

Washington Pork Producers Newsletter Summer 2017

SAVE THE DATE

WPP SUMMER MEETING

July 7, 2017
Ritzville, Washington

Lunch begins at 11:30AM
Cow Creek Mercantile

1611 S. Smitty's Blvd Ritzville, WA (use exit 221)
(hosted lunch for individuals participating in the meeting)

Summer Meeting starts at 1PM in Room #1,
Washington Association Of Wheat Growers
109 East 1st Street Ritzville, WA

*Topics will include: the budget,
delegate selection for the 2018 Pork Forum,
Article of Incorporation proposed changes, and
Swine Information Day 2018*

**All Washington Pork Producers members are
welcome and encouraged to attend.**

PUBLIC NOTICE BY WASHINGTON STATE PORK PRODUCERS ASSOCIATION AND THE NATIONAL PORK BOARD

The election of pork producer delegate candidates for the 2018 National Pork Producers (Pork Act) Delegate Body will take place at 1:00 p.m., Friday, July 7, 2017 in conjunction with a Board of Directors meeting of Washington State Pork Producer Association, in room 1 of the Washington Association of Wheat Growers building, at 109 East 1st Street, Ritzville, Washington, 99169. All Washington State Pork Producers are invited to attend.

Any producer, age 18 or older, who is a resident of the state and has paid all assessments due, may be considered as a delegate candidate and/or participate in the election. All eligible producers are encouraged to bring with them a sales receipts proving that hogs were sold in their name and the checkoff deducted. For more information contact Washington State Pork Producers Association, 2001 VanTine Road, Garfield, Washington, 99130 telephone 509-397-2694.

Your WPP Board Members

Tom Cocking, President	509-595-8415
Paul Klingeman, Jr., V. Pres.	509-760-7170
Janet Schmidt, Secretary	509-397-6290
Jaime Sackmann, Treasurer	509-989-5970
Don Van Tine, State Contact	509-397-2694
Sarah M. Smith, WSU Contact	509-754-2011X4363

EDITOR: Sarah M. Smith
WSU Animal Science Area Extension Educator

First Diagnosed Case of Porcine Delta Coronavirus Detected in Washington State

The Washington Animal Disease Diagnostic Laboratory (WADDL) received confirmation of a new (to Washington) enteric disease. A farm in eastern Washington was experiencing a large mortality of baby pigs. WADDL sent the samples to a Midwestern lab for DNA testing which determined the virus was porcine delta coronavirus (PDCoV). This virus is relatively new to the United States and is related to Porcine Epidemic Diarrhea (PED) virus, Transmissible Gastroenteritis (TGE) and Swine Enteric Coronavirus (SECoV).

An ongoing investigation by the Washington Department of Agriculture State Veterinarian's Office will try to determine how the disease may have entered the state. The mortalities have stopped now that the sows have developed a natural immunity to the disease.

Please contact the WSDA State Veterinarian's office at 360-902-1881 for any follow up questions.

Dr. Brian Joseph, DVM, WSDA State Veterinarian

Porcine Delta Coronavirus Facts

As noted above by Dr. Joseph WSDA State Veterinarian, Porcine Delta Coronavirus (PDCoV) was detected in a herd of pigs in Washington State in mid-May. PDCoV is a coronavirus that causes diarrhea and vomiting in all ages groups and mortality in nursing piglets. PDCoV was first detected in pigs in Hong Kong in 2012, and was first detected in the US in February 2014 on the heels of the severe outbreak or Porcine Epidemic Diarrhea Virus (PEDV is different type of coronavirus) that started in May of 2013 in the US. Mortality rates vary widely with pigs infected with PDCoV, however mortality rates have been much lower than those experienced with the PEDV outbreak of 2013/2014. The highest mortality rate is in nursing piglets under 14 days of age where there is no colostrum immunity to protect them. There is not a vaccine for PDCoV, however biosecurity at the farm and with transportation vehicles can help prevent the spread of PDCoV as well as other swine diseases. Humans and other animals cannot get infected with PDCoV and it is safe to eat pork.

An informative website outlining PDCoV is: https://www.pig333.com/pig-diseases/delta-coronavirus_162. Also, the Pork Information Gateway, www.porkgateway.org, has excellent resources about Coronavirus Diseases and biosecurity for both commercial producers and youth producers. It is important to remind youth showing pigs or transporting pigs for pre-weight/tag events to help do their part to protect not only their pigs from diseases but other pigs back in their area. The Pork Information Gateway has an excellent video for youth on biosecurity practices for their pigs and equipment involved with raising pigs at <http://porkgateway.org/resource/biosecurity/>. This specific disease outbreak has not been associated with any fairs or show pigs, however as show season starts up and more pigs are transported it is good to remind our young or new producers about good biosecurity practices when raising pigs.

Sarah M. Smith, WSU Extension Specialist

Porcine Reproductive and Respiratory Syndrome (PRRS) Detected in Washington Swine Herd

"Porcine Reproductive and Respiratory Syndrome virus was recently (late May) diagnosed in a small, swine farm in Washington by the USDA National Veterinary Services Laboratory. Please contact your veterinarian concerning implementing vaccination and management measures to reduce the potential incidence of and mitigate the effects of this disease syndrome," Dr. Brian Joseph, DVM, Washington State Department of Agriculture's State Veterinarian.

PRRS was first recognized in the US in the mid-1980's and was called "mystery swine disease". A study by the National Pork Board (NPB) in 2011 reported that PRRS Cost the industry \$664 million annually. Improved understanding of the disease, pig production, animal health care and management have been able to control the incidences, severity, and impact this disease has had on pig farms.

"PRRS exists in two distinct forms, reproductive and respiratory, and infected farms may experience one or both. A variety of factors, including swine genetics, the specific PRRS virus variant in the herd, health status of the herd, ages of the animals involved, and pregnancy status, may influence the signs. As a consequence of mutation and recombination, new genetic variants of the PRRS virus appear frequently. Constant genetic change in PRRS virus may explain: 1) the wide variation in clinical disease observed in the field; 2) why prior exposure to one PRRS virus variant may not provide protective immunity against other variants; and 3) why certain vaccines may not be protective in some herds or under certain circumstances." The Pork Information Gateway, www.porkgateway.org has excellent factsheets about PRRS and PRRS Control/Elimination. In addition, "The Pig Site" has a good outline of PRRS and symptoms at <http://www.thepigsite.com/diseaseinfo/97/porcine-reproductive-respiratory-syndrome-prrs/>.

Because Washington state has a small swine industry compared to the Midwest, and the fact that most of our swine herds are isolated from one another, we have not had the incidences or experiences with many of these diseases. This is both good and bad—because of isolation we have been able to keep the diseases out, but we also lack experience dealing with these issues when they present themselves (which can lead to panic). We have many new and small producers raising pigs and we have many more pigs being transported to Washington state than in previous years—especially this time of year with show pigs moving around to shows and pre-weigh/tag events. With these new reported diseases in the state, this are good reminders for both experienced and new swine farmers to implement effective herd health programs, that also involve strict biosecurity plans.

Again, we often talk about the importance of a good biosecurity plan, however for it to be effective it must be strictly followed. As stated above, in Washington we have been fortunate to not only have low exposure to many of the swine diseases, but isolation (great distances between swine herds) has helped decrease ability of exposure and spread for diseases like PRRS, PEDv, and Delta Coronavirus. With these diseases (PRRS and Delta Coronavirus) being diagnosed in Washington swine herds recently and with many more pigs being transported within and across state lines, it is critical that we implement effective biosecurity practices and herd health plans to keep Washington swine herds healthy.

Sarah M. Smith, WSU Extension Specialist

Use these Swine Health Biosecurity Control Points to ensure proper sanitation.

- **Cleaning:** This process involves removing all dirt and manure from equipment. It is an important step in the overall sanitation process, because some disinfectant products can be used up or inactivated by dirt and manure. Hot water and detergents, similar to those used for dish washing, may make cleaning much easier.
- **Disinfection:** Disinfectant products are chemical agents that inactivate or kill pathogens, such as bacteria and viruses, and should be used only when all visible manure and dirt have been removed. Always consult the disinfectant label claims regarding proper dilution and contact times and be sure to work with your veterinarian to make a decision on which product will work best for your situation.
- **Drying:** Drying is crucial to the process of equipment cleaning because drying kills many infectious organisms. Without including a drying step in your cleaning process, the risk of allowing infection to survive and multiply may increase.

Source: Youth PQA Plus manual, National Pork Board, PO Box 9114, Des Moines, IA 50306 pork.org | 800-456-PORK

Central Nervous System Cases Prompt Concern

The Swine Health Information Center (SHIC) has been monitoring unusual central nervous system (CNS) cases detected over the last six months in the U.S. Clinical signs have included ataxia, muscle tremors, and muscle weakness possibly leading to paralysis. In 12 of 17 cases reviewed, sapelovirus and/or teschovirus have been detected. Veterinary diagnostic laboratories have issued the diagnoses.

- Average pig age - 10 weeks
- Morbidity from 10% to 15%
- Mortality - 100%

To date, a wide array of antibiotics and vitamins has not had any apparent benefit and no out-of-water events were detected.

Producers and practitioners are encouraged to watch for unresolved neurologic cases and submit samples to their veterinary diagnostic lab for diagnosis. CNS clinical signs reflecting functional compromise of brain stem, spinal cord, and cerebellum or cerebrum that make up the case definition and initiate voluntary reporting include ataxia, muscle tremors, and muscle weakness.

SHIC has established guidelines to help identify and report CNS cases. Access those guidelines at: <http://www.swinehealth.org/cnscases/>

*Swine Health Information Center,
PorkNetwork.com, June 1, 2017*

--- REMINDER ---

If You Sold Show Pigs Directly to Youth, Don't forget to Pay Pork Checkoff Fees.

By federal law, all producers (adult or youth) selling pigs for any reason and regardless of purpose must pay Pork Checkoff. The Pork Checkoff requires producers to pay \$0.40 per \$100 of value on the first time sales of hogs in three separate categories: feeder pigs, market pigs and breeding pigs. For example, if you sold 20 show pig prospects for \$200 each, you would need to submit payment of \$16 to the National Pork Board. For more information for Pork Checkoff payment and submission go to www.pork.org/AboutUs/default.aspx.

Pork Checkoff Publishes New PRRS Initiative Research Book

The National Pork Board's new porcine reproductive and respiratory syndrome (PRRS) virus research booklet is now available. The guide, *PRRS Initiative Research*, is the most comprehensive source of Checkoff-funded research available on the subject, spanning 20 years of results.

"Each year, the effect of PRRS is felt on pig farms across the country, and it has a \$664 million annual impact on the U.S. pork industry," said David Pyburn, DVM, senior vice president of science and technology, National Pork Board. "The Pork Checkoff has consistently invested in swine science and PRRS research, and the result is a guide that will provide value to understanding PRRS in an effort to address its impact."

The updated and expanded 2017 edition contains Checkoff-funded PRRS research from 1997 to 2016, which can help producers, swine veterinarians and researchers learn more about how to control the costly virus. The guide has six sections including:

- Immunology, virology and pathogenesis
- Vaccine development
- Epidemiology, risk factors and control strategies
- Diagnostic testing
- Surveillance and elimination strategies
- Genetic resistance

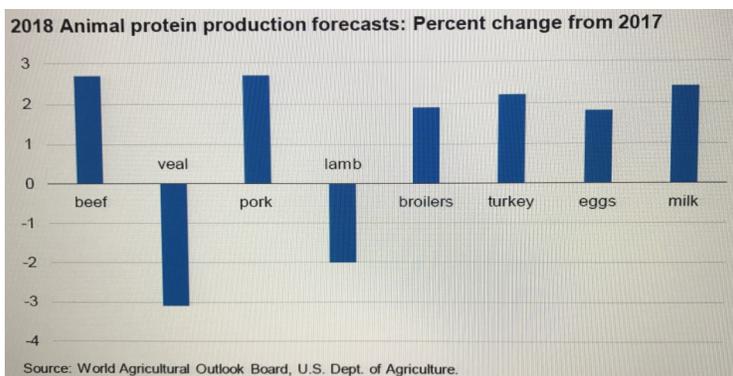
The *PRRS Initiative Research (1997-2016)* is at <http://www.pork.org/pork-checkoff-research>. For more information on the guide, contact Lisa Becton, DVM, at L.Becton@pork.org or at (515) 223-2791.

National Pork Board, News Release, 06.05.17



Forecasts for Most Animal Proteins Increase

USDA forecasts for animal protein production in 2018 show across the board increases with the exception of veal and lamb. Total red meat production in 2018 is forecast at 54 billion pounds, 2.8 percent more than expected this year. Total poultry production is expected to increase to 49 billion pounds, or 1.9 percent above the 2017 forecast. Total egg production is expected to increase by 1.8 percent and milk production by 2.4 percent.



Cattle/Beef: Beef production for 2017 is revised down slightly at 26.3 billion pounds, based on lower average dressed weights for fed cattle that reflect a more rapid pace of marketing and on

an increased share of cows in the total slaughter count. The decline in dressed weights is expected to moderate in the second half of 2017 as placement weights may reflect abundant spring-forage supplies and the pace of marketing is expected to slow. For 2018, production is forecast at 26.9 billion pounds as increased placements in late 2017 and early 2018 are slaughtered that year. With more production expected, USDA forecasts year-over-year declines in cattle prices and increased beef exports.

Dairy: The milk production forecast for 2018 is 222.0 billion pounds, 2.4 percent higher than the 2017 forecast. With higher expected domestic demand and exports, the 2018 all-milk price forecast is \$17.55-\$18.55 per cwt, an increase from \$17.35-\$17.85 per cwt forecast for 2017.

Pork/Hogs: Slaughter capacity expansion in Corn-Belt States, expected to begin to operate later this year, is projected to support higher pork production in 2018. Commercial pork production next year is forecast at 26.9 billion pounds, 3.3 percent higher than expected production this year. 2018 hog prices will reflect larger animal supplies, averaging \$42-\$46 per cwt, about 3 percent lower than the price forecast for this year. First-quarter 2017 exports of more than 1.4 billion pounds were 17 percent ahead of the same period a year ago.

Poultry: The broiler industry has continued to see weak growth in bird weights, but production growth is expected to continue into 2018 on stable producer margins. Growth in egg production is expected to continue, but at a slightly reduced pace in 2018, in part due to weak producer margins in the past year.

Livestock, Dairy, and Poultry Outlook/LDP-M-275/May 16, 2017 Economic Research Service, USDA

First-Quarter 2017 Pork Markets Characterized by Production Increases and Impressive Consumer Demand

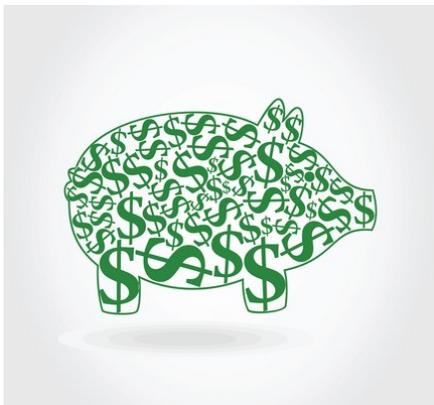
Commercial pork production in the first quarter of 2017 wound up at slightly more than 6.4 billion pounds, 2.9 percent larger than a year earlier. It is notable that despite stronger year-over-year production, per capita pork disappearance in the first quarter of 2017 was smaller than a year ago: 12.3 pounds, compared with 12.6 pounds a year earlier. The difference is mostly attributable to very strong first-quarter exports, which accounted for 22.3 percent of commercial production compared with 19.6 percent a year ago. Also notable is the level of ending stocks that wrapped up first-quarter 2017. The figure below shows first-quarter ending stocks as a percentage of commercial pork production. In the first quarter of 2017, ending stocks were 9.2 percent of production, compared with 10.5 percent a year earlier, and more than 11 percent for 3- and 5- year averages. Reduced ending stocks signal strong demand, both domestic and foreign. Continued strong consumer demand for U.S. pork is one of the keys to the sector's well-being in 2018.

Livestock, Dairy, and Poultry Outlook/LDP-M-275/May 16, 2017 Economic Research Service, USDA



Hog & Pork Market Situation

The pork cutout continues to track higher thanks to robust prices for bellies as well as escalating values for both fat and lean pork trimmings. A few days ago we highlighted the relationship between 50CL beef and 72CL pork trim and the fact that so far in Q2 2017 the value of 72CL pork trim has been well under trend. That seems to be changing however, in part because the price of 50CL beef is coming down but also because 72CL trim values have escalated in recent days. Last night USDA quoted the value of 72CL pork trim at \$95.35/cwt, 22% higher than a year ago. Fat pork trim (42CL) values also have increased sharply as well and now at \$54/cwt compared to the low 30s in early May. The increase in the value of trim has a two fold effect. It increases trim credit values for different parts of the carcass but it



also sets a floor under the price of some muscle cuts, particularly hams. Currently large bone-in hams are trading in the low 60s but given the value of trim it's just a matter of time before you can

take some of those hams and throw them in the grinder. Pork trim prices have certainly benefited from the high price of beef trimmings but they also speak to robust demand for processed pork products at retail (be this bacon, hot dogs or sliced meats). It is interesting to see in the latest USDA pork retail report that processed pork items far outpace other pork items in terms of retail feature activity. US consumers over the years may have had trouble spending money on ground pork. But take that ground pork, mix it with spices and shape it in a long tube and suddenly people cannot have enough of it. As \$2 chicken wings and \$200 50CL beef can attest, the consumer is voting with their dollars for flavor. The value of the pork loin primal, which is about a quarter of the carcass, may have not followed the same trajectory as pork trim but generally prices move higher in June and this year is no different. In the past the value of loins has peaked in late June and this year may do the same. For now, robust prices for loins, trim and bellies have been enough to propel the pork cutout higher, in turn supporting higher cash hog prices. In the short term market participants will pay close attention to reports of hot weather in Iowa and the impact this may have on hog weights. Already barrow and gilt weights (based on mandatory price reports) are running 1.5% under year ago levels. As we noted in a report earlier in the week, weights of packer owned hogs, have declined even more as packers look to maximize margins. That trend has only escalated in the last few days and packer hog weights are now down 2.7% compared to the same period a year ago.

www.daileylivestockreport.com, 06.09.17

*****NOTICE*****

Washington Pork Producers Association

Proposed Articles of Incorporation Changes:

Proposed changes are being made to match the approved WPP By-Law changes that were made at the Annual Meeting concerning dissolution and distribution of assets in compliance with Pork Checkoff Funding.

Approved By-Law Change by membership (02/03/2017):

Article 2, Section 10: In the event of dissolution of the corporation, the net assets are to be distributed in accordance with the decision of the directors. The distribution of any Checkoff assets must be done in accordance with the Pork Promotion, Research, and Consumer Information Act/Order.

Proposed Articles of Incorporation Change:

Article VI:

Current: This corporation shall be a non-profit corporation and no capital stock shall be issued to any member. In the event of dissolution of the corporation, the net assets are to be distributed to the members in accordance with the decision of the directors which shall be based upon the volume of each member's business for the previous year.

Proposed: This corporation shall be a non-profit corporation and no capital stock shall be issued to any member. In the event of dissolution of the corporation, the net assets are to be distributed in accordance with the decision of the directors. The distribution of any Checkoff assets must be done in accordance with the Pork Promotion, Research, and Consumer Information Act/Order.

Proposed Changes will be voted upon at the Annual Summer Meeting of the Washington Pork Producers, at the Washington Association of Wheat Growers, Room 1, on 109 East First Main in Ritzville, WA on July 7, 2017 at 1:00 PM. Current Washington Pork Producers members are welcome and encouraged to vote.

Youth Swine Producers. . .

New National On-Line Quality Assurance Program Available for All Market Sale Species

The National Pork Board is excited to announce the transition of the Youth Pork Quality Assurance Plus (YPQA) to the new Youth for the Quality Care of Animals (YQCA).

Youth for the Quality Care of Animals (YQCA) is a new, industry-supported quality assurance program for youth producers ages 8-21 years old. Within the past few years, educators and livestock industry professionals have noticed National Pork Board's success with the Youth Pork Quality Assurance program and determined the need for a multi-specie (beef, dairy, goat, poultry, rabbit, sheep and swine), science-based educational program. Annually, youth food animal producers raise thousands of food animals that contribute to the U.S. food supply. This contribution measures in the millions of pounds of consumable food animal products. Understanding how to produce a safe wholesome food animal product can only come from a comprehensive educational program focused on proper care and welfare of food animals. So a group of educators and livestock industry professionals have been working on developing this program to meet the needs for a multi-species program.

YQCA will provide a common framework for youth food animal quality assurance programs that will enhance the educational experience of youth, improve the care of food animals and provide a higher level of food safety to consumers. This program will embrace the founding principles of food safety that all quality assurance programs cover, with added information address-ing animal welfare, such as daily health observations, proper use of medications, and establishing a valid Veterinary Client Patient Relationship (VCPR), to mention a few. Those principal topic areas are similar across the species covered in the YQCA curriculum.

The YQCA program is set up for any youth in the U.S. to have access to the online program and gain their certification. The national YQCA program launched March 2017. The Goals of YQCA:

1. Ensure safety and well-being of animals produced by youth for showing and for 4-H and FFA projects.
 2. Ensure safe food supply to consumers.
 3. Enhance the future of livestock industry by educating youth on these very important issues so they can become more informed producers, consumers and/or employees in the agriculture and food industry.
 4. Maximize the limited development time and budgets of state and national youth program leaders to provide an effective quality assurance program.
- Offer livestock shows a valid, national quality assurance certification for youth livestock exhibitors.

Please note, YPQA will no longer be administering by the end of 2017. The National Pork Board will fully be utilizing the YQCA

program as the youth quality assurance program. Those who are not expired are still certified and will not need to earn YQCA certification until their expiration. All of the Youth PQA good production practices are within the YQCA content, just identified in a different way.

There is a \$12 fee for participating in the on-line training. Some have expressed concern about the cost. However, I would like to remind all

that this is a cost of raising a food animal—just like buying feed, show supplies, etc. Also, these programs are essential and demanded by some of our major packing plants we supply animals to. With young producers and beginner 4-H leaders/parents often involved in the raising of these food animals, a solid educational program will not only build

confidence with consumers purchasing your animals but will also help youth be better informed and raise a better-quality food animal.

Participating in the YQCA Quality Assurance program for youth and food animal production is a win-win for everyone. I highly encourage everyone raising and exhibiting an animal that will be sold to produce food to go through the YQCA online program. To participate in the YQCA online program got to <http://yqca.org>.

In addition, producers, clubs/chapters, business, industry sponsors, or others that would like to support youth to participate in this program can go online (<http://yqca.org>) and purchase the \$12 coupons and distribute to youth to take the YQCA program.

If you have additional questions please feel free to email or call Sarah M. Smith, WSU Regional Extension Specialist at smithsm@wsu.edu or 509-754-2011, X436.



Excerpts taken from

A Champion's Guide to Youth Swine Exhibition: Biosecurity and Your Pig Project

Did you know that regardless of how many pigs you care for, whether it's a single show pig or thousands of market hogs, you are part of the pork industry? And, just as you are responsible for keeping your show pig or pigs healthy, you share the responsibility of keeping all of the pigs in the United States healthy as well.

Biosecurity is a continuous process and involves preventing people, equipment or other animals from spreading disease to your pigs. For example, you can prevent disease from spreading by using clean, farm-specific clothes and boots when working with your animals.

Preparing for a Swine Exhibition—

Before entering a pig in a show or fair, it is important that you take actions to protect that animal and your home swine herd from the spread of infectious disease. Ensure, before leaving for an event, that all fair animals have been vaccinated according to the veterinarian's recommendations and any requirements of the show that you will be attending. Every show, county, and state has different requirements for swine exhibitors and their pigs. Before you leave your farm with your swine project for a show, be sure to clean and disinfect all transportation and show-related equipment. Remember that these items have the ability to transmit disease to and from other pigs.

At the Show —While you are at a swine show, fair, or exhibition, it is very important to continue to act in a way that will decrease the spread of infectious disease. Because the best way to spread disease is by direct contact with other hogs, the best way to prevent this spread is to decrease any unnecessary contact with unrelated swine during the exhibition. Refrain from sharing equipment with other exhibitors or using equipment that has come in contact with other swine.

Thoroughly wash your hands, arms and any part of your body that came in contact with pigs with warm, soapy water. Ultimately, it is important to recognize the vital roles that swine exhibitors play in stopping disease transmission among all pigs.

Returning Home —It is also very important that all swine taken to an exhibition be isolated from the rest of the herd upon return to your home farm.

Adhering to a biosecurity protocol when you return from a swine show is extremely important. Before returning to work with your home swine herd, be sure to clean and disinfect all transportation and show-related equipment.

Source: Youth PQA Plus manual, National Pork Board, PO Box 9114, Des Moines, IA 50306
pork.org | 800-456-PORK

Parasite Control in Youth Market Hog Projects

These are excerpts on the control of external and internal parasites aimed at show pigs from Dr Susan Kerr, DVM, Livestock and Dairy Extension Specialist with Washington State University factsheet on the Pork Information Gateway at <http://porkgateway.org/wp-content/uploads/2015/07/parasite-control-in-youth-market-hog-projects1.pdf>

No "one size fits all" recommendations can be made regarding parasite management of youth market hog project animals. Variables such as deworming treatments and other care given before purchase of the project animal, quality of the animal's feeding program, sanitation, length of the project, environment, health status, and genetic factors may also influence performance.

Sanitation is Essential

Sanitation plays a big role in determining the types and numbers of parasites that affect pigs. Prompt removal of feces from the pig's environment will lessen the chances of a pig re-infesting itself with parasites. Housing pigs on solid surfaces such as concrete with bedded areas will allow for frequent cleaning and disinfection of soiled areas. Letting pigs roam on dirt and root is good for their feet, legs, and general wellbeing, but it is important to understand this management practice will likely increase their exposure to parasites.



To Deworm or Not to Deworm?

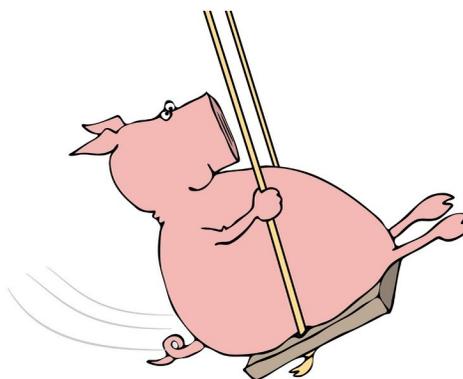
If a project pig was dewormed early in life and is fed an excellent diet and kept in sanitary conditions, perhaps it may not require more deworming before going to market. However, this can only be determined through a fecal analysis for parasites. This procedure can be performed at a veterinary clinic or

by producers who have learned how to do it.

Many project pigs are owned and managed for about three months, so perhaps just one treatment may be needed; it will depend on the animal's exposure to parasites, appearance, general health, and performance (rate of gain). A fecal analysis can reveal the types and severity of parasite infestation, which, in turn, will influence the decision about which, if any, deworming medication should be used.

Treatment

Fortunately, most swine medications work against multiple parasites and are considered safe and easy to administer. Most are fairly cost-effective as well. Check with other 4-H youth who have market hog projects in your area and share the cost of an effective product because most products will expire before a small-scale producer can use up an entire container. See Table 1 for a summary of medications appropriate for use against the most common internal parasites of swine. However, be aware that medication availability can



change at any time.

Parasite resistance to specific medications may develop on individual farms due to underdosing, overuse or other management errors. For example, even though piperazine is labeled as effective against the nodular worm, on many farms it may be completely ineffective against this specific parasite.

Read medication labels to check for claims about effectiveness against specific parasites and follow all label instructions carefully. Follow all withdrawal times when using medication to be sure the appropriate amount of time has passed before marketing your animal for human consumption. Several swine parasites can be transmitted to humans, so be sure to wash your hands well after handling pigs and other livestock. In addition, always cook fresh ground pork to an internal temperature of 160°F and fresh pork cuts to 145°F.

Having a Valid Veterinarian-Client-Patient Relationship is Essential

As long as you use over-the-counter swine deworming products exactly as instructed on the label and follow all meat withholding guidelines, you are following all US Food and Drug Administration (FDA) requirements and are staying within federal law. However, if you use a product not approved for use in pigs or if you use a product approved for use in pigs in a manner other than exactly as instructed on the product label, you are violating federal law and are subject to fines and even prosecution.

If your veterinarian determines it is necessary for your pig's health that you give your animal a non-approved product or a different dose of an approved product, it is legal as long as you have a valid veterinarian-client-patient relationship and you follow the veterinarian's recommendations exactly.

Your veterinarian will give you guidance on how long to keep your animal before selling it to market channels. You must record and keep all this information (injection site, dose, date, medication name and lot number, animal identification, etc.) to document this legal extra-label use of a medication.