

# Mold on Curing Tobacco

The presence of mold on cured tobacco can significantly reduce the quality and marketability of the crop. Mold growth is a fairly common problem that occurs during extended periods of high humidity (70% RH) or temperature increases when between 50 and 90F. However, mold growth typically increases as the temperature increases. Most species of mold are ubiquitous organisms that can grow almost anywhere. If favorable conditions exist, the most likely organisms, mold, needs a source of free water and food in order to grow. Any source of damp carbon and protein with favorable pH can serve as a food source for mold and any humid environment where organic materials remain moist for more than 24 hours will provide free water for mold growth. Tobacco hanging in a curing barn during extended periods of high humidity can provide an ideal environment for mold growth.

Although some growers have claimed to have some success against

mold on tobacco by making direct, undiluted applications of various alcohol, primarily denatured ethyl alcohol (left-hand) or bleach, no such compounds are currently registered for control of mold on curing tobacco. Any fungicide that would control mold would have to be applied to the field and then have sufficient residues to last through curing and marketing. Some fungicides have the type of residual activity but tobacco companies cannot accept these residues. Several companies have considered labeling alcohols for mold removal, but their legal departments have advised them against this due to liability issues. Although ethanol or bleach may be effective in reducing mold, we cannot recommend the use of such compounds and therefore the user must assume all liability involved with their use.

Mold problems can often be traced to poor ventilation within the curing barn. Poor ventilation that promotes mold growth can be caused by plugging tobacco

trucks closely on the rack, lack of suitable weatherstrips to allow adequate air flow, or poor management of ventilation systems. In most cases, attic spacing of at least 9 inches is usually sufficient to allow adequate air movement through the tobacco and reduce the risk of excessive moisture and mold growth. Lack of air movement from attics spaced too closely can also lead to bacterial growth (brounery) and condensation on the leaf surface early in the curing process ("sweating"). Barns should have vents along the bottom of the barn and along the eave in the top to allow air movement into the barn and through the tobacco. Fan systems installed in the top of the barn are also an excellent means of increasing airflow through the tobacco.

Additional management of the barn's ventilation system is critical in preventing mold on tobacco, and growers should be even more aware of proper ventilation if mold begins to appear. Barn doors and vents should be opened on dry, sunny days to drive off moisture and closed at night and during rainy periods to prevent additional moisture from entering the barn. Substantial moisture may also come into the barn by laying plastic on the floor of the barn. Under adverse mold conditions, it may be necessary to widen attic spacing in the barn and/or move some tobacco onto scaffold supports where attic can be ground further apart to increase air movement through the tobacco. The use of heat (oil, coal or propane) under the tobacco will also help to drive away moisture and lessen the chances of mold development. However, growers should never use heat sources in conjunction with the use of any flammable substance such as alcohol.

Growers should evaluate the mold colonies present to determine whether mold spores are active and more proactive steps to promote drying should be taken. Tobacco with substantial mold development should not be stripped and processed for market until mold is eliminated or at least reduced. Growers should remember that mold can be controlled prior to stripping and loading, but can be nearly impossible to control after stripping and loading.



Photo by Charles Mattox

## Bright and early

Burley tobacco harvest season is in full swing and workers on Ky. 36 were tossing out sticks and moving quickly to get the tobacco to the barn last week.

# Local Animals Headed to World's Largest, Purebred Livestock Expo

Louisville, Kentucky tend the hundreds of individual breed shows, sales and events. In addition to the recognition that comes with winning at the NAILE, the value of the champion breeding stock is significantly enhanced. Breed association events are not the only NAILE feature. The expo is also home to numerous youth events and awards. Scheduled for November 7-20, the event takes place at the Kentucky Exposition Center, Louisville, KY.

Purebred farms from nearly every state and Canada bring livestock to compete in one of ten expo divisions: dairy cattle, dairy goats, Boer goats, beef cattle, quarter horses, draft horses, mules and donkeys, sheep, swine, an llama, and alpacas. More than 210,000 American and foreign visitors at-

Additionally, youth exhibitors enter market with paid adult. Tickets are available at visitors find lots to do at the Commonwealth's TicketMaster. Com or and see in addition to giant Kentucky Exponation Center, which features over 1,200,000 square feet of climate-controlled exhibition space.

Friday and Saturday to the entertaining and the Kentucky State PRCA Rodeo, NAILE Fair Board. It is held with paid adult. Tickets are available at visitors find lots to do at the Commonwealth's TicketMaster. Com or and see in addition to giant Kentucky Exponation Center, which features over 1,200,000 square feet of climate-controlled exhibition space.

These youth shows are sponsored by Farm Credit Services of Mid-America and are nationally recognized for both the quality of competition and prestige of winning. Champions from these shows are sold at the Sale of the Champions on November 19, at 6:00 p.m.

The Professional Rodeo Cowboys Association (PRCA) Great-Lakes Circuit Rodeo Finals takes place November 12-14 at 7:30 p.m. nightly. Tickets for the national finals rodeo are \$17 on Thursday, \$27 on Friday and \$32 for Saturday's performance. Children under 12 get in for \$10 on



Photo by Charles Mattox

Irrigation systems have helped produce large crops during recent drought, another benefit of technological advances in farm practices.

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