



Agricultural Meteorology Seminar - Summary

National Botanic Gardens
Tuesday 23rd June 2015

On the 23rd of June Met Éireann held a full day Agricultural Meteorology Seminar at the National Botanic Gardens.

This seminar aimed to highlight the types of Irish meteorological data sets that are available to the agricultural community, provide a summary of current research collaborations and outline agricultural products provided by Met Éireann. The seminar also provided an opportunity for researchers, practitioners and policy makers to discuss the operational needs and priorities in the area of Irish Agricultural Meteorology. The event also provided a forum to investigate the revival of the Joint Working Group on Applied Agricultural Meteorology.

More than 60 people directly related to the industry arrived on what was thankfully a very pleasant and sunny day in Glasnevin. The group comprised of a diverse range of technically minded individuals including representatives from Teagasc, Department of Agricultural Food and the Marine, the major colleges as well as Gas Networks, the media, private companies and community members from Northern Ireland. The event was hosted at the excellent new Teagasc College of Amenity Horticultural lecture building suited in the picturesque setting by the Tolka River. Our thanks to our Teagasc hosts and new friends.

Eoin Moran, Assistant Director of Met Éireann, opened proceedings with a formal welcome. Eoin highlighted just how influential past Met Éireann staff had been in the area of agricultural meteorology not just in Ireland but within the community globally. Eoin's welcome was followed by two more welcomes. One from our Teagasc host Colm Dockrell, lecturer at the College of Amenity Horticulture. This was followed by a greeting from Glynn Anderson, author and Head Guide at the National Botanic Gardens.

The morning session 'Met Éireann Products and Data' was very much driven by Met Éireann staff, its aim was to advertise to this research community the kind of data and products that we currently and could potentially offer. Seamus Walsh got the ball rolling with an overview of Met Éireann's climate data services, the building blocks of much of our meteorological activities. This was followed by Eoin Whelan's simplistic overview of NWP models. Eoin struck a balance between explaining the complexities of model data assimilation in a simple yet comprehensive way, highly applicable for this technical audience. Ray McGrath then gave a concise overview of what climate change may mean for Ireland before Keith Lambkin outlined some examples of how Met Éireann's meteorological data feeds into tailored agricultural models which in turn feed into national decision support infrastructures. The session concluded as Evelyn Murphy gave an excellent overview of the MetWeb service offered by Met Éireann including the type of forecast products that are currently available from this service.

After coffee, scones and a brief chat in the sun the afternoon session 'Practical Agricultural Meteorology Applications' began. Three speakers who are leads in agricultural meteorology projects that Met Éireann are currently involved in, gave an overview of how our weather data is of practical use to their industry along with some provisional results.

Deirdre Hennessy, a research officer at the Grassland Science Research Department in Teagasc Moorepark gave a talk on grass growth modelling and the effects of weather parameters on grass growth. Deirdre showed that using weather data in combination with other factors that improved grass growth prediction is possible. This has the potential to dramatically assist farm management on a national level.

Michael Murphy, lecturer at the School of Mechanical, Process & Electronic Engineering in Cork Institute of Technology spoke to us about milk production and processing. Michael showed us evidence of how accurate temperature forecasts can considerably improve mechanical milk cooling efficiency. Incorporating weather forecasts into milk cooling management has the potential to save significant costs in energy bills, particularly in light of volatile energy costs and projected dairy farm expansions.

To finish this session Steven Kildea a research officer at the Crops, Environment and Land Use Department of Teagasc Oak Park explained to us the chief role weather data has to play in cereal and potato disease control programmes. Steven showed that the potential exists to use weather data to aid decisions relating to disease control, but that weather is just one aspect. Many important factors, including disease activity and improved varietal resistance must be integrated together along with accurate weather forecasts to adequately improve disease control efficiency.

After lunch many of the participants met up with Glynn Anderson again as he gave a guided tour of the gardens. The organic vegetable garden was a big hit as Glynn explained how old traditional methods were being used to help limit the effects of insects and disease. After Steven's talk the question on everyone's mind was, just how effective were the organic potatoes at resisting blight in the absence of preventative spraying!?

With participants refuelled and rested the final session of the day began with an overview of the Joint Working Group on Applied Agricultural Meteorology or as it is more commonly known, the AGMET group. This was given by Tamara Hochstrasser, lecturer at the School of Biology & Environment Science, University College Dublin. Everyone in the room contributed towards the discussion that followed. Debates included topics such as the benefits for such a group, how this group could be more sustainable and ultimately, how the group could be more effective at advising the Irish agricultural community on how to take best advantage of available meteorological information. See [MÉ_AgmetSeminar2015_DiscussionSummary.pdf](#) for further details.

The discussion also provided the opportunity to investigate what is happening in the agricultural meteorology community globally.

In the days prior the seminar most participants filled out an online survey. This survey which had a very good response rate, helped identify the meteorological needs of various agricultural disciplines. It also provided some useful suggestions on how meteorological data could further assist the Irish agricultural community. The seminar finished with a summary of survey results and a brief discussion around these. See [MÉ_AgmetSeminar2015_SurveyResults.pdf](#) for a summary of survey results.

The outcome of the day provided an abundance of material to review and digest both for the participants and organisers. A big thanks to all who helped out in what was both a very informative and enjoyable day.

Keith Lambkin
Met Éireann



Met Éireann, Agricultural Meteorology Seminar - Agenda

Registration and Welcome

09:30 – 10:00

Registration, tea & coffee

10:00 – 10:05 Welcome from Met Éireann

Eoin Moran, Assistant Director, Met Éireann

10:05 – 10:10 Welcome from Teagasc

Colm Dockrell, Lecturer, Teagasc College of Amenity Horticulture

10:10 – 10:15 Welcome from the National Botanic Gardens

Glynn Anderson, Head Guide, National Botanic Gardens

Met Éireann Products and Data

10:15 – 10:35 Climate Data Services

Seamus Walsh, Acting Head of Climate and Observations Division, Met Éireann

10:35 – 10:55 NWP for the Agricultural Community

Eoin Whelan, Higher Meteorologist, Research, Environment and Applications Division,

Met Éireann

10:55 – 11:05 Climate Change

Ray McGrath, Head of Research, Environment and Applications Division, Met Éireann

11:05 – 11:25 Agricultural Products and Services

Keith Lambkin, Meteorologist, Research, Environment and Applications Division, Met

Éireann

11:25 – 11:35 MetWeb

Evelyn Murphy, Customer Relations Manager, Forecasting Division, Met Éireann

11:35 – 11:55

Tea/Coffee break

Practical Agricultural Meteorology Applications

11:55 – 12:15 Grass growth modelling and effects of weather parameters on grass growth

Deirdre Hennessy, Research Officer, Grassland Science Research Department, Teagasc, Animal and Grassland Research and Innovation Centre, Moorepark

12:15 – 12:35 Milk Production and Processing

Michael Murphy, Lecturer, School of Mechanical, Process & Electronic Engineering, Cork Institute of Technology

12:35 – 12:55 Cereal and potato disease control programmes – the chief role of weather data

Steven Kildea, Research Officer, Crops, Environment and land use, Teagasc, Oak Park

12:55 – 14:30

Lunch

[Optional guided tour of National Botanic Gardens 13:50 – 14:20]

Discussion - Agricultural Meteorology in Ireland

14:30 – 14:50 Overview of the Joint Working Group on Applied Agricultural Meteorology

Tamara Hochstrasser, Lecturer, School of Biology & Environment Science, University College Dublin

14:50 – 15:45 Irish agricultural meteorology needs and priorities - discussion

Chair: Keith Lambkin, Met Éireann

16:00

Ends