

UK College Of Agriculture Offers New Tool To Guide Burley Growers Through Ever-Changing Curing Conditions

LEXINGTON, KY.

Tobacco farmers know that to properly cure burley, they have to depend on many factors including facilities, management and especially the weather. A new tool developed by specialists at the University of Kentucky College of Agriculture may give farmers an edge in determining what's best for their crop at any given time.

"Each year we have good and less favorable periods of weather for curing," said Bob Pearce, UK extension tobacco specialist. "Overall the natural air-curing in Kentucky and surrounding states produces high-quality burley tobacco, but when weather conditions are challenging, proper management is critical."

Pearce and John Wilhoit, UK extension agricultural engineer, collaborated with retired UK Biosystems and Agricultural Engineering faculty George Duncan and Linus Walton and with UK agricultural meteorologist Tom Priddy and information technology support specialist Wanhong Wang to create a Burley Curing Advisory website. The site, which features an interactive electronic curing advisory developed by Duncan and Walton based on their wealth of experience and expertise with tobacco curing, offers real-time guidance on curing management. Access the advisory site at http://weather.uky.edu/burley_curing.html.

"The plan is that this tool will give burley growers important information they need to properly cure their crop, whatever the conditions are," Wilhoit said. "The site gives guidance based on many years of curing studies and experiences by burley and weather specialists."

Wilhoit emphasized that the site can only provide guidance and that each grower should use the recommendations combined with their own experience and curing structures.

"A grower may need to apply the guidance differently to a barn located in a hollow as compared to one on a ridge top," he said. "They may need to modify the guidance based on other variables such as stick spacing and curing stage."

Priddy said the website relies on real-time data from the Kentucky Mesonet system, the UK Ag Weather Center and the National Oceanic and Atmospheric Administration's PointAgCast to provide farmers with timely, speedy information through computers and smart phones.

"The KyMesonet has weather stations in nearly 60 Kentucky counties, so that provides a lot of local data for the advisory site that was not available just a few years ago," Priddy said. "Users can select their county from a pull-down menu and see the current curing conditions for their area including the average temperature,



relative humidity and wind speed for the past 48 hours and even see the forecast for those same variables for the next 24 hours."

The website will advise growers to either open or close ventilators to favorably affect curing environments, and, under more extreme weather conditions, will call for supplemental ventilation or moisture to improve curing.

"Obviously, the tool cannot predict actual conditions within tobacco or a facility due to varying facility features, ventilator effectiveness and packing of tobacco," Pearce said. "We recommend growers use relative humidity instruments in their curing structures to give past and ongoing readings of relative humidity within the tobacco mass to indicate the condition of the tobacco relative to the external weather conditions shown by the website and manage ventilators and fans, if used, accordingly."

Wilhoit said the advisory is applicable for the first five to six weeks of air-curing mature, harvested burley plants initially housed without free moisture (wetness) or mud on the leaves, spaced 5 to 7 inches or more apart, hanging in well-ventilated, air-cure facilities with operable ventilator panels during leaf yellowing and browning stages.

"Given the challenging curing conditions we've faced in the past two growing seasons, this advisory site could be a big help to tobacco growers as they try to manage their curing to get the best quality tobacco crop," he added.

Publications describing burley curing technology and management, selection and use of relative humidity instrumentation, installation and use of fans in typical barns and several past curing studies are posted on at <http://www.bae.uky.edu/ext/tobacco/>.

Direct questions or comments on this new tool to jwilhoit@bae.uky.edu or priddy@uky.edu. Δ