is at its strongest, and 60% do this seven days a week. So how many study members wore sun protection? We asked whether you used sunscreen, wore a hat or a long-sleeved shirt. The following chart summarises your responses. A little less than 30% of study members used no protection, but 70% used at least one form of protection against the sun.

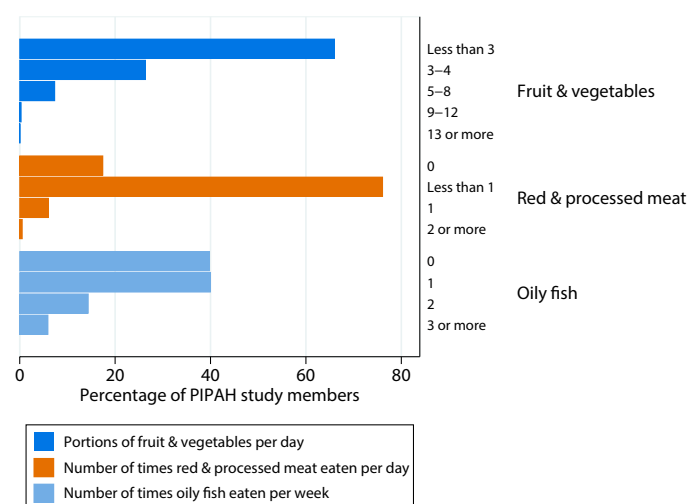


Types of sun protection used by PIPAH study members

Diet

Diet is another important factor that can affect your health. The actual foods eaten and the number of calories in the food are both important aspects of diet. The chart summarises some of important components of the PIPAH study members' diets. Eight percent of study members usually ate at least five portions of fruit and vegetables per day. In Britain, 15% of adults meet the government's target of a minimum of five-a-day, which is in itself quite a low target. Six portions of fruit and vegetables per day are recommended in Denmark, 10 are recommended in France, while in the USA the recommended number of portions increases as an individual's calorie intake increases. In Britain, the nutritional guidelines also recommend that adults do not eat more than one 70g portion of red or processed meat a day, and that they should eat between two and four 140g portions of oily fish per week. We did not collect information on portion sizes for meat and

fish, but we do know that 93% of PIPAH study members reported eating red or processed meat less than once a day and that 20% reported eating oily fish at least twice a week (see chart).



Frequency of fruit and vegetable, red and processed meat, and oily fish consumption reported by the PIPAH

Tobacco and alcohol

Tobacco and alcohol are two lifestyle choices with well-publicised health risks. Only 9% of study members are current smokers, while 66% have never smoked tobacco. In Britain, 20% of adults smoke. This difference in smoking rates immediately suggests that there are likely to be fewer smoking-related health conditions among the PIPAH study members than in the British population. National drinking guidelines specify weekly limits separately for men and women, which define levels of consumption as 'moderate', 'hazardous' and 'harmful'. The guidelines also recommend at least two alcohol-free days a week, and daily maximum levels. Nearly 15% of the study members drink some alcohol every day or nearly every day, 57% drink one to four times a week, and 29% drink alcohol occasionally or not at all. The number of units of alcohol drunk in a week varies widely, but 73% of study members who drink alcohol would be classified as 'moderate' drinkers.

Social circumstances

The general questionnaire also covered your social circumstances. It is important to take into account these aspects because they can affect your health. We have summarised this information in the table, and have shown the corresponding statistics for Britain. You can see some interesting differences between the two groups. A larger proportion of PIPAH study members are living in 'married' households, 85%, compared to 62% in Britain as a whole. Reflecting this, the average household size of study members is also bigger (3.2) than the national average (2.35).

But you can see the biggest differences between the PIPAH study and Britain in the employment status and qualifications statistics. Overall 64% of study members are self-employed, compared to just 14% in Britain and 36% of study members have 'other' qualifications compared to just 6% in Britain. These differences clearly highlight the fact that PIPAH study members belong to a select occupational group, in which many members are self-employed and where vocational training plays a greater role than in Britain overall.

Table comparing characteristics of the PIPAH study population with the Great Britain population

Characteristic	Study	Great Britain
Marital status		
▪ Married/partner/cohabit	85%	62%*
▪ Single	8%	27%*
▪ Divorced/separated/widowed	7%	14%*
Average household size	3.2	2.35*
Home ownership		
▪ Owner	68%	66%*
▪ Renting	18%	34%*
▪ Other	14%	-
Employment status		
▪ Self-employed	64%	14%‡
▪ Employee	34%	86%†
▪ Other	2%	-
Qualifications		
▪ No formal qualifications	14%	23%‡
▪ GCSE/O-level/A-level/equivalents	34%	28%‡
▪ Degree (first/higher)	16%	27%‡
▪ Other (including vocational)	36%	6%‡

*GB General Household Survey 2011 † Labour Force Survey 2011 ‡ England and Wales Census 2011

Once again, we would like to thank you for taking part in the PIPAH study and hope you continue to remain members of it. We certainly can't do without you and look forward to sending you another update. In the meantime, please don't hesitate to contact us either by email PIPAH@hsl.gsi.gov.uk or by freephone 0800 093 4809 if you have any queries or want to discuss any aspect of the PIPAH study with us.

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