My husband, Mike, and I started considering going into the poultry business six years ago. At first I refused, but after a lot of preparation and prayer, I knew it was part of God's plan for our family. We already had a beef cattle operation, and I knew it would be an advantage, because the cattle and poultry operation would work hand-in-hand reducing the cost of producing cattle. In December 2007, the dirt work began, and our farm was complete in June 2008.

Coming from a job at a local bank and the local academy to the poultry farm was a big change for me. We are pretty tied down with the farm 24/7, and one of the biggest adjustments has been the alarms going off in the wee hours of the morning. I was somewhat prepared for the farm to tie us down, because the cattle operation keeps you close to the farm; however, the poultry farm is more confining than the cattle farm. We have learned that we are not always able to go and do things when we want. In other ways, we do more as a family. Fun times for us and our son, Evan, must be scheduled during out times.

Learning the controllers was scary at the beginning. With help from Sanderson Farms, good friends, and Latco, we were able to learn the system. We know we can call them if we have any questions. Every day gets easier.

Proper ventilation is a vital part of our operation's success. We quickly learned that we have to strive for perfection in this area. Ventilation is vital to both our bottom line and bird production. Our bottom line is effected through burning extra gas by over-ventilating. We also know that if we under-ventilate, the birds will become stressed and perform poorly which cuts our pay. We have worked with friends and service personnel to find the best program for ventilation. We burn the gas necessary on the front end of the flock, because we know it will pay out at the end by keeping our birds comfortable and stress-free.

We have faced some surprises and challenges. We received a batch of chicks from a young hen flock and realized that we had to brood these smaller chicks at a higher temperature than normal. The birds overcame their small size and grew as big as the chicks we normally get. One day we were surprised to find a large feed spill inside one of the houses. We worked together and cleaned up the mess and proceeded. Another day our water well was not operating properly. We have learned that a lot of regulations and paper work come with this job, and you do what has to be done.

Now as we get ready to sell our ninth batch of chickens, I am still delighted by growing a tiny, yellow biddie into a big, white, fluffy, feathered chicken.
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¹ Merial Study #00-126.
² Merial Study #04-016, 07-032.
The Mississippi Poultry Association’s Poultry Management School, held in May at the College of Veterinary Medicine at Mississippi State University, presented some of the timeliest information to growers, service technicians and other industry professionals in the state’s largest agricultural industry.

As the industry begins to turn up after the sharp trough of 2008-09, the keynote address was on communication between service technicians and growers given by the man who wrote the book on the subject, Dr. Larry Cole of Conway, Arkansas. The second day, the four breakout sessions addressed ventilation, parasites, male management and environmental regulations.

According to Dr. Cole, service technicians have the most difficult job in the poultry industry. Because they are caught between the grower and integrator, they should approach the job with humility and with the following message to growers:

“I am here to help you be successful.” Dr. Cole called “people problems” a silent thief that can cost any business 20 to 25 percent. He also noted that businesses are often quicker to address technical issues that eat into profits than people problems.

The author of Communication in Poultry Grower Relations: A Blueprint to Success, Dr. Cole is a psychologist who has conducted surveys of growers and worked with companies and growers to improve integrator-grower relations. In discussions with growers, what they value most is to be treated by integrator personnel as professionals who have large investments in successfully raising poultry. Dr. Cole has worked with growers and integrators to develop guidelines for working relationships that build trust and open communication.

When those relationships are marked by frustration, “frustration can be your best friend,” said Cole, also author of Teamwork in Poultry Production: Improving Grower and (Continued on page 4)
Employee Interpersonal Skills. He led the audience of about 125 through an exercise to determine their personality type and to recognize three other personality types and how the types interact. The four types he outlined were Analytical, Driven, Amiable and Expressive. “You’ve got to know who you are and who you are talking to for effective communication,” says Dr. Cole.

On the second day, Drs. Jody Purswell and Jeremiah Davis with the U.S. Department of Agriculture’s Agricultural Research Service at MSU presented a new way of communicating the costs of various lighting and ventilation options using their new Mobile Energy and Environment Laboratory. The mobile chicken house was unveiled at MPA’s Poultry Management School. The lab has computer screens that give instant feedback on various changes to the systems within the house.

In one of the wet labs, Dr. Kelli Jones, assistant clinical professor at the Mississippi Veterinary Research and Diagnosis Laboratory in Pearl, showed participants various intestinal parasites that reduce feed conversion rates and what products are effective in killing the parasites. Consultant Huey Hilburn in another wet lab provided clues for effective male management methods using a rating system of 1-5.

Tracy Tomkins, chief of the Mississippi Department of Environmental Quality’s Agricultural Branch in the Environmental Permits Division, reviewed what growers are required to have when agency compliance officers come for an inspection. She also gave an update on the progress of issuing coverage to poultry farms under the state’s general permit adopted last year.

---

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<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Thursday, September 16</td>
<td>2:00-5:00 pm</td>
<td>Registration</td>
</tr>
<tr>
<td></td>
<td>6:00-7:30 pm</td>
<td>Diamond Sponsor Poolside Reception</td>
</tr>
<tr>
<td>Friday, September 17</td>
<td>8:00 am-12:00 noon</td>
<td>Opening Business Session, Awards and Accolades</td>
</tr>
<tr>
<td></td>
<td>10:00-11:30 am</td>
<td>Cobb-Vantress Ladies “Brunch on the Bay” on board the Solaris</td>
</tr>
<tr>
<td></td>
<td>12:30-5:00 pm</td>
<td>Fishing Tournament</td>
</tr>
<tr>
<td></td>
<td>1:00-5:00 pm</td>
<td>Vendworks, McNeely Plastics Product Golf Tournament</td>
</tr>
<tr>
<td>Saturday, September 18</td>
<td>8:00-11:00 am</td>
<td>Business/Board Meeting, Keynote Speaker</td>
</tr>
<tr>
<td></td>
<td>1:00-5:00 pm</td>
<td>International Paper Golf Tournament</td>
</tr>
<tr>
<td></td>
<td>6:00-9:00 pm</td>
<td>Gold Star Sponsor’s Awards Reception and the Silent/Live Auction</td>
</tr>
</tbody>
</table>

REGISTRATION & RESERVATION INFORMATION
To register, call Becky Beard at the MPA office at 601-932-7560 or email mpaoffice@bellsouth.net. In order to make your reservations, you must call the HILTON SANDESTIN at 850-267-9500 or 1-800-367-1271 or visit www.hiltonsandestinbeach.com. Be sure to mention “MPA” to receive the special room rate. The deadline for reserving rooms is August 15, 2010. Your room rate is $169.00 per night.
One of the changes that the 2010 Legislature made that MPA grower members will notice starting January 1, 2011, is the adoption of the new Limited Liability Company Act (LLC).

Existing LLCs that have written operating agreements will be able to continue to operate under those agreements. A key feature of this new Act is the annual reporting requirement. Starting in 2011, LLCs organized in Mississippi and out-of-state LLCs registered in Mississippi will be required to file annual reports to maintain their good standing status with the Secretary of State’s Office. These reports will be similar in content to the annual reports currently filed by corporations. There will be no filing fee for in-state LLCs and a $250 filing fee for out-of-state LLCs. The Secretary of State’s Office anticipates that the due date for the reports will be April 15, 2011. LLCs that do not file the required reports may be administratively dissolved but can file an application at any time to get reinstated.

Generally, the 2010 revisions clear up uncertainty in the existing laws to make them easier to read and understand. It also is very friendly to small LLCs that don’t use comprehensive written agreements to govern their operations, because it provides for more default rules which apply if an LLC has no operating agreement or if the agreement is silent on the issue.

Other key features of the Revised Act (which applies to all LLCs formed or registered after January 1, 2011) not contained in the current act include:

- Allows LLCs to have officers (President, CEO, etc.) and “in-name” only members (members who don’t vote or share in the profits). Both of these are optional to the LLC.
- Sets forth the things that must be in a written operating agreement to be enforceable and provisions in the revised act that cannot be varied by the LLC.
- Adds that a majority of the LLC’s members must approve an agreement to sell its assets outside the ordinary course of business. Current laws require this as a default rule for a merger but not an asset sale.
- Provides that heirs of a deceased member become members as a default rule, except in cases where the member must be a professional, such as in a PLLC.
- Provides as a default rule that member voting is based on profit sharing. Under the current act, each member gets one vote regardless of their profit sharing percentage.
- Provides for ways to add new members to an LLC when there are no members to allow the LLC to continue operating and avoid dissolution for not having any members. This situation could occur when the sole member of a single member LLC files for bankruptcy. Under the current laws the LLC would have to be dissolved in this situation.
- Adds a new provision regarding enforceability of limitations on assignments of financial interests (such as pledges of their interests as collateral for a loan). Members will be able to agree among themselves that they won’t assign their individual financial rights to a third party or pledge them as collateral for a loan.

Transition provisions provide that the entire new Revised Act will apply to all LLCs formed or registered on or after January 1, 2011, including the annual reporting requirement. Existing LLCs will be required to file annual reports beginning January 1, 2011, but will have another year before the rest of the Revised Act applies to them. If existing LLCs do not take steps to elect to come under the Revised Act early, then the rest of the Revised Act applies to them on January 1, 2012.

For additional information, you may contact the Secretary of State’s office at 601-359-1350.
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Today, the U.S. Environmental Protection Agency (EPA) is often characterized as an agency focused on strengthening enforcement and compliance in all regulated areas. Daily news reports emphasize EPA's new initiatives in climate change and greenhouse gas emissions. These initiatives are indicative of the big picture and future goals of EPA. What about the smaller pieces of the puzzle? What about EPA regulations and enforcement in specific industries? Do new EPA regulations affect even feed mills? The short answer is yes.

**ACTION**

On January 5, 2010, the *National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Prepared Feed Manufacturing* was published by U.S. Environmental Protection Agency (EPA) as a final rule in the Federal Register (40 CFR 63). A primary goal of the rule is to achieve a 75 percent reduction in cancer incidence attributable to hazardous air pollutants emitted from stationary sources (Clean Air Act § 112(d)). The rule applies to feed mills—"prepared feeds manufacturing area sources"—that produce animal feed products, excluding cat and dog, that contain chromium (>0.1 percent) or manganese (>1.0 percent). “Prepared feed manufacturing facilities” include those that are “primarily engaged” in the production of animal feed, making up at least half of the facility’s annual production of all products.

On May 5, 2010, applicable facilities (NAICS code 311119) were required to submit an “Initial Notification” to EPA and Mississippi Department of Environmental Quality (MDEQ). On May 4, 2012, a subsequent “Notification of Compliance Status” must also be submitted to MDEQ as the delegated authority for the NESHAP regulation (contact B.J. Hailey, MDEQ Office of Pollution Control, 601-961-5783).

**SUMMARY**

The new regulations require applicable facilities to implement various management practices in areas where materials containing chromium and/or manganese are stored, used or handled. Feed mill facilities with an average daily feed production level of more than 50 tons per day are further required to implement emission control equipment on pelleting/pellet cooling systems that provide a particulate matter removal rate of 95 percent or greater. Most animal feed mills that use high-efficiency cyclones should be able to meet this requirement. These facilities are also required to establish and maintain key operating parameters for emission control systems to ensure compliance. The final requirements of the rule consist of equipment standards and management practices.

THE “NUTS AND BOLTS” OF NESHAP

I. General Management Practices

By January 5, 2012, feed mills must implement the following general management practices:

- Implement housekeeping measures that minimize excess dust that may contain manganese or chromium, including the use of an industrial vacuum system or manual sweeping system, the monthly removal of dust in the area, and keeping doors shut except for normal ingress and egress.
- Maintain and operate all equipment that stores, processes, or contains chromium or manganese in accordance with manufacturers’ specifications and in a manner to minimize dust creation.

II. Specific Management Practices

By January 5, 2012, feed mills must implement the following specific management practices:

- All raw materials containing manganese or chromium need to be stored in closed containers in storage areas.
- In mixing areas, all materials containing manganese or chromium must be added to the mixer in a manner that reduces emissions, and the mixer must be covered at all times.
- Devices must be used at the load-out end of each bulk loader to reduce the distance between the loading arm and the truck or railcar in order to reduce fugitive emissions where prepared products containing manganese or chromium are loaded.

---

**BENEFITS OF REGAL GAS CHLORINATORS FOR POULTRY FARMS:**

- Lowers feed conversion
- Increases animal body weight
- Reduces animal mortality
- Reduces medication use

**REGAL GAS CHLORINATORS:**

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III. Equipment Practices
By January 5, 2012, feed mills must implement the following equipment standards and practices:

• Facilities with average feed production levels of 50 tons per day or more must install and operate a cyclone to reduce emissions.
• The cyclone must demonstrate 95 percent or greater reduction in particulate matter using manufacturer’s specifications and certification, certification by a professional engineer or responsible official or a one-time Method 5 Performance Test.
• Cyclones must be monitored for proper operation once per day (inlet flow, inlet velocity, pressure drop or fan amperage).
• Cyclones need to be inspected quarterly for corrosion, erosion or other damage.
• Unloading at the end of the bulk loader must be inspected monthly to ensure operating conditions are suitable.

IV. Notification of Compliance
An initial “Notification of Compliance” must be submitted by each feed mill to MDEQ within 120 days after the compliance date, May 4, 2012. The “Notification of Compliance” must include:

• Certification by each Feed Mill Manager
• A statement indicating the facility has complied with the requirements contained in the regulation.
• The inflow rate, inlet velocity, pressure drop or fan amperage that constitutes proper operation of the cyclone used to reduce particulate emissions from pelleting and pellet cooling operation.
• Documentation of initial average daily feed production by facilities not required to install a cyclone.
• ‘Notification and Compliance and Inspection records must be retained for 5 years.
• Please note that by March 1 of each year beginning in 2013, each feed mill must prepare and submit an annual compliance certification.

BACKUP GENERATORS
An often-forgotten aspect of regulations for feed mills is the backup generator, a stationary source within the definition of EPA regulations. Owners and operators need to be aware that the Standards of Performance for New Stationary Sources (NSPS rule) applies to the faithful backup generator in use at most facilities (40 CFR 60, Subpart A). A “Summary Report” regarding the gaseous and opacity excess emission and monitoring system performance for a generator should be timely filed with EPA and MDEQ.

If you have any questions concerning the matters discussed in this article, please feel free to contact John Milner, MPA Counsel, at jmilner@brunini.com or (601)960-6842, or contact J.D. Sumrall at MPA.
COOL CELL AND FOGGING PAD CLEANING PROGRAMS

For 2’ or 4’ Fogging Pads:
1. Wet Pad thoroughly using a house washer or water hose. Do NOT use too high of pressure or it will harm the pad
2. Combine (2) gallons of Cool-N-Klean with (10) gallons of water into a backpack/pump up sprayer
3. Spray mixture thoroughly onto entire length of pad and let sit for 30 minutes
4. Then spray with clear water from top to bottom, removing all minerals deposits and algae
5. To control the growth of algae, spray pads once a week with EVAP 100 at a rate of 1 ounce to 20 gallons of water during periods of use

For 6” Recirculating Systems:
1. Remove screen / cartridge from filter
2. Add (1-2) gallons of Cool-N-Klean to system storage tank
3. Turn pump on continuous flow until pad is completely wet
4. Run for approximately (1) hour or until calcium and deposits are broken down.
5. Spray Cool-N-Klean inside the pad to remove dust and spider webs
6. Using clear water, rinse pad thoroughly from top to bottom, with a hose
7. All mineral deposits and algae should be broken down and removed during this process
8. Be sure not to use too high of pressure (psi) that would damage the pad
9. Then empty the entire contents of the storage tank
10. To control the growth of algae, add (2-4) ounces of EVAP 100 to the storage tank once per week, during periods of use

IMPORTANT:
1. To extend the longevity and productivity of the pads, these cleaning procedures should be done once in the Fall and again in the Spring before Summer usage.
2. EVAP 100 is quaternary ammonia labeled for evaporative cooling pads and approved by manufacturers.

COOL-N-KLEAN™
Cool-N-Klean™ is a phosphate-free, biodegradable, organic acid cleaner. It contains no muriatic, nitric, sulfuric, mineral, or oxidizing acids. Cool-N-Klean™ is compatible in use with quaternary ammonium compounds, iodine disinfectant, glutaraldehyde, hydrogen peroxide, and biguanides. Used as a hard surface cleaner, it removes hard water scaling minerals and alkaline detergent residues, so disinfectants can directly contact the surface. It rinses freely without streaking. Cool-N-Klean™ renders environmental surfaces in hatcheries and farm premises whistle clean and ready for disinfection in a subsequent step using an appropriate disinfectant.

• For water pipes, cool cell pads and hard environmental surfaces

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Recent developments in light bulb technology now make it a good business decision to replace incandescent bulbs with energy-efficient Cold Cathode (CC) and Compact Fluorescent (CFL) bulbs, which are much more cost-effective. When implemented correctly, a broiler grower’s lighting cost may be reduced by 70 to 85 percent while maintaining the same level of flock performance and using existing wiring circuits. Widespread replacement of incandescent bulbs with CC and CFL bulbs is being seen across the Broiler Belt. In time, everybody will need to retrofit all their bulbs, as there will be no more incandescent bulbs sold within about three years, and growers who do lighting retrofits first will get the most economic benefit. This is no longer experimental; we are all doing it at our homes and now we need to do it on our farms.

Experts recommend that broilers receive approximately 3 to 4 food-candles (fc) of light (one foot-candle equals 10.76 lux) during the brood phase. Brood lasts for 8 to 14 days, depending on the integrator company, and helps the chicks become acclimated to their new environment by finding feed and water, while strengthening their skeletal structure and properly developing their circulatory, digestive, nervous and immune systems. After the initial brood phase, birds are turned out, migration fences are installed, and light intensity is lowered (dimmed), generally to around one-fourth foot-candle or less, and alternated with short periods of complete darkness for the remainder of the growout. At this low light intensity, birds will be less active, but still eat and drink sufficiently to achieve desired weight gains. Low light intensities during growout also reduce aggression in the flock and tend to lower the incidence of heart attacks, ascites and other flock problems.

The goal is to provide intense, uniform light in the brood chamber, especially over the feed and water lines. After turnout to whole house, we need to fully satisfy dimming requirements for the remainder of the growout.

ALL ENERGY-EFFICIENT BULBS ARE NOT CREATED EQUAL

Lumen output per watt of power consumption is the biggest difference between CC and CFL bulbs. CLF bulbs provide 65-75 lumens per watt, nearly twice the light output per watt of CC bulbs, which give about 35-40 lumens per watt. For comparison, incandescent bulbs provide only 12-17 lumens per watt.

Thus, we can replace incandescent bulbs with lower-wattage CC and/or CFL bulbs to achieve equivalent light levels at much lower electric power costs. However, because of the relatively...
low lumen output of CC bulbs, higher-wattage CFL brood lights usually must be used as a supplement.

The table below compares wattage, light output, lumens per watt and approximate life for incandescent, cold cathode and compact fluorescent bulbs.

**COLD CATHODE (CC)**
Cold cathode bulbs are dimmable and typically last twice as long as compact fluorescents but are more expensive and have much lower light output. Many poultry growers are using 8-watt (W) CC dimmable bulbs, which dim very well, but only emit 325 lumens of light. Even the new 15W CC bulbs generate only 525 lumens, compared to a 15W dimmable CFL that generates 1,190 lumens or a 23W dimmable CFL that emits 1,600 lumens. Consequently, supplemental bright (high lumen) brood lights are required when using CC bulbs.

Many 8W CC bulbs have been installed in broiler houses in the dimming circuits to replace 60W or 100W incandescent bulbs. However, since the equivalent lumen output is still very low, it requires that either dual light adapters be used to allow the installation of two bulbs in one fixture (see Dual Bulb Pull-Chain Adapters, below), or that supplemental brood lights be used to achieve minimum brood lighting levels. CC bulb life is considerably higher than incandescent bulbs at 18,000-25,000 hours.

---

**COMPACT FLUORESCENT (CFL) – DIMMABLE AND NON-DIMMABLE**
There are two different types of CFL bulbs, dimmable and non-dimmable. CFL bulbs are being widely adopted in broiler houses in the U.S. and are the new bulb of choice for several reasons. These bulbs have an estimated lifespan of 8,000-12,000 hours, which is less than the CC but approximately 10 times longer than their incandescent equivalent, and their lumen output is 2 to 3 times that of CC bulbs.

A variety of CFL bulbs are on the market in the U.S. and pricing is very competitive. Bulb prices are much lower than the CC equivalent, and CFL dimming technology has progressed rapidly. The first generation dimmable CFL bulbs did not perform as well as expected in broiler houses and had problems in early field trials. However, newer generation dimmable CFL bulbs have been tested with several broiler companies, and they show much longer life and improved dimming capabilities.

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**Lumens per Watt and Approximate Bulb Life by Bulb Type**

<table>
<thead>
<tr>
<th>Bulb Type</th>
<th>Wattage</th>
<th>Lumens</th>
<th>Lumens/Watt</th>
<th>Approx. Life (Hr)</th>
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<tbody>
<tr>
<td>Incandescent</td>
<td>25</td>
<td>190</td>
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<tr>
<td>Incandescent</td>
<td>40</td>
<td>470</td>
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<td>&quot;</td>
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<td>Incandescent</td>
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<td>870</td>
<td>14.5</td>
<td>&quot;</td>
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<tr>
<td>Incandescent</td>
<td>75</td>
<td>1,190</td>
<td>15.9</td>
<td>&quot;</td>
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<tr>
<td>Incandescent</td>
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<td>1,710</td>
<td>17.1</td>
<td>&quot;</td>
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<tr>
<td>Cold Cathode</td>
<td>8</td>
<td>325</td>
<td>40.6</td>
<td>18,000-15,000</td>
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<tr>
<td>Cold Cathode</td>
<td>15</td>
<td>525</td>
<td>35.0</td>
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<tr>
<td>Compact Fluorescent</td>
<td>15</td>
<td>1,100</td>
<td>73.3</td>
<td>8,000-12,000</td>
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<tr>
<td>Compact Fluorescent</td>
<td>18</td>
<td>1,250</td>
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<tr>
<td>Compact Fluorescent</td>
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<tr>
<td>Compact Fluorescent</td>
<td>55</td>
<td>3,600</td>
<td>65.5</td>
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</tbody>
</table>
**Reliable dimming CFL bulbs are now available in two common sizes, a 15W (70W incandescent equivalent) and a 23W (100W incandescent equivalent). Both use less than 25 percent of the power of their incandescent equivalents. Bulb cost is approximately $5.50 per bulb with a lumen output of 1,100 and 1,600 lumens, respectively.**

Non-dimmable CFL bulbs range in size from 8 or 9W (40W incandescent equivalent) up to 65W (300W incandescent equivalent). Sizes of non-dimmable CFL bulbs commonly found in broiler house applications are 15W (950 lumens), 18W (1250 lumens), 23W (1600 lumens), 26W (1750 lumens), 40-42W (2700 lumens), 55W (3500 lumens) and 65W (3900 lumens). Minor variation among manufacturers is common. Since mass production of “household size” bulbs has resulted in much lower prices, non-dimmable CFL bulbs in the 15W to 26W range are by far the least expensive and most cost-effective bulbs, typically ranging in cost from less than $1.50 to about $3.00. The 40-42W bulbs typically retail for about $8.00 to $11.00, and the 55-65W bulbs typically range from $12.00 to $17.00.

**LIGHT EMITTING DIODE (LED)**

LED bulbs are quickly becoming available for many applications and LED technology offers excellent potential for development over the next several years. However, currently LED technology has several attributes that make it poorly suited for use in poultry houses. LED bulbs emit a cone-shaped light pattern similar to a floodlight which makes achieving lighting uniformity very difficult. LED bulbs all have finned heat sinks surrounding their bases to dissipate heat, and the space between these fins collects dirt, debris and moisture quickly. Currently the cost of LED bulbs is extremely high, and any economic analyses which compare the true costs of LED lighting against the other new technologies (CC and CFL) will yield economic paybacks of several years compared to economic paybacks of several flocks for the CC and CFL options.

While we believe the future holds promise for LED technologies in poultry housing, we feel that this technology has not currently been sufficiently developed for use in the harsh environment of the typical production house.

**DIMMING CONSIDERATIONS**

While we typically brood birds at 3 or more fc, it is imperative that we have the capability of dimming the lights in the broiler house to 0.10 fc to 0.25 fc measured at a bird level along the feed lines. Exact target dimming levels depend on the integrator and should be determined by using a good light meter, not just by “eyeballing.” Thus, each house must be equipped with a compatible light dimmer wired into the dimming lighting circuits in the house.

High-wattage dimmers designed to work with incandescent light bulbs typically do not operate in the same manner with CC and dimmable CFL bulbs. Some growers with older dimmers have had good dimming success by simply installing a single 75W or 100W incandescent bulb at the front-most socket of the dimming circuit when using CC and dimmable CFL bulbs. However, most of the manufacturers making dimmers have developed new dimming hardware and software that is available to field upgrade their existing incandescent dimmers, or they now sell dimmers specifically designed to operate with the lower-wattage CC or dimmable CFL bulbs.

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DUAL BULB PULL-CHAIN ADAPTERS

A new 2-bulb adapter has been specifically designed for broiler houses by Retrolite Corporation that elevates socket splitters to another level by adding a pull-chain selectable switch and ratcheting base. The grower simply unscrews the incandescent bulb and screws in the pull-chain adapter.

The ratchet allows flexibility in orienting the adapter, and the pull-chain permits one bulb to be switched off when dimming is desired. One dimmable bulb and one non-dimmable bulb can be placed in the adapter, and no additional wiring is required. The cost of the adapter (about $6.50) is much less than running additional electrical circuits. Both bulbs are used in the brood chamber when high light intensity is necessary during the brood phase, and then the fixtures can be switched to turn off the non-dimmable bulb and operate only the dimmable bulb.

Houses that do not use these adapters typically must operate an additional electrical circuit in the brood chamber to achieve the required foot candle levels, so the adapter adds a great deal of flexibility toward achieving your lighting goals. Additionally, with the use of these adapters, a large number of bulbs can easily be turned off to provide the very low light requested by flock catch crews. These adapters can also be equipped with glass or plastic globe enclosures commonly called “jelly jars.”

KEYLESS SOCKET FIXTURES

Conversations with distributors and integrators, as well as countless field observations, have shown us that many keyless sockets have never been replaced. Usually, we find that there is major corrosion on these sockets, which is a contributing factor to higher bulb failures and erratic dimming performance. Additionally, the majority of keyless sockets in the field are found to be aluminum screw-shell models. We have seen many electrical contact issues using aluminum screw-shell keyless sockets over the past two years. Most bulb manufacturers are now recommending that when first installing a house of CCs or dimmable CFLs, the producer use only nickel-plated brass screw-shell keyless socket fixtures, which retail for about a dollar each. Aluminum screw-shell fixtures should be avoided with CC and CFL bulbs. The aluminum screw-shell is subject to quickly becoming corroded, which causes high electrical resistance that affects bulb life and dimming performance. The aluminum screw-shell is a very thin and weak material, and when used in an already corrosive environment, is a key reason why some houses have much higher failure rates than others, since the inexpensive aluminum screw-shells were designed for use in non-corrosive environments. New bulb warranties will likely require using these nickel-plated brass screw-shell keyless socket fixtures with CC and dimmable CFL bulbs.

IMPLEMENTATION

Installing CC and CFL bulbs in dropped-ceiling houses with two feed lines is usually fairly simple, as ceiling height is the same for all sockets, and ceiling material helps reflect light without any shadowing effect. White ceilings deliver higher intensities of light to the floor than black ceilings, typically 0.50 to 0.90 fc more. High-ceiling, open-truss houses are more of a challenge. These houses usually have lighting installed at a higher distance from the floor and generally require additional wiring work to deliver adequate brood lighting levels. New wider houses with three or more feed lines and different ceiling heights require a mix of different wattage bulbs to achieve lighting uniformity. Many newer houses have installed dimmable and non-dimmable circuits over each feed line with alternating (dim, non-dim) sockets on 10-foot centers.

CLEANING TIPS

Cleaning spiral bulbs without a globe is a hard job. However, between flocks, much of the dirt and debris can be removed from bulbs with a leaf blower and/or feather duster. It is also a good idea to wipe down the bulb surfaces with a damp cloth. Cleaner bulbs allow more light to reach bird level. “Jelly jars” may also be helpful in delivering adequate light levels.

BOTTOM LINE

The best way to accomplish a lighting retrofit across a broiler complex is for an integrator company to refine it in a few standard houses and then convey the final layout and the design to the growers. A grower should ask his company for help before trying to implement it on his own. Unfortunately, there are new broiler houses being built with incandescent bulbs specified, which is very short-sighted. In any case, be sure to use the nickel-plated brass sockets when building; otherwise, you will be switching them out soon.

Many problems encountered when installing an energy efficient-lighting system can be avoided by following these three guidelines:

1) install nickel-plated brass keyless sockets;
2) use an appropriate dimmer; and
3) use a light meter to accurately set dimming levels.

The result is that lighting costs can be reduced between 70 percent and 85 percent. The typical break-even payback is within 2 or 3 flocks, and the higher the rate a grower pays for electricity, the quicker his return on investment.

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There are at least eight major commercial poultry companies that call Mississippi home. Poultry is the state's leading agricultural industry, valued at $2.3 billion last year alone. As you can imagine, our poultry industry impacts not just Mississippi families, businesses and industries, but it also affects the entire country and even the world. Our poultry products are shipped all over the world to meet the nutritional needs of families. It is no wonder that safeguards are in place in each of the eight companies to ensure the wholesomeness and health of our poultry.

Company personnel go to extraordinary measures for the sake of “biosecurity.” Some departments require special clothing or boots, and yes, even those stylish hairnets to visit a flock. Others may disinfect tires, wash vehicles or equipment between each farm or visit farms in a special order depending on bird age or disease status. Not a day goes by for a company team member that he or she is not in some way involved with biosecurity. The company has a huge role to play in protecting their investment, but the grower has an investment of his or her own to protect.

Every time you put up a “No Entry, Biosecure Facility” sign on your farm, step into a foot pan bath of disinfectant, keep your grass cut short, avoid visiting those friends and neighbors with other poultry or exotic birds, or even find a new home for the sweet-eyed kitty cat that wants to hang out at the chicken house, you are doing your part to protect not only your birds, but the entire industry. The threat of disease actually invading your farm may not feel like a reality, but the reality is scarier than you can imagine.

While there is the potential for diseases to spread from one commercial poultry house to another, companies take all precautions to prevent this from happening. There are other ways for disease to spread. All it takes is one wild goose or duck carrying avian influenza to fly over a commercial poultry farm in Mississippi and shed its droppings, and the entire state poultry industry would be quarantined and possibly devastated. So, wild birds and our own commercial flocks are scary enough risks to our industry, but what about the other poultry industry in the state?

What other industry you may ask? The backyard poultry industry is alive and thriving in our state. Not just the Mom and Pop chicken coops in the back yard, but a genuine industry of traders, haulers and breeders. I am speaking of the backyard tradesmen who haul backyard birds (chickens, guineas, turkeys, peacocks, quail, pheasants, geese, ducks and anything else with a feather) around the country. They freely enter and cross state borders possibly carrying and spreading disease agents along the way. The out-of-state guests are a high risk, but the in-state traders are risky, as well.

There are at least five (Ripley, Coldwater, Wren, Philadelphia and Forest) well-known flea markets in the state that welcome the pedaling of not only your treasured knickknacks, but also any type of poultry you can imagine. There are at least four (Lucedale, Picayune, Golden and Heidelberg) genuine poultry auction sites in the state that traders frequent where the public can obtain a bid card and actually bid on poultry as if they were cattle. In addition to flea markets and auctions, Saturday morning tailgating is a popular past time. Vendors bring birds in the back of pick up trucks (sometimes in the trunk of their car), lower their tailgates and sell to folks driving by. There are at least five (Hazlehurst, Hattiesburg, Mendenhall, Carthage and Mt. Olive) locations where tailgaters gather for these Saturday morning swaps.

It all seems harmless enough. A few neighbors gathering to make a few extra bucks on the weekends, right? Well, maybe, but maybe not. Of course they have a right to grow and sell backyard poultry, and many of them are very conscientious bird tradesmen. There are those folks that do realize the importance of doing their part in protecting both poultry industries in the state, and they try to make sure that they obtain any required paperwork from the Mississippi Board of Animal Health to haul birds. Many make an effort not to haul or purchase any sick birds and try to take very good care of their birds. But, there are also many who do not obtain the proper paperwork prior to hauling and those that chose to bring sick birds to market.

For commercial growers, this latter group is of most concern. They have a major role in potentiating the spread of disease in the state. The primary disease problem typically seen in the backyard birds is mycoplasma, both Mycoplasma gallisepticum (MG) and Mycoplasma synoviae (MS). Mycoplasma is a sometimes-severe respiratory disease in birds that can wreak havoc on the commercial industry. Some companies will completely eradicate a flock if they test positive for mycoplasma. A recent study involving over 200 individual backyard bird owners covering 36 counties in Mississippi found that nearly 40 percent of flocks were positive for MG, MS or both. The main problem with either of the two mycoplasmas is that birds never really recover from the disease. They may not have clinical signs after a while, but they will be carriers of the disease and serve to infect other birds. Mycoplasma is just one example of a disease risk that the backyard industry represents to the commercial poultry industry. There are many more scenarios that could be mentioned that are equally as scary.

Here is something else for you to think about. Who do you think makes up the customer population for these flea markets, auctions and swaps? Anyone in the community can visit one of these locations and carry a potential disease back to a poultry flock. Many of the market locations listed above are located in areas where the commercial industry has a large presence. In heavily-infiltrated poultry areas, there is a good chance that some of the customers will be linked to the commercial industry in some way shape or form. So, the question becomes, where do your workers or your workers’ family members go on the weekends?

Hopefully you are beginning to gain an understanding of the importance of not only your company representatives practicing good biosecurity, but also of taking an active role yourself and educating your employees and family members about keeping your farm biosecure. Companies preach biosecurity for a very good reason. Sure there will be an effort involved to keep your flocks safe, but it is worth it.
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UPCOMING EVENTS

JUNE 8 • GROWER ADVISORY COMMITTEE MEETING
10:00 a.m. at Morgan’s on Main in Collins, MS.

SEPT 7 • GROWER ADVISORY COMMITTEE MEETING
10:00 a.m. at Country Fisherman in Mendenhall, MS.

SEPT 16-19 • MPA 73RD ANNUAL CONVENTION
Hilton Sandestin Golf & Tennis Resort in Destin, FL. See page 5 for details, or call Becky Beard at (601) 932-7560.

DEC • GROWER ADVISORY COMMITTEE MEETING
Morgan’s on Main in Collins, MS. Time to be announced.

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If you want to join the Mississippi Poultry Association as a Grower Member, call the MPA office at 601-932-7560 for more information!