

## IOM Pesticide biomonitoring project

Summer Newsletter, June 2011



### Hello and Welcome

Welcome to the Summer 2011 newsletter for our project '*Biological monitoring of pesticide exposures in residents living near agricultural land*'.

I would like to begin by saying a big thank you to all the farmers and householders who have registered to participate in the study. The response rates have been excellent and our community researchers have been kept very busy!

The project is now up and running in the East Lothian and Kent areas. Recruitment and data collection in East Anglia will commence in early 2012. In March and April 2011, we ran a pilot study in East Lothian to test our data collection procedures. This went very well but, as expected, highlighted a few areas for improvement for the main study which have now been made.

This newsletter provides an update on our progress with the main study data collection which we hope you will find interesting.

*Karen Galea*  
Dr. Karen Galea (Project leader)

### East Lothian

#### *Arable farming*

The nutritious soil and dry, sunny climate in East Lothian make for good arable conditions and crops grown include wheat, barley, oil seed rape, potatoes and other vegetables. The warm and sunny Spring has had a good impact on the crops in the region, with healthy signs of growth evident.

Farmers closely monitor their crops, normally with the help of a crop specialist, an Agronomist. They meet regularly with the farmer to monitor the progress of crops. If the crop is not developing as expected or if there are any signs of disease or pests, the farmer may be advised to take some action, which may include the application of a pesticide. With April being relatively dry, disease levels were low, however the weather has a huge impact on crop growth, development and disease so it is important that crops are regularly monitored.

#### *Main study update*

In East Lothian, we have recruited 9 farms to the project and are delighted with the support we have received from the participating farmers as well as the wider farming community.

The response from local residents living near agricultural land has been equally as impressive - we have now in excess of 80 households registered to participate in the study. However, we are still looking to increase our pool of recruits in selected areas of East Lothian. If you know of anyone who might be interested in participating in the study, please ask them to contact us.



## **Kent**

### ***Orchard farming***

Orchard rather than arable farming is our focus in the county of Kent, which covers a very large geographical area.

Similarly to East Lothian, agronomists are employed to check the fruits for problems which fall into two main categories, fungi and insects. The fungal problems are typically scab and mildew and these vary according to weather conditions. Early detection and prediction is important so that spraying can be made accordingly. The pesticides are usually preventative, protecting the leaf against infection. Insecticides act against insects such as aphids and codling moth or other caterpillars and also weevils. They have different actions, some acting to disrupt hormone activity within the organism or some regulating their growth, and are very specific.

Generally spraying in orchards is done via an air assisted spray device which blows spray through the trees.

### ***Main study update***

We have received a positive response and have so far recruited 5 orchards into the project. We are still keen to recruit further orchards into the study. If you know of anyone who might be interested in participating, please ask them to contact us.

Resident recruitment has recently started and again we have had a positive response with 45 individuals registered to participate in the study to date. We are keen to increase our pool of recruits in selected areas and again, if you know of anyone who might be interested in participating in the study then please ask them to get in touch!

### **Residents sample and data collection**

We originally advised participants that we would require weekly urine samples

for a period extending up to 15-23 weeks. As you are aware, we have changed our strategy and are now asking participants to provide samples for shorter block periods of time. This is to coincide with key spraying periods; therefore reducing the number of samples collected which may not be selected for further analysis. We also hope this more focused sample collection helps reduce any inconvenience to our participants.

### **What's happened to the urine samples that have been collected so far?**

The collected urine samples have been transferred to the IOMs laboratory for secure storage. Not all collected urine samples will be analysed; once the spray season has finished at the end of 2011, we will select samples which coincide with key pesticide spray events for analysis by our collaborator, the Health and Safety Laboratory (HSL) in Buxton.

### **Updates on project progress**

Your local community researcher will continue to keep you informed on how you can help with our project, as well as key further developments in our work. Remember to also visit our project website for future regular news updates:

[www.pesticidebiomonitoring.org](http://www.pesticidebiomonitoring.org)

### **Contacts for further information**

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