

GLAA to provide ongoing support for farmers during COVID-19 pandemic

The Gangmasters and Labour Abuse Authority (GLAA) has contacted all agricultural labour sites in the south of England and Wales to provide farmers and growers with ongoing support during the COVID-19 pandemic.

Advice on how to spot the signs of labour exploitation and where to report concerns has been issued ahead of the GLAA visiting farms directly over the coming weeks to give further guidance to the industry. This engagement activity ties in with the temporary licensing scheme established by the GLAA for the food production sector in March. Temporary licences are currently being granted to businesses operating within the wider labour supply industry who wish to support GLAA licence holders in feeding the nation.

Phase two of this operation will see GLAA investigators conduct welfare visits to ensure that farmers and growers are getting the help that they need and that their workers are not at risk of exploitation. The GLAA has been supported by several partners including the NFU in spreading the message to all sites in the area.

GLAA Senior Investigating Officer Jennifer Baines said: "Despite the obvious challenges that this awful virus has presented, we remain committed as an organisation to not only

be heard by frontline workers during the crisis, but also to be seen. They are doing an incredibly important job for the country at this difficult time, which we recognise and want to help them with. Following the initial contact that we have made, we are keen to increase our visibility to check that standards are being maintained and that some of the most vulnerable and hidden members of our society are being treated fairly. This will clearly take place while adhering to the strict social distancing restrictions to minimise the spread of the virus.

"We understand the pressures growers are currently facing in picking and harvesting crops, not only during this pandemic but beyond. As the coronavirus crisis subsides, we know that there will be uncertainties around the availability of foreign workers and the booking of future travel. In these times, more than ever, it is vital that you report any concerns or suspicions that you have to us. The potential for labour shortages in the near future could create conditions in which exploitation can thrive if we are not alive to the risks."

Report concerns to the GLAA's intelligence team by calling 0800 4320804 or contact them by email at intelligence@gla.gov.uk.

Powdery mildew prediction tool gives boost to UK strawberry industry

Experts at the University of Hertfordshire, in collaboration with Agri-tech Services, have created a web-based, real-time system for calculating when to use fungicides to control strawberry powdery mildew.

Strawberry powdery mildew is caused by the fungus *Podosphaera aphanis* and it attacks the leaves, flowers and fruits of strawberry plants, causing major yield loss. In the UK, the disease can result in yield losses of between 20% and 70%, with a 20% yield loss in 2016 costing an estimated £56.8 million (AHDB, 2017).

The system, which can be used on smartphones or computers, records humidity and temperature. It forecasts when the fungus is likely to grow and alerts the grower to high-risk periods when fungicide sprays are needed. By using the system, the grower can control the disease using fewer fungicide applications, reducing the risk of yield loss and saving money. The average cost benefit of the system in 2018 was £250/ha, with no detriment to the crop.

Dr Avicé Hall MBE, from the School of Life and Medical Sciences at the University of Hertfordshire said: "This useful tool can help strawberry growers better manage the use of fungicides. The risk of disease development is clearly visualized on screen and updated continually. It will allow them to control the disease throughout the season with fewer fungicide applications and record their fungicide use with ease from any device. It will enable growers to be proactive, rather than reactive, which helps reduce the use of fungicides, decreases costs and reduces environmental impacts - thus delivering high quality fruit to the consumer."

Agri-tech Services has been closely involved with the project, from proof-of-concept to recent validation work, funded by Ceres. Agri-tech Services has licensed the technology from the University of Hertfordshire for commercial exploitation. During the 2019 season, the system was validated on eight commercial sites throughout the UK and is now available to purchase.



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cropping season. Certis IPM manager Semo Kurtev says: "Growers have been very successful in extending the season, but this has created the problem of how to stay on top of mildew control all season long. Whilst biofungicides on their own are not enough to control powdery mildew, used in a programme they fit well and complement conventional chemistry. Since 2014 we have been losing actives much faster than gaining anything new to replace them. There has to be a shift in mindset from the performance of individual treatments to the overall effectiveness of an IPM programme."

Bioprotectants offer some answers, but Semo emphasises that they do not provide a direct replacement to plug the gaps. "A significant proportion of bioprotectants have a contact mode of action (MoA), they do not persist in the same



Powdery mildew on fruit.

way as conventional active substances, but they are very helpful with anti-resistance management. They often do not deal with high disease pressure situations but have a low impact on beneficials used in IPM, whether microbial, pollinators or predators".

Demands from the supply chain for the implementation of IPM are increasing and the use of bioprotectants fits perfectly with sustainable agriculture. "European retailers are already demanding that residues be set at below 70% of the MRL. Whilst UK retailer specifications are more relaxed at present, it is better to be future proofed," says Semo.

What bioprotectants are available?

Semo acknowledges that biological products are a little more challenging to use and advises, "The key areas to keep an eye on are preparation, conditions, application methods and timing. Some products require more careful mixing and application, so it's important to check product quality, formulation specifics and storage. When it comes to application conditions, most microbials are affected by light, temperature and humidity, while timing is determined by the fact that most bioprotectants will need to be used preventatively or at first signs of attack rather than curatively."

In AHDB Project SF 62, carried out by Dr Avice Hall at the

University of Hertfordshire, potassium bicarbonate was found to be very effective at controlling established powdery mildew infection. AHDB Factsheet 29/16 on controlling strawberry powdery mildew states that: Bicarbonate works by contact, so good leaf coverage is necessary to achieve optimum control; it has a very short harvest interval, so it is an ideal product to use at the time the fruit is being picked. Bicarbonate does not provide long-lasting protection; it will only kill the mycelium that it contacts.

Growers should be aware that as a commodity product, potassium bicarbonate will be withdrawn for plant protection on 31 August 2020. Luckily, Karma (potassium hydrogen carbonate) from Certis is authorised as a plant protection product and has built-in adjuvants to enhance its effectiveness. This also means that Karma comes with the support of Certis. Semo says: "Karma is better than the commodity substance; it can eradicate an existing infection on the leaf surface in one day and, with a one-day harvest interval, it fits well later in the season".

His tip for success is to apply early or late in the day when evaporation from the leaves is slower, to lengthen the time in contact with the fungus. At Wilkin & Sons, Karma is Andrey's



Powdery mildew susceptibility is not helped by many modern varieties producing a lot of vegetative growth on tabletops.

first choice for mildew control throughout the season. "I can talk directly to Certis about any issues I have and Semo can tell you how to use it to be the most effective. I'm also going to try another Certis product Amylo-X this year."

Amylo-X provides a further biological route to prevent powdery mildew and Botrytis. It is based on a naturally occurring bacterium and can be used on a wide range of permanently protected soft-fruit crops, particularly strawberries. There are several biofungicide products containing Bacillus species, but as Semo points out: "Between them they produce 30 different peptides which are anti-fungal, but they are not the same and some are better on powdery mildew than others. I