

## MCLEAN COUNTY EXTENSION

# NEWSLETTER

### WEATHER ALERT APP

The University of Kentucky Ag Weather Center, in collaboration with the UK Department of Biosystems and Ag Engineering and other partners, has launched the "Weather Alert" app. Designed to aid Kentucky's farming community and residents, the app provides up-to-date weather forecasts, high-resolution radar, and real-time alerts tailored to specific GPS locations.



According to UK senior meteorologist Matt Dixon, the app is simple, offering essential weather information without unnecessary features. It is free to download, ad-free, and accessible on iOS and Android platforms. The app aims to improve agricultural decision-making and disaster readiness in future updates. Users can provide feedback as the app continues to evolve.

To download via iOS, visit <https://apple.co/3wN3645>

To download via Android, visit <https://bit.ly/4dUyxdq>



# BULL VALUE ASSESSMENT PROGRAM

OCTOBER 10TH & 17TH  
6:00 PM

HANCOCK COUNTY COOPERATIVE EXTENSION  
1605 HWY 60-W, HAWESVILLE, KY 42348

## SESSION 1 - TIPS ON BUYING AND MANAGING YOUR BULL

- Targeting Selection for Specific Markets: Factors to consider when purchasing a bull -  
Dr Darrh Bullock
- Bull Reproductive Considerations and the Importance of Breeding Soundness Exams -  
Dr Les Anderson
- Tools for Selection: Breed differences, Expected Progeny Differences (EPD) and  
Crossbreeding - Dr Darrh Bullock
- Proper Bull Nutrition and Health Programs: How to manage the bull you purchased -  
Dr Jeff Lehmkuhler and Dr Katie VanValin
- Matching Genetics to Cow Herd and Management - Dr Darrh Bullock

## SESSION 2 - MOCK AUCTION: PUTTING YOUR PLAN TO WORK

- Rules for auction
- Auction: Goal is to buy the best value to fit your scenario
- Post Auction Discussion: Detailed discussion of each scenario and which bulls fit  
each the best - identify the participant that purchased the highest "value" bull in each  
scenario

**MUST RSVP BY OCTOBER 7TH, 2024**  
**CALL 270-927-6618**

**\$25**  
REGISTRATION FEE

(can bring check on the  
10th)

**MAKE CHECKS PAYABLE TO:**  
**DAVIESS COUNTY PROGRAM FUND**

Cooperative  
Extension Service

Agriculture and Natural Resources  
Family and Consumer Sciences  
4-H Youth Development  
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

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University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.

Lexington, KY 40506



Disabilities  
accommodated  
with prior notification.

# 2024 Fall Crop Protection Webinar Series scheduled for October and November

Sign up now for a popular webinar series that addresses timely topics regarding integrated pest management for field crops. University of Kentucky Martin-Gatton College of Agriculture, Food and Environment extension specialists have once again organized the Fall Crop Protection Webinar Series, hosted through the Southern Integrated Pest Management Center. Each webinar will begin at 10 a.m. ET/9 a.m. CT, and will be one hour in length.



*2024 Fall Crop Protection  
Webinar Series*

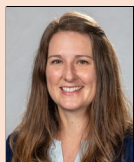
Continuing education credits for Certified Crop Advisors and Kentucky pesticide applicators will be available. This year the webinars will be held Oct. 15, Oct. 29, Nov. 12, and Nov. 26. Pre-registration is required to attend each webinar. The webinars are open to agriculture and natural resource county extension agents, crop consultants, farmers, industry professionals, and others, whether they reside or work in Kentucky or outside the state. Pre-registration links and schedules follow:



**Webinar #1: Oct. 15** — Dr. Raul Villanueva, Extension Entomologist

**Title:** Dealing with stink bugs and other insect pests in 2023-24

**Webinar link:** [https://zoom.us/webinar/register/WN\\_MAppWNeZR5yCSoTGMGUj\\_Q](https://zoom.us/webinar/register/WN_MAppWNeZR5yCSoTGMGUj_Q)



**Webinar #2: Oct. 29** — Dr. Kiersten A. Wise, Extension Plant Pathologist

**Title:** Maximizing disease control AND return on investment for corn fungicides

**Webinar link:** [https://zoom.us/webinar/register/WN\\_irdgz-OATPy3hCKsOVxyGQ](https://zoom.us/webinar/register/WN_irdgz-OATPy3hCKsOVxyGQ)



**Webinar #3: Nov. 12** — Dr. Travis Legleiter, Extension Weeds Specialist

**Title:** Spray Application Parameters – The Offensive Line of Herbicide Applications

**Webinar link:** [https://zoom.us/webinar/register/WN\\_rxH9T0W4T4a3HZRFAgGA1w](https://zoom.us/webinar/register/WN_rxH9T0W4T4a3HZRFAgGA1w)



**Webinar #4: Nov. 26** — Dr. Carl Bradley, Extension Plant Pathologist

**Title:** Management of important wheat diseases in Kentucky

**Webinar link:** [https://zoom.us/webinar/register/WN\\_NURPmPdgQICwWGHR-qOCEw](https://zoom.us/webinar/register/WN_NURPmPdgQICwWGHR-qOCEw)

## Fall Crop Protection Webinar Series

*Oct 15*, Dealing with stink bugs and other insect pests in 2023-24

*Oct 29*, Maximizing disease control AND return on investment for corn fungicides

*Nov 12*, Spray Application Parameters – The Offensive Line of Herbicide Applications

*Nov 26* Management of important wheat diseases in Kentucky

**2025**

## Kentucky Commodity all Crop Protection Webinar Series

*January 16, 2025*

### Winter Wheat Meeting

*February 4, 2025*

### 2025 Kentucky Crop Health Conference

*February 6, 2025*

### Wheat Field Day

*May 13, 2025*

### Pest Management Field Day

*June 26, 2025*

### Corn, Soybean & Tobacco Field Day

*July 22 or July 29, 2025*

TO SIGN UP AND RECEIVE OUR LATEST NEWSLETTER(S) CLICK THE LINK: [NEWSLETTER](#)

### Cooperative Extension Service

Agriculture and Natural Resources  
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### MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

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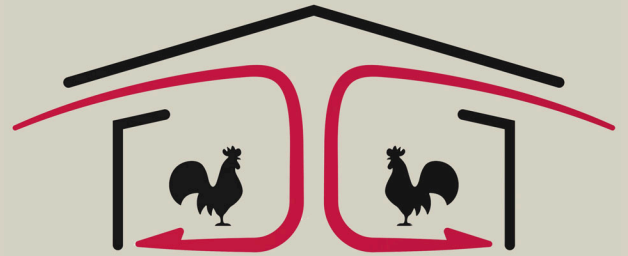


Disabilities accommodated with prior notification.



# Poultry Housing Tips

## Fan Motor Size/Fan Pulley Size and Fan Performance



2024

A 54" tunnel fan with a 1.5-hp motor is running and consuming 1,700 watts of power. The belt suddenly breaks and the fan blades stop rotating, but the motor continues to spin. How much power do you believe the motor is now consuming? 1,700 watts? It is important to understand that the primary factor determining how much power a fan will use is how fast the motor is spinning the prop. The faster the prop spins, the greater the amount of work required, and the greater the amount of power used by the motor. So, as a result, when the belt breaks, the amount of work required of the motor decreases dramatically, as does its power usage, to around 200 watts. What might surprise you even more is that motor size and/or whether the motor is single-phase or three-phase has little effect on fan power usage. This is because it's not the size of a motor that determines how much power it will use, but rather how much work is required of the motor. Though it is true that a 2-hp motor is capable of doing more work than a 1-hp motor, if spinning a fan prop only requires 1 hp worth of work a 2-hp motor will use essentially the same amount of power as a 1-hp motor. To demonstrate this fan principle, the performance of a fairly typical 54" tunnel fan was evaluated in a fan test chamber\* with three different motors using the same size prop pulley (AK104 - 10.4" diameter) and motor pulley (AK34 - 3.4" diameter):

- 1.5 hp 240 V single-phase motor (standard)
- 2 hp 240 V single-phase motor
- 1.5 hp three-phase motor with an integrated phase converter (single to three-phase)

The fan test chamber allowed the precise determination of both the fan's power usage and air moving capacity at a wide range of operating static pressures (0 - 0.30"),

Motor	Prop Speed (rpm)	Air Moving Capacity (ft <sup>3</sup> /min)	Power Usage (watts)
1.5 hp three-phase	600	25,760	1,699
1.5 hp single-phase	599	25,136	1,689
2.0 hp single-phase	610	26,089	1,762

Tunnel fan performance with various

Table 1. motors.

Table 1. shows the performance of the 54" fan, operating at a static pressure of 0.10", with the three Since all three motors were designed to operate at a fixed speed (1,750 rpm), and the motor and prop pulleys were the same, there was less than a 2% difference in prop speed between the three motors. The air-moving capacity of the fan varied a few percent between the three motors which could have been due to slight differences in fan prop speed and/or slight variations of measurements taken The power usage was slightly higher, 4%, for the 2-hp motor which is likely attributed to its efficiency being lower than the other two motors (81% vs 84% and 86%). Though there were technical differences in fan performance between the three motors, they were so small it is doubtful that if the fans were installed on a farm in three identical houses that there would be any notable difference in the air speed produced by the fans or power usage among the three houses. In contrast, varying the size of the motor pulley, which changes the speed at which a fan prop rotates, can have a dramatic effect on both the air-moving capacity and power usage of a fan. Three different pulleys were installed on the same 54" tunnel fan with

a 240 V single-phase motor and fan performance was again evaluated (Figure 1):

- AK34 (standard)
- AK30 (smaller diameter-reduced prop speed)
- AK39 (larger diameter-increased prop speed)

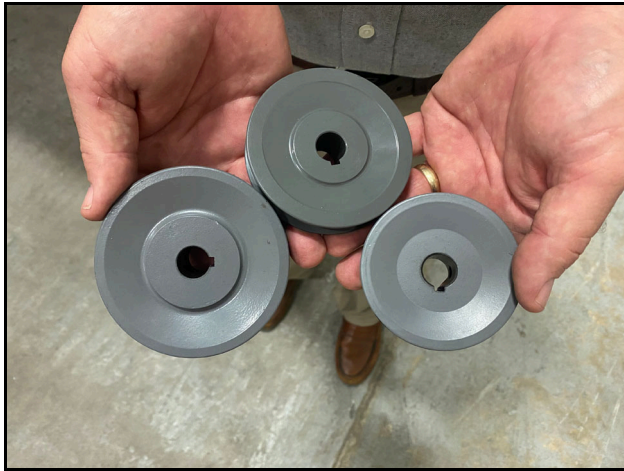


Figure 1. Pulley sizes evaluated (from left to right) AK39, AK34, AK30.

Pulley Size	Prop Speed (rpm)	Air Moving Capacity (ft <sup>3</sup> /min)	Current (amps)	Power Usage (watts)
AK30 small	537	22,532	5.5	1,263
<b>AK34</b>	<b>599</b>	<b>25,136</b>	<b>7.4</b>	<b>1,689</b>
AK39 large	650	27,805	9.0	2,048

Table 2. Fan performance with various motor pulley sizes. Reducing the motor pulley diameter by 0.4" (AK34 vs AK30) reduced fan prop speed and air-moving. In contrast, increasing the motor pulley diameter by approximately 0.5" increased the speed of the fan and speed and air-moving capacity by approximately 10%. These results were not unexpected because well-established fan laws dictate a linear relationship between fan speed and the air moving capacity of the fan (10, 20, 30% more speed = 10, 20, 30% more cfm). It is important to note that the pulleys could have been changed on the other motors tested as well and the results would have remained essentially the same.

What many people don't realize is that simply changing the motor pulley can have a dramatic effect on fan power usage and current. This is because of the exponential relationship between prop speed and the work required of a fan motor. Namely, small changes in prop speed can result in very large changes in the work required and therefore the power used by a fan. With the same 1.5-hp motor used in the first test, increasing the pulley size from AK34 to AK39 only increased the air-moving capacity of the fan by 10%, while power usage and current increased by more than 22%. Now, if the motor was not designed to handle this dramatic increase in current and power usage, the motor would overheat and, in time, fail. For this reason, it is very important when replacing a motor, to install the same size pulley that was on it previously. If you are unsure of the correct motor pulley size you can check with the fan manufacturer. Installing the smaller motor pulley and reducing the prop speed/air-moving capacity of the fan by 10% resulted in nearly a 25% reduction in fan motor power usage and current. This is the principle driving the increasing use of variable speed tunnel fans to reduce power usage by using more fans operating at a lower speed instead of operating fewer fans at full speed.

It is important to always keep in mind that fan power usage is primarily determined by the work required to spin the prop at a given speed and not by the size or type of motor. Though installing a slightly larger fan motor pulley will increase the air-moving capacity of the fan, it can result in overloading the motor, resulting in dramatically increased power usage and reduced motor life. Conversely, it is possible to potentially increase fan motor life without increasing fan power usage by installing a larger motor, and since it isn't fully loaded, it will tend to operate at a lower temperature and therefore last longer. Michael Czarick Brian Fairchild Department of Poultry Science - UGA  
\*Georgia Poultry Fan/Inlet Test facility. Newton Grove North Carolina.



# Bull Breeding Soundness Evaluation Clinic



**Stone Veterinary Clinic**

(8862 US HWY 60W Sturgis, KY)

**8am-12pm**

There will be a  
Evaluation Fee of  
**\$60/Bull**

\* Optional vaccine/deworming  
can be done at appointment  
for additional price\*

Evaluation Will Include:  
Physical Examination  
Reproductive Examination  
Semen Evaluation

**Reserve your Spot by Nov 18,2024**

To save your spot or for more  
information Contact Katie Hughes

Union Co ANR Agent

270-389-1400 or  
[katie.n.hughes@uky.edu](mailto:katie.n.hughes@uky.edu)



# Venison Sloppy Joes

Give these Sloppy Joes a try. You'll be glad you did.

Ingredients:

- 1 pound ground venison
- 1 onion, chopped
- 1 green bell pepper, chopped
- 2 stalks celery, chopped
- 2 tablespoons brown sugar
- ¼ cup water
- ¼ cup vinegar
- 2 tablespoons lemon juice
- 8 ounces tomato sauce, no-salt-added
- 1 tablespoon Worcestershire sauce
- 1 tablespoon prepared mustard



Directions:

Mix all ingredients in a medium saucepan. Cook over medium heat for approximately 30 minutes. Serve on whole grain bun.

Source: Adapted from Wild Game: From Field to Table, Sandra Bastin, PhD, RD, Extension Food and Nutrition Specialist. Revised July 2007. Revised February 2023.

Nutrition facts per serving: 180 calories; 2.5g total fat; 1g saturated fat; 0g trans fat; 65mg cholesterol; 180mg sodium; 17g carbohydrate; 2g fiber; 9g total sugars; 5g added sugars; 20g protein; 0% Daily Value of Vitamin D; 4% Daily Value of Calcium; 15% Daily Value of Iron; 10% Daily value of Potassium

# Slow Cooker Venison Enchiladas

Ingredients:

- 1 ground venison (may substitute elk or beef)
- ½ cup chopped green pepper
- 1 cup chopped onion
- 1 can (16 ounces) low sodium pinot or kidney beans, drained and rinsed
- 1 can (15 ounces) low sodium black beans, drained and rinsed
- 1 can (10 ounces) no-sodium diced tomatoes with green chilies, undrained
- 1/3 cup water
- ½ teaspoon cumin
- ¾ teaspoon chili powder
- ¼ teaspoon pepper
- 6 corn tortillas
- 1 cup colby jack cheese, shredded



Directions:

In a large skillet, cook meat, green pepper, and onion until meat is browned. Add the beans, tomatoes, water, cumin, chili powder, and pepper, and bring to a boil. Reduce heat, cover, and simmer for 15 minutes. In a slow cooker, layer 1/3 of meat mixture, 2 tortillas and 1/3 cup of cheese. Repeat the layers 3 times. Cover and cook on low for 5 to 7 hours.

Source: Adapted from: "Fish & Game Cookbook" Bonnie Scott. 2013.

Nutrition Facts per Serving: 370 calories, 8g total fat, 4g saturated fat, 80mg cholesterol, 350mg sodium, 39g total carbohydrate, 10g dietary fiber, 3g total sugars, 31 g protein, 15% DV calcium, 35% DV iron, 15% DV potassium