

SPRAYDAY


FAIRWAY partner: Luke Farrow (AFBI, IE)



Brief description

A mobile phone app that provides infrequent users of professional pesticide products with guidance on current best practice in all aspects of pesticide use. Areas targeted include an hour-by-hour assessment of the suitability of weather conditions for spray activities, an area to guide users through calibration and dilution calculations and hints and tips about the correct way to dispose of pesticides and contaminated Personal Protective Equipment.

Contaminants covered (e.g. nitrate, pesticides etc.)	Pesticides
Intended end users (e.g. farmer, water quality manager, policy maker)	Infrequent users of professional pesticides. Expected target audiences include grassland farmers and amenity sector workers.
Level of expertise and/or training required	No previous experience necessary
Geographical resolution (e.g. field, catchment, national)	Weather: Data presented to AFBI in a 1km grid for UK, would be ~ 12km grid for the rest of the world. Advice section written in light of UK regulations
Temporal resolution (e.g. daily, annual, long-term).	Weather: Data updated to AFBI servers every 6 hrs. App downloads weather every time it connects to the mobile network or user instructs it to update.
Real-time component (e.g. live weather data, soil moisture data feeds etc.)	Weather
Number and type of mitigation measures included	N/A
Platform (e.g. paper-based tool, phone app, bespoke software).	Mobile apps
Frequency of updates	Weather data updates provided to AFBI every 6 hrs. App downloads weather every time it connects to the mobile network or user instructs it to update. Advice section updated as and when legislation alters. App checks it has the correct version of the document every time the Hints and Tips section is opened by the user
Cost/availability	Not commercially available yet
Number of users or number of copies distributed/downloaded/purchased	Not commercially available yet
Links to demo material and other relevant information (e.g. user guides).	Presentation attached separately
Additional comments	App is currently at Technology Level 5 – 7. We are searching for funding to take the work further.

SprayDay FAIRWAY partner: Luke Farrow (AFBI, IE)		
Input data required to run the DST	Weather: GPS-derived location. Already available to smart phone users Sprayers: Characteristics of the sprayer – e.g. tank size, nozzle spacing and designed nozzle output, ground speed when operational. Sprayer dilution calculation – Area to be sprayed and pesticide application rate desired	
Outputs (including links to water quality and economic or financial aspects)	Weather – suitability of every hour (6am – 10pm) for the next five days for spraying Sprayers – Confirmation that, if the instructions were completed correctly, the sprayer has been calibrated properly. If yes, then the dilution calculations will be correct. Advice section Up to date information on the correct steps to be taken for disposal of pesticide contaminated items.	
Age/provenance of supporting data used to develop the DST	Weather – updated every 6 hrs – provided by the UK Meteorological Office Advice – based on current UK legislation and best practice.	
Country-specific calibration or data requirements (including restrictions on use)	Weather – currently based on UK Meteorological Office data, but other suppliers are available and may be adopted in later versions Advice section - based on current UK legislation and best practice. Overall – written in English and for the English/Irish mobile network, but can be re-developed for other countries relatively easily. – Would need to select a supplier of weather data, translate the text and adjust the advice section for local legislation.	
Details of validation and testing	Currently under development/testing	
Date developed/released (or planned release date)	2022/2023	
Author/developer names and affiliations	Agri-Food and Bioscience Institute, Northern Ireland.	
Member state(s) where developed	UK	
Member State(s) where currently used	N/A	
Key publication references (including url)	N/A	

NMP Online

Add logo

FAIRWAY partner: Luke Farrow (AFBI, IE)

Any other useful information (e.g. screenshots of DST input/outputs)