



# Cheeps & Chirps

..... *Points for Poultry Profitability*

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## 2013 KPF MEMBERSHIP DRIVE

The 2013 membership drive for the Kentucky Poultry Federation started in January. The Kentucky Poultry Federation is your organization and your voice in Kentucky. The Kentucky Poultry Federation needs your support and commitment to this organization as we enter the new year.

Membership benefits include:

- \* \$2,000 Accidental Death and Dismemberment
- \* Partners Discount Card which will save you 20-60% on vision, hearing, chiropractic care, prescription drugs, and optional dental discounts available
- \* Cheeps and Chirps offered via email
- \* A lobbyist in Frankfort to provide aggressive involvement in legislative action in regards to the security of our industry

- \* Subscription to Poultry Times and The Farmers Pride
- \* The KPF quarterly newsletter—the Sunnyside
- \* Each year three producers are awarded the Kentucky Family Farm Environmental Award
- \* Each year four students receive \$1,000 scholarships each. Three of these scholarships are earmarked for a child or grandchild of a producer who is a member of the KPF.

Membership dues are payable on a calendar year basis. The membership application form is available on the KPF website:

<http://www.kypoultry.org/>

## KY CATTLEMEN'S ASSOCIATION 2013 CONVENTION AND AG INDUSTRY TRADE SHOW



The Kentucky Poultry Federation (KPF) kicked off the new year by preparing omelets at the annual Kentucky Cattlemen's Convention and Agriculture Trade Show. This year's event allowed the KPF the opportunity to showcase partnerships shared with other industry and poultry

volunteers. Those cooking for our event included volunteers from the University of Kentucky's poultry farm; Extension Poultry Specialists from the UK College of Agriculture, Kentucky Poultry Federation board members and volunteers from Alltech. Over 400 omelets were prepared for participants at this year's annual convention and trade show.

The Kentucky Poultry Federation would like to thank each volunteer for their generous donation of time and thank Cal-Maine Foods Inc. for the donation of eggs for this year's event.

Cassinda Bechanan, Promotions Coordinator, Kentucky Poultry Federation.

related fields in the state of Kentucky.

Culinary students from East Jessamine High School, along with their advisor, Cary York, were the newest addition to this year's list of

## No mystery to Dry Litter

Keeping litter dry in a broiler house can certainly be a challenge in our fickle Kentucky weather, but it should not be a mystery! The principles behind litter moisture control are well known and they are like a three-legged stool. These three basic items are needed:

- 1) Ventilation to remove warm moist air and replace it with fresh dry air
- 2) Air circulation over the litter within the house, and
- 3) Heat to warm the fresh air



Let's start with air exchange, which is supplied by exhaust fans. Moisture control is normally provided by a "minimum" air exchange (or ventilation) rate. That is the quantity of air exchange that is needed to maintain a desired relative humidity—60% is a good target—within the house. One or more timer

controlled exhaust fans provide the minimum ventilation air exchange.

Charts or computer programs are available to give guidance on fan timer settings for birds at different ages (see sidebar). Those tools do provide a very helpful starting point for operating fans, but they cannot ever be correct for all weather conditions, all fans, and all broiler houses. Growers should adjust timer settings up or down as needed to keep the interior relative humidity near their 60% target (50% to 70% is a reasonable range).

As birds grow, they drink more water, produce more manure, and give off more moisture into the air. Fan operation must be increased as the birds grow so there will be enough air exchange to remove an ever increasing amount of water that is being added to the house. **Failure to provide adequate air exchange is one of the chief causes of wet litter!**

Good mixing and circulation of fresh air is the second critical element in keeping litter dry. Adjustable air inlets located near the top of each sidewall or in the ceiling near the center of the house are designed to control air circulation. It is essential for in-

lets to be adjusted and operated so fresh air enters the house with enough speed to push it along the ceiling toward the center of the barn (or the sidewalls with attic inlets) before it moves down to the birds at floor level. That pattern of air movement mixes incoming air with warm interior air before it moves into the bird zone and cross the litter.

*(Continued on page 3)*

### SIDEBAR

The following table gives approximate minimum ventilation rates needed for moisture removal during average winter weather conditions. The rates may be adjusted down for extremely cold temperatures or upward for above normal temperatures. The best guide for good moisture control is to monitor relative humidity inside the house and keep it near 60% ( $\pm 10\%$ ).

Ventilation Rate per Bird	
Age in weeks	cfm
1	0.10
2	0.25
3	0.35
4	0.50
5	0.65
6	0.70
7	0.80
8	0.90

*Source: National Poultry Technology Center, Auburn University*

Fan timer settings for minimum ventilation are a function of the exhaust fans in use and the desired ventilation rate. The National Poultry Technology Center at Auburn University has developed a calculator that can provide estimates of fan timer settings for specific fans and ventilation rates. The calculator is available on the internet at <http://www.aces.edu/dept/poultryventilation/documents/MinVentTimerCalculator.pdf>.

## No mystery to Dry Litter—continued

(Continued from page 2)

Keep in mind that cold air is heavier than warm air. Cold air will quickly fall directly to the floor if it does not enter the house with enough speed to keep it attached to the ceiling. For best cold weather operation, the minimum inlet opening should be about one inch with a house static pressure near 0.10 inches of water. Those inlet and static pressure settings will usually generate enough air speed to create good air mixing within the house.

Small mixing or stirring fans located near the ceiling can also be used to help circulate air down to the floor and promote litter drying. Stirring fans force some heat that accumulates at the ceiling back down to the floor. Those fans may operate continuously or may be cycled off when the exhaust fans are operating but should never blow air directly on the birds.

Beware of air leaks in the walls, doors, curtains or fans. Excessive air leakage will compromise even the best efforts to establish good air mixing. Seal as many air leaks as possible to make the house tight. In a tight house nearly all ventilation air will enter the house through the controlled ventilation air inlets and will be well mixed with interior air before it reaches the litter. Cold air that enters through cracks generally goes directly to the floor, creating cold damp areas on the litter. **Without good air mixing and circulation, floors are likely to be cool and damp even though the overall air exchange rate may be adequate.**

The third essential requirement for keeping litter dry is to warm cold air that comes into the house. Some heat comes from the birds and the rest comes primarily from radiant or forced air heaters in the barn. Some heat may also come from the solar heated attic space if ventilation inlets have been installed in the ceiling near the center of

the house. Heat from all sources must be sufficient to warm all incoming air to the appropriate temperature (varies with bird age) for the birds.

Everyone recognizes that it is costly to operate brooders, and it is tempting to reduce fan timer or heater temperature settings in an effort to save fuel. However, that strategy can easily produce bad results in the form of wet litter and poor bird performance. **It is usually much less costly and more profitable to heat the air before litter gets wet than to supply enough heat to dry the litter after it gets wet.**

The old cliché, “an ounce of prevention is worth a pound of cure,” applies to maintaining good litter condition. Think of litter as a big sponge. It is nearly always absorbing more water than it is releasing during the winter months. For a while the litter can absorb excess moisture from the house, but it reaches its maximum water holding capacity at some point. That’s when litter seems to go from good condition one day to wet or ‘slicked over’ the next day.

Wet litter may seem to appear suddenly but the problem has usually been building for an extended time. Since it is difficult to know how much water absorbing capacity the litter has at any point in time, the best procedure is to provide adequate ventilation, air circulation and heat all through the growout period. It is much easier to prevent the litter from getting wet than to dry it afterward. **Keeping litter dry requires all three pieces of the “three-legged stool:” adequate air exchange, good interior air circulation, and sufficient heat.**

By Doug Overhults, University of KY, Biosystems & Ag Engineering.

## Poultry is a major contributor to the Kentucky Economy

The next time you are asked why Kentucky should welcome poultry production in the state, you can tell them that poultry is a major contributor to the state. A 2012 economic study indicates that the poultry industry provides 4,890 direct jobs in Kentucky and contributes indirectly to an additional 15,780 jobs in the supplier and ancillary industries. The latter refer to companies that supply goods and services to the poultry industry.

The economic impact is felt throughout the state generating jobs for firms that would, at first look, appear to be unrelated to poultry. Those jobs are in industries such as banking, real estate, accounting, even printing. The total economic impact to the state was estimated to be \$3.30 billion.

Not only does the poultry industry generate jobs, but it also generates tax revenues. In Kentucky the industry and its employees pay about \$165.8 million in federal taxes and \$88.32 million in state and local taxes.

**Back issues of Cheeps and Chirps, as well as other information, are available at [www.poultryenergy.com](http://www.poultryenergy.com)**



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## New Energy Efficiency Cost Share available for 2013

The Kentucky Agricultural Development Board has made new funds available to support energy efficiency and renewable energy projects this year. The new program will provide funding for up to 50% of eligible project costs with the maximum cost share amount that an applicant can receive limited to \$15,000.

Applications will be received and reviewed on a quarterly basis with the first application deadline on April 26, 2013. Growers who are planning to make energy efficiency improvements to their poultry housing should look into this program. Applications and more information are available online at <http://ag-energy.ky.gov/energy-program.shtml>. Angela Justice is the contact in the Governor's Office of Agricultural Policy and can be reached at (502) 564-4627.



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