

Washington Pork Producers Newsletter Spring 2007

ELANCO ANIMAL HEALTH ANNOUNCES GIVEWAYS FOR PREMIUM REGISTERED USERS OF THE PORK INFORMATIONAL GATEWAY

Elanco Animal Health, along with **Washington State University Extension** and the U.S. Pork Center of Excellence, are pleased to announce giveaways for premium registered users of the Pork Information Gateway (PIG).

"PIG is a great resource tool for the U.S. Pork Industry and Elanco Animal Health is pleased to sponsor and administer the prizes to registered



premium users of PIG", said Dr. Paul Matzat, Elanco Animal Health.

If Premium Users register for

PIG access between January 1, 2007 and March 15, 2007, they will be entered into a drawing to win an all-expense paid 3-day, 2-night trip for two, to San Antonio, TX. This trip is sponsored by Elanco Animal Health. A second prize will be a 4GB I-pod Nano.

PIG is a virtual library where pork producers can find information in 16 categories related to swine and pork production. The library includes peer-reviewed information from leading swine researchers in 200 fact sheets. PIG also includes a question and answer section. Premium users can log on and search for answers to their pork related questions. If they are unable to find what they are looking for, premium users can also submit a question to be answered by a swine industry expert.

Members of the pork industry are able to log onto <http://wsu.porkgateway.org> and register for a free account. Registration entitles premium users to search PIG for any information that they may need to improve their pork knowledge.

"**Washington State University Extension Swine Team** is excited because we believe that PIG will give the pork producers of Washington State and the Pacific Northwest access to information that they need to be competitive in the pork industry today," said Sarah M. Smith, Area Animal Sciences Educator, Washington State University Extension.

To be eligible for these give-aways individuals need to register for premium access on PIG between January 1, 2007 and March 15, 2007. A PIG premium user is a U.S. Citizen who is involved with the U.S. Pork Industry. For more details on the official rules please visit www.usporkcenter.org.

The U.S. Pork Center of Excellence was established in 2005 as a public/private partnership to bring together academic expertise in research, teaching, and Extension related to pork production. There are two governmental agencies, two industry associations, twelve state pork producer associations and 23 land-grant universities involved in the coalition.

For more information please contact Sarah M. Smith, WSU Extension, at smithsm@wsu.edu or Claire Masker, USPCE, at cmasker@iastate.edu.

US Proposes to Phase Out Some Antibiotics

Bills have been introduced in the US Congress that would phase-out within two years the non-therapeutic use in animal feed of antibiotics that are deemed important to human medicine. They also would require manufacturers to submit information on the amounts of such drugs sold.

The Preservation of Antibiotics for Medical Treatment Act was introduced in the Senate by Edward Kennedy (D-MA) and Senator Olympia Snowe (R-ME). The House version was introduced by Rules Committee Chair, Louise Slaughter (D-NY), the only microbiologist in Congress. Pressure has been growing to discontinue the non-therapeutic use of antibiotics in animal feed citing the growing resistance to the medicines in humans.

The bill also requires the pharmaceutical companies making agricultural antibiotics to submit data on the quantity of drugs they sell, along with information on the claimed purpose and the dosage form of those drugs, to help public health officials track the implementation of the phase-out.

It is said the bill has the support of more than 350 health, agriculture and other groups. It would phase-out within two years the use of antibiotics in animal feed that are also important to human medicine such as penicillin.

Supporters say it still leaves farmers many antibiotics that are not used in human medicine. The bill also authorizes funds to help farmers defray the cost of phasing out the use of medically-important antibiotics.

Similar bills were introduced in previous Congresses but never made it to the floor of the respective Houses, but proponents think they have a better chance this year in a Congress controlled by Democrats.

Adapted from AllAboutFeed.net 02.13.07



This newsletter can be accessed online at www.animalag.wsu.edu

If you would like to receive future newsletters via email please email smithsm@wsu.edu

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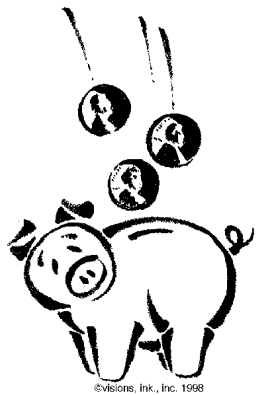
Jason Mann, WSU Dept of Animal Sciences
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USDA Outlook: Feed Grains

Coarse grain supply, use and stocks projections for 2006/07 corn, barley, and oats were largely unchanged from the *World Agricultural Supply and Demand Estimates* published last month. Consequently, the projected farm price for corn was unchanged at \$3.00 to \$3.40 per bushel. The soybean meal price was raised \$10 on both sides to \$180 to \$195 per short ton. The next major mover in grain prices will likely be the March 30 Prospective Plantings report, the first real indicator of how corn acreage will respond to higher prices induced by growth in ethanol production.

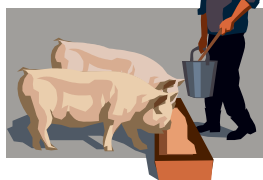
High Feed Cost Considerations

Corn prices hit a ten year high in January of 2007, primarily on the anticipation of high demands for ethanol production. Currently, 107 ethanol plants are operating in the U.S, with another 46 projected to open in 2007. Rising corn prices have also



resulted in higher soybean, wheat and other cereal grain prices as more farmable acres are transferred into corn production and feed grain supplies decrease. High corn prices will be especially tough on hog and poultry producers because these animals typically require corn/cereal grain based diets.

As feed prices continue to rise livestock producers need to find ways to maintain or improve production while keeping feed cost at a reasonable level. First, evaluate feeds based on the nutrients provided and balance diets to make sure you are feeding to the animals' level of production and/or growth and not overfeed any unnecessarily nutrients. Second, reduce feed waste by checking and repairing feed storage containers, covers, and feeders to prevent feed spoilage, rodent/insect damage or animal waste. And third, evaluate the possibility of alternative feeds or production system changes. However, cheap alternative or by-product feeds are not always the most economical solution. We all know that the type and amount of feed greatly impact production levels—you might save \$0.10 per pound on grain, but lose more than \$0.10 in decreased production or in the purchase of supplementation to support the alternative feed. Producers should also consider changing the way they manage their animals to improve efficiency and/or productions, such as; cull low or non producing animals, implement an effective herd health or genetic selection program to improve the number of animals or pounds of animals to market, or attempt to establish alternative marketing strategies. S. M. Smith



Summary of Feeding Wheat To Swine

1. Wheat may be used as a partial or sole grain source in diets for all classes of swine.
2. Diets containing wheat should be balanced for lysine instead of crude protein. Wheat-soybean meal diets will be higher in crude protein content than comparable corn-soybean meal diets.
3. Wheat contains more lysine than corn, thus those producers who mix their own diets using a soybean meal-premix program can save 50 lb of soybean meal (44%) per ton of mixed diet.

4. Those producers who mix their own diets using a complete protein-vitamin-mineral supplement should replace corn with wheat on a pound for pound basis.
 5. Wheat should be coarsely ground or rolled for use in swine diets.
 6. Wheat is worth up to 5% more than corn on an equal weight basis for those who can take advantage of wheat's higher lysine content
- By R. O. Myer, W. R. Walker, and R. D. Barnett, University of Florida

Summary of Feeding Peas To Swine

1. Peas are a good feed for growing-finishing pigs from 50 pounds to market weight. The peas can be fed either as a protein supplement or for pigs over 75 pounds as nearly the entire ration.
 2. Sows, gilts, and young pigs under 50 pounds don't do well on high-pea diets. For sows and gilts use peas only as a protein supplement. For pigs under 50 pounds, use peas as only part of the protein supplement.
 3. Peas need to be supplemented with selenium or with vitamin E. Selenium can be legally added to swine rations and costs less than vitamin E. Rations for pigs under 125 pounds should also have methionine added, especially if peas are the only protein supplement.
 4. Peas should only be used as part of the protein supplement in starter and grower rations.
 5. Don't use pea screenings in place of cull peas. Pea screenings are much lower in protein than cull peas and cannot be used in the same way.
- By Dr. J. A. Froseth, **WSU Extension Bulletin 1738**



By-Products in Swine Diets

Feed cost comprise approximately 65-70% of the cost of pork production. While most US producers think of strictly corn and soybean meal (SBM) when feeding pigs, they need to realize that pigs require amino acids, energy, vitamins and minerals, and not any particular feedstuff for normal growth. In most regions of the US, a corn-SBM combination is usually the least expensive ingredient combination that meets the pig's nutrient requirements. However, in times of higher corn and SBM prices or regions of the US that are removed from the Corn Belt, producers need to look at alternative feedstuffs in order to keep diet cost down. There are at least six questions you should ask when considering alternative

feeds:

- 1) Are there animal and human health hazards associated with the by-product?
- 2) Is the nutrient composition suited to swine feeding?
- 3) Are there added costs of utilizing the by-products?
- 4) Who is in charge of quality control, and how much will that cost in time and money?
- 5) Do by-products reduce the cost of production most of the time?
- 6) Is by-product availability and quality sufficiently consistent to support longtime use?

From *"By-Product in Swine Diets"* by B. Thaler and P. J. Holden, **Pork Information Gateway factsheet 07-06-01**. For more information concerning using alternative feeds in swine diets read the complete factsheet on the Pork Information Gateway at <http://wsu.porkgateway.org>

Washington State Department of Agriculture Encouraging All Livestock Producers to Register Premise Identification.

The Washington Department of Agriculture (WSDA) is encouraging all livestock producers, including small farms and youth producers (4-H/FFA members), to register their premise as part of the *voluntary* National Animal Identification System (NAIS). This program includes cattle, bison, alpaca, llama, goats, horses, sheep, swine, chickens, ducks, emu, geese, guineas, pheasants, quail, and turkey owners. The primary purpose of NAIS is to be able to quickly locate and/or trace animal movement within 48 hours of an agro-terrorism event or devastating foreign animal disease outbreak, such as foot and mouth disease. These animal disease



outbreaks could quickly cripple the infrastructure of the United States because the economy of this nation is based on agriculture.

Registering your premise is as simple as listing the farm's address, contact person, checking the kinds of livestock and listing the contact information. You can do it either by filling out a form and mailing it to WSDA or registering directly on-line at http://agr.wa.gov/FoodAnimal/Animal_Premise/default.htm. It is important to protect your animals, livelihood, and the health and safety of America's animal agriculture. For more information on premise identification contact the WSDA office at 360.725.5493 or nais@agr.wa.gov. S. M. Smith

Washington Pork Producers Organization Votes To Support National Animal Identification System

Members in attendance at the 2007 Washington Pork Producers annual meeting held on February 2 at the Red Lion in Pasco voted unanimously to support the National Animal Identification System to help protect Washington swine producers in the event of a animal disease outbreak.

UC Davis School of Veterinary Conducting Foot-And-Mouth Survey

The Center for Animal Disease Modeling and Surveillance (CADMS) at the UC Davis School of Veterinary Medicine is developing a simulation model to predict the spread of foot-and-mouth disease (FMD) in the event of an outbreak in the United States, and they are asking for assistance from livestock producers across the U.S.

The goal of the project is to be able to identify the best strategies that would minimize the impact and the cost to the livestock industry of a FMD epidemic through use of computer models. They are gathering data in two areas: animal movement and premise location.

Producers who would like to participate in the survey can go to www.cadms.ucdavis.com or contact Pelayo Alvarez at 503.554.2988. All information will be kept confidential and will only be used for modeling purposes.

Pork Industry Announces Push On Premises Registration

The National Pork Producers Council and the National Pork Board have initiated a year-long push to get a 100 percent registration rate of all pork production premises by December 31. The effort is in conjunction with USDA's National Animal Identification System. NPB has hired regional swine-identification coordinators to work with state pork producer associations and ID coordinators to encourage producers to register their premises.

About 40 percent of swine premises are already registered. The new push is being made possible through a cooperative agreement between USDA and NPB.

Washington State Department of Agriculture Proposing to Amend Animal Service Regulations

The Washington State Department of Agriculture (WSDA) is proposing to amend chapters of the Washington Administrative Code (WC) that pertain to animal importation (chapter 16-54 WAC), livestock inspection (chapter 16-610 WAC), and reporting animal diseases (chapter 16-70 WAC). In addition, the department is also proposing to establish rules pertaining to the disposal of livestock that have died from disease or unknown causes (chapter 16-25 WAC).

The ruling making documents and draft language for each of the proposals can be viewed or downloaded at <http://agr.wa.gov/LawsRules/Rulemaking/RulemakingActivity.htm>. Public hearings to receive oral or written comments on the proposed rules have been scheduled for March 13 at the Holiday Inn Express, Spokane Valley; March 14 at the Ellensburg Inn, Ellensburg; and March 15 at the Best Western Tulalip Inn in Marysville. Written comments may also be emailed to WSDARulesComments@agr.wa.gov or faxed to 360.902.2092, until close of business on March 15. Written comments can also be mailed by the above deadline to WSDA, Attn: Teresa Norman, 1111 Washington St., Olympia, 98504.

The Washington State Department of Agriculture encourages all interested parties to review the proposed rule change and make comments via email, fax or mail. Additional questions can be directed to Teresa Norman, Administrative Regulations, at 360.902.2043 or TNorman@agr.wa.gov.



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NEWS FROM WSU . . .

Pacific Northwest Pork Market: Challenges and Opportunities

Recently, Jan Busboom and Jason Mann of the Department of Animal Sciences at Washington State University visited several Pacific Northwest meat processors. These visits were the result of discussions between Jan, Jason and members of the Washington Pork Producers Association and were an effort to obtain information regarding the quality and acceptability of Washington hogs to regional meat processors. A number of questions were posed to officials at these meat processors, including Masami Foods, Inc. and Carlton Farms, who are responsible for processing the majority of hogs produced in Washington state. The most important questions and answers are outlined below.

- **How many hogs do you process each week and how long are they held before slaughter?**

Each processor slaughters around 1600 animals each week. Washington hogs accounted for 25-30% of total volume. The majority of the remainder comes from Canada. Masami Foods holds hogs for 2 to 3 days prior to slaughter, while Carlton Farms routinely slaughters animals immediately following receiving.

- **What are your ideal animal and carcass attributes?**

Masami Foods prefers live animals of 240 to 270 lb that yield 140-179 lb carcasses. Lean quality is very important and the ideal loin eye will be heavily marbled, have a firm texture and a moderate color. Yield is a lesser concern, but backfat levels of 0.8 inch or more are preferred.

Carlton Farms wants animals that will yield a 160-180 lb carcass. Yield is a concern and ideally carcasses will have 0.5 to 1 in of backfat and a loin eye area of 5 to 6 square inches. Lean quality preferences are essentially the same as those for Masami Foods.

- **What genetics do you prefer?**

Ultimately, any genetics producing carcasses with the attributes outlined above are acceptable. Masami Foods has found that the combination of Peak Genetics Trailblazer Boars and F1 sows produces high quality carcasses.

- **Are carcass defects a concern?**

Pork quality assurance programs appear to be functioning as intended in Washington state. Neither processor felt that producer-related defects, such as injection site blemishes, were currently of concern. However, lean color has been an issue at each plant.

- **How does the quality of Washington hogs compare to other sources?**

The packers indicated that the quality of carcasses from Washington hogs was not as consistent as that of other sources. Washington hogs, while often leaner than their Canadian counterparts, were more inconsistent and had lesser lean quality, especially regarding marbling and color.

- **What are some advantages and disadvantages of Washington hogs?**

As stated previously, the main drawback of Washington hogs is inconsistency and insufficient quality. Advantages include reduced shipping costs and local sourcing which allows for the development of Pacific Northwest branded pork.

Results of our discussions with regional processors were eye opening to say the least. While there appears to be a significant problem with quality and consistency, our heightened awareness of the issue will allow us to address the problems in a constructive manner. The advantages of less

expensive shipping and local sourcing (for marketing) are very strong and are likely keeping the Washington hog in demand despite quality issues. However, it is clear that quality and consistency must improve if the current market share is to be maintained. The results of this and upcoming studies should be used not only to maintain your current position but also to strengthen it and ultimately to increase your market share.

Additional information regarding our survey of Pacific Northwest pork processors can be obtained by contacting Jan Busboom at (509) 335-2880 or Jason Mann at (509) 335-6192.

By J. Mann and J. R. Busboom

Dr. Everett Martin Retires

Dr. Everett Martin from Washington State University Department of Animal Sciences retired this past spring after 36 years of continuous service.



Dr. Martin taught a number of courses at WSU ranging from Introductory Animal Science to Master's Research. His featured

courses were AS 260, Live Animal and Carcass Evaluation, and AS 360 Meat Science. He devoted over 25 years to coaching the Meat Judging Team and the Live Animal-Carcass Evaluation Judging Team and is especially pleased with the contributions former students are making in the livestock industry and academia. He served the youth of the state by conducting the state FFA Career Development Event (contest) from 1971-2006. A major assignment at WSU included faculty supervision of the Meat Science Laboratory. His research activities focused on several factors that influence the composition and quality of meat. Everett is proud of the continuing contributions that his former graduate students are making to the industry.

Dr. Martin was rewarded for his teaching and interest in students with all the major teaching awards from the college and university: R.M. Wade Foundation for excellence in teaching, 1975; Washington State University Alumni Association award for undergraduate advising, 1987; Western Section of the American Society of Animal Science Distinguished Teacher Award, 1989; and the Washington State University-President's Faculty Excellence Award for Teaching, 1991. His service to the department, college and university include many committee assignments to numerous to list. He is especially proud of his committee work in connection with undergraduate scholarships. Since 1981 he served as a faculty-advisor to the WSU Chapter of Alpha Zeta.

Everett and his "First-Lady" Gloria have two children, son Mark (daughter-in-law Lisa) and daughter Erin (son-in-law James) and three wonderful grandchildren: Mackenzie, Timothy and Jason. Everett and Gloria plan to stay in Pullman for the foreseeable future. Everett stays busy in retirement, among other things, with his antique John Deere tractors and his volunteer work with the Lewis-Clark Antique Power Club.

A retirement party for Dr. Martin will be held April 14th at the Clarkston Golf and Country Club in Clarkston, Washington. The cost is \$20 per person in advance. An E.L. Martin Scholarship Fund has been organized and donations are being accepted. For more information contact Dr. Mike Dodson at 509.335.9644 or by email at dodson@wsu.edu.

CONSIDERATIONS FOR YOUTH SWINE PROJECT FACILITIES

There is no one "right" facility for raising your pigs. The important factors to consider are:

- Will the facility protect your pig from the weather?
- Is it affordable?
- Is it easily cleaned and disinfected?

An animal that is not stressed by its environment (too hot or too cold) grows better and tends to be healthier. The primary goal is to provide an environment that allows the animal to fulfill its genetic potential to the greatest extent. In Texas, heat stress is a concern. Shade is extremely important, especially for white pigs that sunburn. Fans, misters and common sense can provide your pig with a suitable environment. Facilities do not have to cost a lot of money. For example, you can make a mister by poking small holes in a garden hose. In Texas, misters are not generally required during the winter. In fact, exhibitors should be cautious because pigs will not gain weight as well when they are cold and wet and may also be more susceptible to illness.

The pen should be long and rectangular in shape and open to the south, out of the north wind. In most situations, animals need access to a covered or enclosed area as well as an outside pen. Most pens have more than enough space, many being at least 6 feet wide and 12 feet long, although this varies a

great deal. The more space you have, the more pigs you can put into the pen. Some type of bedding (straw, sand, shavings) should be used to keep the pigs warm, especially during the winter. It also helps keep them cleaner.

The flooring of a pen can be dirt, sand, wood or concrete. There are advantages to each. Dirt and sand are the cheapest and the easiest on the feet and legs of an animal, but it is impossible to completely remove microorganisms from such floors. To reduce pathogens from one year to the next, till the soil and expose it to sunlight for at least 3 days. Then you can put a new group of animals into the pen.

Concrete is the most expensive flooring and the hardest on the feet and legs of a pig. However, it is the easiest to clean and disinfect. A combination of sand and concrete is often used to get the advantages of both. Concrete laid in a portion of the pen, such as around the waterer, prevents mud holes from forming. Or you might lay sand on top of a concrete floor to ease the stress on an animal's joints. After animals are gone, remove the sand, disinfect the concrete, and lay new sand before the next group of animals arrives.

Adapted from Jodi Sterle, Associate Professor and Extension Swine Specialist, Texas Cooperative Extension/ Texas A&M University System



2007 4-H/FFA FEEDER PIG SALE

Washington State University is sponsoring two feeder pig sales for 4-H and FFA members this year. Approximately 200 pigs will be available from the WSU Swine Center for each sale. **The first sale** will be at the Kittitas County Fairgrounds in Ellensburg on April 14th beginning at 11:00 am. These pigs will be of the right age and weight for July and August shows. **The second sale** is set for May 12th at the WSU Swine Center beginning at 9:30 am. These pigs will be of the right age and weight for September shows.

Both sales events will begin with an educational program about health, management, selection, and feeding project pigs. All youth and adults are encouraged to attend even if they are not purchasing animals.

Terms of sales: Pigs will be limited to 2 per youth. Each youth will be expected to select his/her pig(s). Parents/advisors/leaders/ other adults will not be allowed to help directly at the time of selection. We will supply enough help to assist the youth. The youth that will be showing the pig must be present to do the selection. Youth not present at the time of selection will be allotted the pigs left after all other selections have been made. For the April sale, the pigs will be penned by size and youth will select pigs of a size most appropriate for their show (July or August). Pigs brought to the sale CANNOT be returned to WSU. Pigs purchased but not claimed will be sold in the name of the youth who ordered and paid for them. There will be no refunds from WSU for unclaimed pigs.

Selection order for both spring sales will be determined by a lottery drawing. Those purchasing 2 pigs will not be allowed to choose the second pig until all youth have received their first pig. Separate colored cards will be filled out for those purchasing 2 pigs. No group purchases or gate cuts will be allowed. This process is fair to everyone and encourages greater pride of ownership for the youth upon selection of their own animal(s). Pigs will be 7-9 weeks old at sale time and average 35-60 lbs each. For July shows, they will be larger. They will be sold for \$85 (August shows) and \$90 (July shows) each at Ellensburg and \$85 at Pullman. Prices are reflective of the current market. Only checks/money orders, made out to "WSU Controller", will be accepted, no cash sales. Individual checks/money orders will need to be written for each youth or family. Payment must be received 2 days prior to the sale. If payment is not received by the deadlines of April 12th and May 10th, you will not get a pig. Payment must be accompanied by the order form. Only one order form is necessary for each family, but group forms are not acceptable. Each and every youth purchasing a pig must be listed by name on the order form. Please call or e-mail for information on pig availability. Phone orders will not be accepted. You are not guaranteed a pig until your payment and order form are received. Completed orders will be done on a first come first serve basis. It is encouraged to get your order forms and payment in early. If order form and payment are received after all pigs have been reserved, your check will be returned to you promptly so that you may find another source for pigs.

For the sales at the WSU Swine Center, we ask that you respect our biosecurity measures. We reserve the right to refuse sales to anyone entering the premises with a dirty/contaminated truck or trailer. Please be sure that all manure is removed. For animal care issues, we also refuse the right to refuse sales to anyone without adequate hauling devices. Think about the welfare of the pig and make accommodations for weather.

Contact information: For more information please contact the WSU Swine Center at (509) 335-2287 and ask for Ace or send an e-mail to attimm@wsu.edu.

Largest North American Pork Producers Phasing Out Gestation Stalls

Last month both Smithfield Food, largest pork producer in the U.S., and Maple Leaf, Canada's largest pork producer, announced plans to phase out sow gestation stalls over the next ten years. There is no conclusive scientific evidence that one type of system is better suited to herd health or an animal's welfare, however gestation stalls have drawn criticism from animal right groups. Both Arizona and Florida voters passed measures to ban the use of gestation stalls, and California swine producers are being sued over their use. In Europe, gestation stalls are to be eliminated from all swine production units by January 1, 2013

Hoop Structures: Key to Success

Like all undertakings, investing in hoop structures requires careful consideration of several critical factors. Research, as well as common sense, dictate the following keys for success in mangaging hoop structures.

Management Keys for Success in Hoop Structures:

- **Bedding, bedding, and more bedding.** Dry bedding is the main key to success. Finishing of pigs in hoops requires an average of approximately 200 lbs of corn stalk bedding per finished pig, with more in winter and less in summer. About 1 ton of bedding per year per gestating sow space is required.
- **Keen observation.** Finding sick pigs in a group of 150 to 200 is a challenge. Walking through the pigs and watching them for warning signs is important daily routine.
- **Start-up after construction.** Placing pigs in hoops once the ground has frozen can result in mortalities from piling and slow growth due to thermal discomfort. Place bedding on the ground to prevent freezing, even if it means bedding weeks in advance of pig placement.
- **Handling facilities.** Sorting pigs for sale or treatment from a group of 150 to 200 is a challenge and generally requires more than one person. Give forethought to how sorting will occur.
- **Water.** Waterers need to be frost-free. Additional waterers may be needed in the summer.
- **Feeder space.** Traditional recommendations are 1 feeder hole per 4 or 5 pigs. Observations

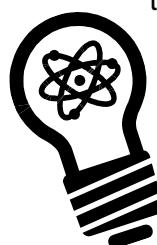
indicate that this may be increased to 5 or 6 pigs per space. Pig observations will dictate the proper level.

- **Fresh air.** Hoop structures are naturally ventilated, unheated facilities. Closing the ends too tightly during winter will result in high humidity and poorer air quality. General practice in Iowa is to close the north end during the winter, leaving the south end open. During the summer, both ends are open for maximum air flow.

From: *Iowa State University of Science and Technology: Hoop Structures for Swine—*
http://www3.abe.iastate.edu/hoop_structures/swine/index.html

Light Up Energy Savings

Energy cost are high, but large savings are hard to come by. Instead, it's the seemingly little things that you chip away at the eventually add up. One such



example, accordingly to Jay Harmon, Iowa State University agriculture engineer, can be found in your light bulb use.

Here's a comparison between typical incandescent light bulbs and compact fluorescents.

| Incandescent | Compact Fluorescent |
|---------------------|---------------------|
| 75 watts | 18 watts |
| 1,065 lumens | 1,299 lumens |
| 750-hour life | 10,000-hour life |
| \$0.38 initial cost | \$6.77 initial cost |

Suppose the lights are operations for 8 hours per day all year long (2,920 hours)

| | |
|--|--------------------------------------|
| 219 kilowatt hours or \$15.33 per year | 53 kilowatt hours or \$3.68 per year |
| Need 3.89 bulbs per year = \$1.48 | Need 0.29 bulbs per year = \$1.98 |
| Total Cost = \$16.81 | Total Cost = \$5.66 |

Think about how many lights bulbs you have in service, and you can see how the savings can add up. From *Pork*, Feb. 2007