

Washington Pork Producers *Newsletter* May 2006

DR. JOHN FROSETH RETIREMENT ANNOUNCEMENT

Dr. John Froseth, the WSU Extension Swine Specialist, has announced his retirement which will be effective as of June 30, 2006. He has been with WSU since he began his tenure in the autumn of 1969. During his nearly 37 years with WSU, he has gained the respect of pork producers, educators, industry leaders and those involved with 4-H/FFA for his practical knowledge and understanding of the pork industry. His work with diet formulation utilizing cull peas and Northwest barley cultivars has provided an incalculable economic benefit to pork producers in the Pacific Northwest. He was recently described by Randy Baldree, the WSU Southeast District Extension Director, as a "highly motivated teacher and a very effective extension specialist." Dr. Froseth will be missed by many—especially the Washington State Pork Producers. We would like to thank him for all his support and send him forth with warm wishes as he enters the fresh green pastures of retirement.

The Animal Sciences department would like to invite you to a "Retirement Reception" for Dr. John Froseth who has given 36+ years of outstanding dedication and service to the Animal Sciences Department. A reception will be held on Thursday, June 15 from 9:30 - 11:00 am in Clark 122.

If you would like to send letters or cards of good wishes, please send them to **Jaimie Dahl, Dept. of Animal Sciences, WSU, P.O. Box 646310, Pullman, WA 99164-6310** or E-mail: jaimie@wsu.edu. Please join us for this special occasion and wish him well.

PIG WASTING DISEASE

Post-Weaning Multisystemic Wasting Syndrome (PMWS) has severely affected pork production in the United Kingdom, Ontario, Canada, and parts of the United States.

Pigs affected with this syndrome waste away starting as early as six to eight weeks of age with the most common time the disease strikes being two to four weeks after the pigs are placed in the finisher barn. The common findings for this disease include the presence of circovirus, enlarged lymph nodes with a depletion of lymphoid tissue, and secondary disease pathogens that impact the effect of circovirus, which ultimately results in PMWS. Porcine Reproductive and Respiratory Syndrome (PRRS) virus, mycoplasma, and swine influenza virus are the most common pathogens that are found to initiate PMWS when circovirus is circulating in the herd.

The primary clinical signs of this syndrome are weight loss or emaciation, unthriftiness, and jaundice. Enlarged inguinal lymph nodes can also be observed. Ten to fifteen percent mortality rates as well as five to ten percent poor-doing pigs are being reported from this disease.

Common necropsy findings in these pigs with poor body condition include icterus in some of the cases, all lymph nodes being enlarged three to four

times normal size, and lungs that are also co-infected with PRRS virus, mycoplasma, or swine influenza virus. The liver and kidneys can also show signs. Diagnosis of this disease is through histological examination and demonstration of the PCV2 antigen.

Management practices utilized to attempt to control this disease center around minimizing all stressors and controlling the other pathogens that are involved. Specific steps that can be taken include:

- Obtaining accurate diagnostic workups to determine what diseases are impacting the occurrence of PMWS;
- Implementing strategies to effectively control concurrent diseases such as PRRS and mycoplasma in an attempt to develop herd immunity.
- Administering appropriate vaccinations against concurrent diseases and appropriate timing of those vaccines.
- Conducting strict all-in/all-out pig flow;
- Administration of strategic pulse medication of antibiotics at treatment levels; and
- Practicing excellent hygiene utilizing disinfectants known to kill circovirus.

Since there is no specific treatment for this disease, it is important that PMWS be added to the list of diseases when obtaining the herd health history of a possible source farm. There currently is no commercial vaccine available for this disease in the United States, but reports out of Europe have been promising.

Producers with herds that have not exhibited any signs of the disease should work with their veterinarian to develop a biosecurity plan to aid in maintaining herd health. A producer observing signs of PMWS in his herd should work with a local veterinarian to develop a plan to decrease the impact of this disease.

By: *Larry Firkins, DVM, MS, MBA*

*Swine Veterinary Extension Specialist
University of Illinois College of Veterinary
Medicine*

If you have sick or dying pigs please see article on page three concerning state funding for disease surveillance.

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2006 PORK FORUM UPDATE

On March 2-4, Scot Cocking and I attended the National Pork Forum in Kansas City, Mo. The Forum began with an industry update session. Some of the topics included the National Animal Identification System (NAIS), environmental policy, and the ownership of "The Other White Meat." The National Pork Board (NPB) and National Pork Producers Council (NPPC) signed an agreement for NPB to purchase full ownership of the trademark. NPPC created the slogan in 1985 and the NPB has been licensing the rights to it for \$800,000 annually as part of the pork promotional efforts directed by checkoff. Under the new agreement NPB will make annual payments of \$3 million to NPPC for 20 years, including 6.5% interest. This not only protects the investment of modifying the logo by NPB, but also helps to fund the many endeavors of the NPPC and gives pork producers ownership of the trademark.

During the delegate session for the NPB, there were only a few resolutions brought to the delegate body. These included requesting that NPB continue the many programs that are already in place, and take part in educating and informing people about the importance of the NAIS. This year marks the 20th anniversary of the Pork Act. The theme for this year was "20 Years of Progress." There were presentations reviewing the industry, marketing programs, and pork export markets from the last two decades. Pork export markets had another record breaking year.

During the Delegate session for the NPPC, the resolutions brought to the delegate body included requesting that the NPPC aid in getting everyone on board the NAIS, make a request to Mike Johanns to get an express lane at the Canadian border crossings so that livestock are not subject to waiting in line behind the general public (this was proposed from an animal welfare perspective during hot or cold weather), help direct congress in writing the 2007 Farm Bill to protect pork producers, increase funding for APHIS to help with present day health needs in the industry, help to support a competitive market, continue to seek reauthorization of mandatory price reporting, and support the permanent addition of pork and pork variety meats to the weekly export/sales report released by USDA. Oregon Pork Producers proposed a resolution to have the first \$1000 of Strategic Investment Planning (SIP) money returned to the states. This money will hopefully allow the smaller swine producing states to be able to send a representative to Washington D.C. for lobbying purposes. The theme for this year was Prepare, Protect, Succeed. This is a reflection of the progress that NPPC and state organizations have made and the need to proactively engage in the future.

On Saturday morning the Secretary of Agriculture, Mike Johanns, blessed us with his presence. He lead an informal discussion with topics including the Farm Bill and world trade. He made a few statements then opened the floor for questions. He ensured the delegate body that he will do his best to help protect the pork producers in the writing of the new Farm Bill and that he will continue to help improve the export markets.

In summary, it became obvious what issues pork producers are most concerned with, the 2007 Farm Bill, exports, animal id, and animal welfare. Many of the pork producers are on the same page and we are all working toward the same goals. This became very evident during the discussions on the resolutions. In the past, many producers had different philosophies and there was alot to debate.

This year there was little debate and most resolutions proposed were passed unanimously. By Preparing, Protecting and Succeeding, the next 20 years of progress will be an adventure. *T. Tassell*

STATE FUNDING AVAILABLE FOR SWINE HEALTH SURVEILLANCE

The Washington State Department of Agriculture (WSDA) has received funding for a one year Swine Health Program, which began September 2005 and will go through September 24, 2006. The objective of the program is to prevent the introduction of foreign animal disease through surveillance and management of swine health concerns. WSDA plans to accomplish this by working with swine producers, veterinarians, county extension agents, industry groups and organizations through education, disease surveillance, improvement of swine identification and education and licensing of garbage feeders.

The swine disease surveillance-testing plan includes a monetary incentive to be offered to swine producers and large animal veterinarians to notify state or federal field staff of sick or dead swine. A determination will be made as to what samples will be submitted to the Washington Animal Disease Diagnostic Laboratory (WADDL). Samples may include, but are not limited to, serum, slaughter tissue, biopsies and blood samples. The plan allows for covering the cost of necropsy, testing and staff time for swine tested at WADDL. For sample collection and submission procedures or other additional information, please contact the State Veterinarian Office at 360.902.1878. If you have sick or dieing pigs, this program will provide you funding to help identify the cause. *S. M. Smith*

INTRODUCING THE NEW WSU ANIMAL SCIENCE/EXTENSION SPECIALIST

Washington State University Extension and Department of Animal Science are excited to announce the appointment of Dr. Jason Mann, Assistant Meat Scientist and Extension Meat Specialist. Mann is completing his PhD degree in Animal Science in the Department of Animal and Food Sciences with a minor in Microbiology at Texas Tech University. He received his Bachelor of Science degree in Animal Science from the University of Illinois in 1998 and his Master of Science degree in Animal Science from the University of Nebraska in 2001. He has been employed as a food safety specialist at the University of Nebraska and as a research associate at Texas Tech University. Research endeavors have included pre-harvest food safety and validation of modern meat production practices to determine their ability to produce microbiologically safe finished products.

EXTENSION OUTREACH SPECIALIST POSITION

The Agricultural Animal Health Program (AAHP) of the WSU College of Veterinary Medicine is in the process of hiring a Veterinary Extension Outreach Specialist. This new position follows the AAHP's mission "to enhance the wellbeing of agricultural animals and wholesomeness of food animal products through integrated disease diagnosis, field investigation and research." The individual selected for this position will provide current science-based information regarding animal disease management/prevention, food safety, biosecurity measures, federal and state regulations, as well as promote multi-state and regional educational agendas concerning the health of animals and the public.

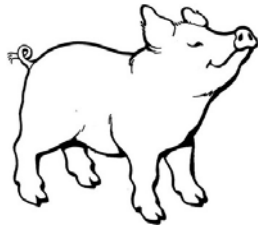
This newsletter can be accessed online at www.animalag.wsu.edu If you would like to receive future newsletters via email please email smithsm@wsu.edu

WASHINGTON PORK PRODUCERS POLICY FOR SUPPORTING FAIRS & SHOWS

Washington Pork Producers would like to continue our efforts in supporting local fairs, 4-H, and FFA shows. We would like to offer some guidelines for projects and events that Washington Pork Producers would be willing to support. At this time, we would like to focus on education and objective measures of skills or economically important pork production. We feel fairs and shows provide an excellent opportunity to educate the general public about pork production in Washington and the United States. 4-H and FFA swine projects offer students an excellent opportunity to learn animal husbandry skills, responsibility, and record keeping—all talents vital to today's commercial pork producer.

We would be happy to help purchase educational and/or promotional materials from the National Pork Producers Council to be handed out to fairgoers.

The amount of money available for such purchases will be in direct proportion to the gate count at your fair or event. We also highly encourage booths that provide free material to be continually manned to help decrease the waste of pamphlets. If you are submitting a request for the purchase of educational material, please first contact your local fair to report the typical gate count.



Regarding 4-H, FFA, and other youth events, we would like to encourage programs that emphasize the knowledge and skills necessary to be successful in commercial pork production. We would be happy to support such events as carcass or rate of gain contests that showcase economically important traits in today's pork industry. We will not be supporting awards for class winners, Grand, or Reserve Champion conformation pigs. Pork producers recognize the importance of education as well as public speaking and would be interested in sponsoring contests such as "Best Pork/Swine Demonstration" or "Best Pork/Swine Educational Poster". Similar to educational materials, the amount of funding available will be in proportion to the number of hogs exhibited at your event. Again, prior to contacting WPP, please contact your fair officials to obtain a head count.

Monies used to support activities are the result of mandatory Pork Checkoff payments. These funds are collected from all individuals selling pigs in the United States. Money is used for consumer and producer education as well as research to further our industry. One of the Checkoff funded programs is PQA (Pork Quality Assurance). This program educates producers (including 4-H and FFA members) about procedures to ensure proper swine care and that a safe and wholesome pork product reaches the consumer. Prior to requesting funds, we are asking you to verify that Checkoff fees are properly collected at the sale associated with your show or fair.

In order for our group to review requests, applications need to be received at least sixty (60) days prior to your event. Forms can be obtained by contacting Sarah Smith at smithsm@wsu.edu.

J. Sackmann

2006 SWINE INFORMATION DAY—OVER 90 PARTICIPANTS

Dr. Ron Anderson, a fisheries biologist with Bio-Oregon Inc., spoke on the value of fish protein concentrate. The following speaker was Dr. Ruth Newberry who shared her research focusing on the importance of environmental enrichment and its health benefits for swine of all ages. After a brief break, state veterinarian, Dr. Kohrs, spoke about the National Premise ID Program. He was followed by a representative from the National Pork Board who updated us on current Pork Checkoff programs. The pork carnita that was served at lunch was absolutely delectable. The afternoon session started with Dr. Busboom's presentation on meat quality and Symbol III. Carlton Meats donated the meat cuts for this pork lab. This made it possible for everyone to see firsthand the differences in ideal, acceptable and unacceptable meat quality factors instead of just looking at pictures. Following the meat lab, Dr. Froseth discussed the importance and the effects of environmental temperature on overall swine performance. Following the afternoon break, again Dr. Froseth took to the front to speak to us all about the risks of Mycotoxins and how potentially serious they could be. Dr. Perry Stanfield wrapped up the day when he spoke on the importance of creating a proper vaccination routine to limit the risk of disease.

The seminar was a marvelous experience and a great learning opportunity for all in attendance. If you were unable to attend this year, please seriously consider coming next year. For those of you who were participants this year, please join us next time. If there are any topics you would like to see included in following years, please let us know by emailing Sarah Smith at smithsm@wsu.edu. C. Russo

IMPORTANT NOTICE

Attention all 4-H leaders, FFA Advisors, Sale Committees and Extension Educators all those who are involved in youth livestock auctions.

Washington State youth need to pay their Pork Checkoff on any pigs they sell through youth or 4-H/FFA auctions. Many youth programs are supported by the Pork Checkoff program to insure that American food remains safe and of the highest quality.

All pigs being sold through youth and 4-H/FFA livestock sales must pay the Pork Checkoff which is based on the auction value of the pig not the turn price. For example, if a pig is bought for \$3.00 a pound and then turned back to the packer for \$0.80, the Checkoff is paid for the \$3.00 a pound as opposed to the \$0.80. These funds are to be collected by the sale committee and remitted to the National Pork Board.

If you have further questions concerning the Pork-Checkoff or remittance of funds from fair animals please contact Lynette Webster, National Pork Board, at 1.866.701.6388 and ask for the Check-off Collection Department (ext. 2620). You may also access information additional information at <http://www.pork.org/NewsAndInformation/docs/checkoffremittanceinstr2002.pdf>.



INTERESTED IN A GREAT OPPORTUNITY?

Nicole Boettger from the National Pork Board has asked for ten grillers to cook pork products at Oregon's Portland Rose Festival and Parade June 7-11, 2006. Anyone interested in this opportunity to support the pork industry as well as mingle with producers from other states please contact Nicole Boettger at the National Pork Board 1-800-456-PORK

PREPARATION AND MANAGEMENT PRACTICES FOR YOUR PROJECT PIG

Preparations for your project pig should begin long before you bring it home. Begin by becoming familiar with the rules of the show in which your pig will be exhibited. These rules vary from show to show and may change each year, so contact the show management for current information. Factors such as weight limits and ear tagging dates will influence when and what type of pig you purchase.

Project pigs are often in short supply, and you may need to make purchase arrangements months in advance of the actual date you pick up your pig. Check with your leader, WSU Extension educator or others for possible project pig sources. Buying animals from a farm or single source has some advantages. These animals are generally not exposed to other pigs from which they could pick up diseases. Also, the producer can give more attention to you as a customer, offering suggestions about feeding and raising your animal.

Regardless of whether you buy your pig at a special feeder pig sale or directly from a farm, there are a number of things you need to know: time of the sale and driving directions to the sale or farm; cost (approximate cost or pre-set price); preferred method of payment (cash, check or money order); etc. Make sure you arrive on time. Be respectful of the producers' time, facilities and animals. Producers have taken time out of their busy schedule to sort and pen some of their better animals for your selection. Be courteous, keep any negative comments to yourself and always be sure to thank the producer before you leave. For biosecurity reasons, some producers prefer that you not enter their facilities to select your own pig. In this case, just make sure that the seller is aware of the size and type of pig you want, and then trust him/her to pick the best available animal for you at that time.

A critical factor is the preparation of your swine facilities. Elaborate facilities are not essential for a successful project, but you do need to provide the proper environment to ensure your pig stays healthy and grows well. The determining factors are both the size of the pig and the environmental temperatures. Many project pigs are purchased when they are between 30 to 50 pounds. The comfort zone for these young animals is 70 to 85°F, and they can easily suffer chilling that can impact their health and growth performance. Therefore, it is critical to consider the effective temperature when preparing the facilities and transporting these pigs home, particularly when night-time temperatures drop well below their comfort zone.* In the winter and spring it is important to provide an insulated area in the facility that is draft-free, with deep, dry straw bedding and possibly zone heating for young feeder pigs. As the pigs grow and their comfort zone drops to 60-75°F, it becomes critical to provide shade and cooling for animal performance (gain) during hot summer months.

Another major stress that can occur when you bring your pig home comes from a change in feed. To minimize this stress, find out what type of feed the pig has been receiving and either purchase a 2 to 4 day supply from the producer or their supplier. Then make any changes to a new feed over several days. Young feeder pigs will often scour because of the multiple stressors that occur at the change of ownership. Therefore, you should consider the administration of antibiotics (injectable or in the feed or water) for the first few days after you bring them home.



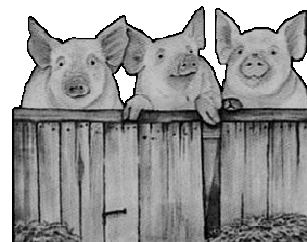
Regardless of how you transport your pigs, make sure the vehicle or carrier is free of sharp edges and is appropriate for the weather and temperature. Clean, straw-bedded dog carriers can be appropriate for small feeder pigs. During cool and/or wet weather, drafts should be minimized and protection provided from the damp and cold. Thick straw bedding is appropriate in cool or cold weather. If you are transporting young pigs in a pickup, make sure the bed is covered and the sides are solid to minimize drafts. Allow for some air exchange. Shade and wet shavings are appropriate for older pigs or market hogs during transport in hot weather. Also observe good biosecurity practices by thoroughly cleaning your vehicle before you go to pick up your animals. At least 24-48 hours should have elapsed since exposure of the vehicle to other pigs. Your clothes and foot wear should be clean and disinfected after the last contact with other pigs. *J. Smith*

*In-depth information on managing for environmental temperatures can be found on the web in the June and December 2005 issues of the Washington Pork Producers newsletter at: www.animalag.wsu.edu.

WHAT IS A FEEDER PIG WORTH? FOR COMMERCIAL PURPOSES? FOR SHOW?

Let's look at the facts. According to the USDA-Iowa Department of Agriculture Market News, the average cash price paid for 40-50 pounds commercial feeder pigs in the U.S. during the week ending February 17, 2006, was \$67.58 per head. This was for pigs expected to yield 50-54% lean value at base slaughter weights, usually 250-260 pounds. In other words, \$68 for just an average pig. With excellent prices for slaughter pigs, demand for feeder pigs that are expected to go to market this summer is good. In addition, market prices for slaughter hogs are usually even higher in June and July than in February or March.

So, what are project pigs of show quality worth? Significantly more than \$68 each! First, "average" pigs that yield 50-54% lean value might earn blue ribbons but would not be very competitive in very many shows. Most youth want a better quality pig than that and should be willing to pay more for it. Second, the cost of producing project pigs is at least 20-25% higher than for commercial feeder pigs and the breeder/producer deserves to be paid for that added cost.



Show pig producers are usually small and do not benefit from economies of size like commercial feeder pig producers do. They also spend more money on breeding stock and/or boar semen as well as feed. They give considerably more care and attention to each individual animal they raise. They also usually work directly and personally with each young person who buys one or more of their pigs. Last, the price of a high quality project pig from outside of the Pacific Northwest would likely be even higher to cover transportation costs.

Now for the bottom line for the spring of 2006—no one should expect to purchase a good quality 40-50 lb show pig for less than \$90 per head. To do so would fail to adequately compensate the breeder for his/her costs of production. A price of \$90 to \$115 would be fair to both buyer and seller under current market conditions. Animals of excellent quality from a well-respected breeder could certainly be worth \$150 each.

Are most youth likely to earn a profit if they pay \$115 for their project animal? Maybe not! But, is that the primary purpose of a 4-H or FFA swine project? For us, it certainly is not, nor should it be. *J. Froseth & J. Smith*

MYCOTOXINS IN SWINE FEED IN WASHINGTON

Dr. John A. Froseth,
Swine Specialist

A mycotoxin is a compound produced by fungi on or in grain and/or feeds when conditions are favorable for their development. This fungi formation usually appears as a mold. Mycotoxin production is influenced by type of grain, stage of plant growth when infected by the fungus, insect damage, type and duration of weather conditions, time of harvest and feed storage conditions. Moldy grain or feed may or may not contain mycotoxins.

Four classes of fungi produce mycotoxins that are of economic importance to pork producers and other livestock farmers: *Aspergillus*, *Penicillium*, *Claviceps* and *Fusarium*. The most important mycotoxins in grains and feed for pigs in Washington are aflatoxins, vomitoxin or deoxynivalenol (DON), zearalenone and ergot alkaloids.

Aflatoxins

Aflatoxins are produced by various species of *Aspergillus* primarily on corn in the Pacific Northwest and Midwest and on peanuts and cottonseed in the southern states. Harmful effects of aflatoxins on pigs include reduced feed intake and growth rate and suppression of the immune system which increases susceptibility to infections. High levels of aflatoxin can result in liver damage, increased morbidity and even death. The cautionary level of total aflatoxins in most swine feeds is 0.02 ppm or 20 ppb. It's just 10 ppb for young pigs. Note that 1 part per million (ppm) is equal to 1,000 parts per billion (ppb). Even levels less than 20 ppb may be of concern and could result in economic losses. The FDA's regulatory level for aflatoxins in food commodities for humans is also set at 20 ppb. Because of its recognized toxicity, aflatoxin is the only mycotoxin regulated in much of the world.

Vomitoxin

Vomitoxin or DON is produced by *Fusarium* molds on corn, wheat and barley and primarily affects the gastro-intestinal tract. Pigs are very sensitive to vomitoxin and react very quickly to its presence in their feed. It causes slight decreases in feed intake and weight gain at dietary levels as low as 1-2 ppm. At levels of 5 ppm or higher, reduction in feed intake will be severe and vomiting often occurs within one day or as soon as fifteen minutes at levels of 20 ppm. By comparison, poultry, cattle and sheep can tolerate 20 ppm of DON.

Zearalenone

Zearalenone is a resorcyclic acid lactone (RAL) which, like DON, is produced by *Fusarium* molds such as *Gibberella zeae* on corn and also on wheat and barley. It has estrogenic-like activity and, therefore, it causes decreased reproduction in gilts, sows and boars. Swine in general and especially prepubertal gilts are very sensitive. Signs in these young gilts include swollen, reddish vulva, enlarged mammary glands, increased size and weight of the uterus and rectal/vaginal prolapse. These signs can be observed as soon as one week after first exposure to Zearalenone at levels as low as 1.0 ppm. Fortunately, the results are not permanent and gilts can enter the breeding herd without a reduction in fertility after a two-week withdrawal from the contaminated feed. Feeding Zearalenone at higher levels (25-100 ppm) to cycling gilts and sows causes constant estrus, pseudopregnancy, infertility,

abortion, abnormal return to estrus and extended estrous cycles depending on time and duration of ingestion. Effects on the piglets of sows fed Zearalenone include an increase in stillbirths, mummies, neonatal mortality and the incidence of the spraddle-leg condition. It can be transferred through the sow's milk, causing enlarged, reddened vulvas in female piglets. If fed to pregnant gilts at levels of 60-90 ppm from days 2 to 15 postmating, it can arrest embryo development, cause embryonic death and delay return to estrus by two months. The producer often does not realize that the animal is "open," resulting in significant economic loss. In young boars, it may decrease libido. It does not affect feed intake or growth rate.

Ergot Alkaloids

These are produced by the fungus *Claviceps purpurea* primarily on small grains in Eastern Washington. Triticale and rye are more susceptible to the ergot fungi than wheat and barley but contamination of barley has caused significant economic loss for swine producers here. Ergot alkaloids reduce weight gain, lower reproductive efficiency and increase the incidence of agalactia in milking sows. It impairs blood flow to the limbs, ears, tail and reproductive organs and can result in abortions in sows and even in women. Signs of ergot poisoning include diarrhea, convulsions, staggers, posterior paralysis, and dry gangrene of the extremities. It can actually limit blood flow enough to result in tissue death in feet, ears, uterus, and even kidney.

Kernels of grain infected by ergot are dark colored, usually black. The ergot fungus actually replaces the normal kernel and can be visually detected. If you see just 2 or 3 infected kernels in a load of grain, do not feed it to breeding animals. For growing pigs, the number of contaminated kernels should not exceed 0.1% or one black, infected kernel for every 1,000 normal kernels.

Problems in Washington, 2005-2006

Some of the corn harvest in the Columbia Basin of Central Washington in the fall of 2005 was not completed before the onset of inclement weather. Abnormally heavy rainfall and moderate temperatures in late 2005 and early 2006 delayed corn harvest even longer and provided conditions extremely favorable to the growth of molds and mycotoxin production. Primary concern was for potentially toxic levels of vomitoxin and zearalenone in the corn grain harvested in January and February. Although it has not been previously recognized as a problem in the Columbia Basin, Aflatoxin was also a real possibility given the unusual conditions of 2005-2006.

In late February 2006, WSU Livestock Extension Specialists and swine producers collected corn samples from three different areas in the Columbia Basin; east of Basin City (BC), Road 9 near Ephrata (E) and Stratford Road, Moses Lake (ML). These samples were from fields that had just been harvested or were to be harvested within a few days. For comparison purposes, a sample of barley from Whitman County (WC) in the Palouse Region of Eastern Washington was also collected. All four grain samples were sent to the Veterinary Diagnostic Laboratory at Iowa State University, Ames, IA, for mycotoxin analyses. Financial assistance for these analyses was provided by the Washington Pork Producers.

Results of the mycotoxin panel for the four grain samples are shown in the following table

Type of mycotoxin	Corn ^a			Barley
	BC	E	ML	WC ^b
Aflatoxins, total	NDA ^c	NDA	19 ppb ^d	NDA
Vomitoxin	1.5 ppm	NDA	NDA	NDA
Zearalenone + zearalenol	NDA	NDA	NDA	NDA

^aB = Basin City, E = Ephrata, ML = Moses Lake.

^bWC = Whitman County.

^cNDA = No detectable Amount

^dMostly aflatoxin G1 plus traces of B1 and G2.

These results indicate that some corn harvested during late winter and early spring of 2006 in the Columbia Basin of Washington contains levels of mycotoxins high enough to be of concern to swine producers. The vomitoxin level of 1.5 ppm in the Basin City corn is sufficient to cause decreases in feed intake and growth rate that are not always readily apparent to many producers. The 19 ppb concentration of aflatoxin in the Moses Lake corn is probably of greater concern because that is equal to the cautionary level for grow-finish pigs and nearly double that tolerated by young pigs. Economic loss through decreased growth rate could definitely occur if this corn were used as the only grain in swine diets. Also, the level is essentially equal to the FDA regulatory level of 20 ppb and this may limit its commercial use.

As expected, the barley sample from Whitman County contained no detectable amounts of any of the mycotoxins included in the assay panel. However, this analysis did not include ergot alkaloids. Since barley grown in Eastern Washington and Northern Idaho, especially in regions outside of the Palouse, may contain at least trace levels of ergot, visual inspection should be conducted followed by analysis if necessary.

It is very important to understand that the three samples of corn tested were not randomly collected but simply represented lots readily available to agents and producers at that time. Since levels of mycotoxins in grain corn can vary greatly from one area to another, within a specific county or small area and even within a specific field, care must be taken in interpretation of these data. For example, the fact that one corn sample from Moses Lake contained 19 ppm aflatoxin does not mean that corn from other fields in that region, area or county may not contain much higher levels. Just because the sample from Ephrata did not contain detectable amounts of any mycotoxin, that is not assurance that all or even most corn from the Ephrata area is

mycotoxin-free. After all, the Ephrata sample is only 20 miles from the Moses Lake sample. The significant level of vomitoxin in corn from Basin City, but not from the other two areas, does not necessarily mean that vomitoxin is more likely to be a problem in the lower Columbia Basin than in the upper Basin.

The bottom line, take-home message is; **If you are planning to feed Columbia Basin corn from the 2005 crop and it was not harvested before November 1, 2005, have it tested for mycotoxins prior to use.** The cost will be about \$100 per sample.

**MARK YOUR CALENDAR:
WPP SUMMER MEETING**

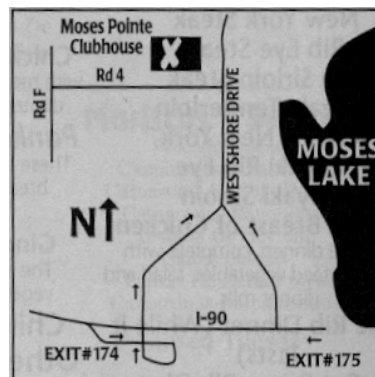
Date: July 21st, 2006

Time: 3:00-5:00 PM, hosted dinner to follow

Location: Moses Pointe Steak House
4524 Westshore Dr.
Moses Lake, WA

Topics to include the budget, delegate selection for 2007 Pork Forum and Swine Information Day 2007

All Washington Pork Producers Members Are Welcomed and Encouraged to Attend



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