Swine Disease Guide
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Cooperative Extension Service
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Swine Disease Guide

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Good records are necessary in today's pork production enterprises. Without adequate records a herd health program may not be efficient. Records tend to identify the cost of disease. If coupled with a good herd health maximization program an increased economic return is possible.

Timely application of correct management procedures is essential to a program of herd health. Chronic diseases may not be as obvious as transmissible gastroenteritis, for example, but their cost in terms of dollars to the production unit is extremely important.

This SWINE DISEASE GUIDE is a compilation in chart form of information generally available from many sources. While some disease conditions are readily recognized by the producer many others often require good diagnostic skills and planned programs of prevention and control. These should be provided by the practicing veterinarian. Thus, the veterinarian is a key man in successful pork production units because of his skills in the area of preventive medicine and management.

Boars

DISEASE/CAUSE	PREVENTION[5]	TREATMENT[5]	WITHDRAWAL
Buy boars early, from herds known to be free of disease. Isolate from the swine herd for 2-3 weeks. Prior to using the boars expose them to the females of the breeding unit 30 days before they are to be bred. This may be done by fence line contact. Have sufficient boar power, one boar for each 10 gilts to be bred in a three week period. Use double mating. Since mating is a learned response spend sufficient time with the new boars in trial matings to be sure they are capable of breeding.			
Swine Erysipelas: *Bacterium Erysipelothrix insidiosa*	Erysipelas vaccine[1,3] (avirulent) Erysipelas bacterin[3] Oral Erysipelas vaccine (water mix)	Penicillin[2] Anti-swine Erysipelas serum[2] Oxytetracycline[2] injected	5 days 22 days
Leptospirosis *Leptospira* *pomona* *grippotyphosa* *canicola* *icterohemorrhagicae* *and other species*	Leptospirosis[3] bacterin use type according to strain of Leptospirosis diagnosed	Oxytetracycline[2], injected Streptomycin[2], injected To reduce chronic or carrier state of Leptospirosis Chlortetracycline 200 gm./ton continuously or 400 gm./ton at least 14 days Oxytetracycline 500 gm./ton 7-14 days	18 days 30 days None established None established
Respiratory Infections **Pneumonia** **Influenza:** *Influenza virus* *Other viruses* *Bacterial infection* *Stress from environmental changes*	Isolate new animals Avoid drafty conditions	Individual treatment[2] Penicillin, injected Oxytetracycline, injected Herd treatment[2] Chlortetracycline or Oxytetracycline in drinking water Sulfathiazole in drinking water Tetracycline in drinking water	 5 days 22 days 24 hours 24 hours 10 days 4 days
Arthritis and Lameness *Bacteria* *Erysipelothrix insidiosa* *Mycoplasma hyosynoviae (gallinarum)* *Injuries* *Foot pads* *Hoof wall cracks* *(get proper diagnosis)*	Sort for good feet and legs, good conformation	Dependent upon diagnosis[2] Tylosin Lincocin Penicillin Anti-swine Erysipelas serum	 4 days 48 hours 5 days
Brucellosis (Bang's Disease): *Bacterium Brucella suis*	Buy from validated herds Blood test before adding to herd	None	

1. Available through your veterinarian.
2. Follow your veterinarian and the manufacturers instructions.
3. Slaughter not permitted for a least 21 days after biological products have been injected.
4. Ideally the choice of antibiotics should be based on antibiotic sensitivity tests. Consult your veterinarian for details.
5. Most of the drugs listed should be considered as aids in prevention and treatment of the disease. Combinations of several of these drugs are permitted.

Sows

Pregestation

DISEASE/CAUSE	PREVENTION	TREATMENT	WITHDRAWAL
Brucellosis (Bang's Disease): *Bacteria Brucella suis*	Buy tested animals only or from validated herds and retest before adding to the herd	None	
Leptospirosis: *(See Boars)*	Vaccination 2-3 weeks prior to breeding[3]	Chlortetracycline 200 gm./ton continuously or 400 gm./ton at least 14 days	None established
		Oxytetracycline 500 gm./ton, 7-14 days approximately one month before farrowing	None established
		Oxytetracycline[2] injected	22 days
Erysipelas: *(See Boars)*	Vaccination 2-3 weeks prior to breeding[3]	(See Boars)	
Respiratory Infections Pneumonia Influenza: *(See Boars)*	Influenza during or shortly after breeding may produce a reproductive problem.		
Arthritis and Lameness: *(See Boars)*	Sort breeding stock for good foot and leg conformation.		
Non-Specific Infections (Pre-breeding rations)[2]	A combination of 100 gm./Chlortetracycline 100 gm./Sulfamethazine 50 gm./Penicillin per ton of feed 1 week before and 3 weeks after mating		7 days
	Chlortetracycline—100-200 gm./ton		None established
	Furaxolidone—100-150 gm./ton 2 weeks before and 2 weeks after mating		None established
	Neomycin 150 gm. and Oxytetracycline 150 gm./ton of feed		None established
	Oxytetracycline 100-200 gm./ton		None established
	Tylosin 100-120 gm./ton		None established

Gestation and Farrowing

Non-specific infections causing early embryonic death: *Bacteria Viruses*	Co-mingle sows and gilts. Expose them to each other 30 days prior to breeding so they will develop immunity to the bacteria and viruses that may be present in the herd. As an aid in prevention when bacteria are involved use the drugs listed in the pre-gestation section for non-specific bacterial infections. Use for the first 3-4 weeks of the gestation period and then leave antibiotics out of the ration until 2-3 weeks prior to farrowing. No treatment is available for viral infections.		
MMA Mastitis Metritis: *Bacteria E. coli Streptococci sp. Corynebacterium and other bacteria Management factors Nutritional deficiencies Unknown causes*	Feed antibiotics[4] which sensitivity testing indicates would be of value in your herd. Vaccination of the sow using mixed bacterins[3] Autogenous bacterins prepared from bacteria involved in the herd problem are best Use at 6 weeks and 2 weeks before farrowing (two injections) Vitamin E 10,000-20,000 units/ton	Streptomycin[2], injected Cortico-steroids, injected	30 days
Agalactia: *Constipation*	Thyroprotein (100-200 gm./ton) Caution: This drug will increase the metabolic rate. Sows and gilts will become very thin unless pigs are weaned early. Not recommended for routine use. Consult your veterinarian.	Mineral oil by mouth, Enemas, Epsom or Glauber salts in feed or water.	None established
Mastitis		See above	
Metritis		See above	
Hormonal deficiencies		Posterior pituitary extract[1]	

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DISEASE/CAUSE	PREVENTION[5]	TREATMENT[5]	WITHDRAWAL
Atrophic Rhinitis: *Bacterium Bordetella bronchiseptica* *Secondary invading bacteria*	Nasal swabbing is a currently suggested method to aid in the control of this disease Consult your veterinarian for details To reduce carrier state from sow to pigs, use 1 lb. of sodium sulfamethazine in 600 gallons of drinking water 3 weeks prior to farrowing (Many strains of Bordetella are resistant to sulfa drugs. Keep old sows in preference to gilts to reduce the amount of spread to pigs).	None	 10 days
Influenza Pneumonia: *Influenza virus* *Pasteurella and other bacteria*	Avoid bringing in new animals. Exposure to viruses, including influenza during gestation may affect the baby pig before birth.	Sulfathiazole[2] in drinking water Individual treatment[2] Penicillin, injected Oxytetracycline, injected Tylosin, injected	10 days 5 days 18 days 4 days
SMEDI **Stillborn, mummified pigs** **Embryonic death** **Infertility:** *Enteroviruses* *Influenza virus* *Psuedorabies virus* *Hog cholera virus* *and other viruses which may affect the unborn pig causing early embryonic death or mummification and stillborn or weak pigs at birth.*	Co-mingle sows and gilts 30 days before breeding. Give fence line contact with new boars. Avoid exposure of pregnant animals to outside animals. Animals so affected usually will carry normal litters at the next breeding if not exposed to a different virus. This condition may recur in 2-3 years cycles on some farms.	None	
Brucellosis: *Bacterium Brucella suis Abortions*	(See Boars)	None	
TGE Transmissible Gastro-enteritis: *Virus*	Vaccination of the sow twice,[1,3] 6 weeks and 2 weeks prior to farrowing	None Avoid outside exposures during farrowing periods	
Clostridial enteritis Type C: *Bacterium Clostridium perfinges Type C*	Vaccination of the sow twice,[3] 6 weeks and 2 weeks prior to farrowing	This is a disease of the baby pig which may be prevented by sow vaccination. Schedule the 2nd vaccination as near to 2 weeks prior to farrowing as possible	
Erysipelas: *Bacterium Erysipelothrix insidiosa*	(See Boars) Vaccination of sow[3] can be done anytime during gestation, prefer before breeding to get maximum protection	May repeat vaccination 3-4 weeks prior to farrowing to help protect the baby pig (See Boars)	
Leptospirosis: *Bacterium Leptospira pomona, grippotyphosa, canicola, incterohemorrhagicae and other species*	(See Boars) Vaccination of sow[1,3] can be done anytime during gestation. Prefer before breeding to get maximum protection. (Also see feed recommendations under Boars)	(See Boars)	
Arthritis and Lameness: *Bacterium* *Mycoplasma hyosynoviae (gallinarum)* *Erysipelothrix insidiosa* *Mineral deficiencies* *Injuries* *Foot pads and Hoof wall cracks (Get proper diagnosis)*	Good selection practices may be an aid.	Treatment based on diagnosis[2] Tylosin Lincocin Penicillin Cortico steroids Anti-swine Erysipelas serum	 4 days 48 hours 5 days
Baby Pigs			
Hypoglycemia *Sugar deficiency:* *Starvation* *Chilling*	Avoid chilling Allow pigs to nurse shortly after birth (Don't keep the pigs away until the sow is through farrowing)	Dextrose or dark syrup by mouth or injected inraperitoneally with dextrose.	

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DISEASE/CAUSE	PREVENTION[5]	TREATMENT[5]	WITHDRAWAL
Transmissible Gastro enteritis TGE **Baby pig disease:** *TGE virus*	Avoid exposure. Limit people, animals, trucks on the premise. Don't bring it home from markets or your neighbors. Sow vaccination (See Sows)	No treatment is of value. Normal electrolytes in water will help to replace the fluid loss in pigs. If they are over 2-3 weeks in age.you may save a few more pigs. Consult your veterinarian.	
Clostridial enteritis: *Bacterium Clostridium perfinges Type C*	Sow vaccination[3] to protect baby pig through colostrum. (See Sows) Clostridium Type C antitoxin at birth. This may be too late, sow vaccination preferred.	None	
Non-specific diarrheas: *E. coli and other bacteria*	Before farrowing expose the sow and gilt to manure from the farrowing house. Bacterins to the sow (preferably autogenous) may be helpful. Sanitation of the building, wash and fumigate. Wash the sow or gilt when brought to the farrowing house. They may be carriers. Allow an interval between farrowings. Consult your veterinarian for a specific program.	Early treatment (First 24 hours most important) with an antibiotic or sulfonamide drug by using a sensitivity test of the bacteria involved.[4] Where the problem exists, treatment at 24 hours whether scours is observed or not is a good practice.	
Nutritional anemia: *Iron deficiency*	Inject with injectable iron compounds at 1-3 days of age. Inject into the muscle of the neck or under the skin of the neck or flank. Give a second injection if pigs are not starting to eat creep feed by 3½ weeks of age. Oral iron dosed individually twice weekly until the pigs are eating will prevent anemia, but it is a time-consuming job. Oral iron in moss or feed is a valuable aid to prevent nutritional anemia.	Once anemia occurs use injectable iron compounds. Add additional iron and copper to the creep rations.	
Pneumonia: *Bacteria* *Pasteurella* *Mycoplasma* *Secondary to Atrophic rhinitis* *Drafts*	Improve management, avoid drafts and chilling. Bacterins (preferably autogenous) for Pasteurella pneumonia.	Oxytetracycline[2] Penicillin[2] Tylosine[2] These drugs are to be injected. Broad spectrum antibiotics oxytetracycline or chlortetracycline fed at high levels may be valuable in secondary chronic pneumonias.	18 days 5 days 4 days
Atrophic rhinitis: *Bacteria* *Bordetella bronchiseptica*	Nasal swabbing of sows. (Consult your veterinarian about the merits and demerits of nasal swabbing. Rhinitis free breeding stock. Wean pigs early in infected herds. Save older sows to raise replacement gilts. Avoid stress conditions; enteritis, anemia, pneumonia and parasites which will make the effects of rhinitis more severe. Keep cats and other carrier animals out of the farrowing house, as they can be carriers of the bacteria Bordetella bronchiseptica.	Sulfamethazine or sulfathiazole in creep feeds in combination with antibiotics Use for a minimum of 5 weeks, preferably to at least 75 lb. in weight. Many strains of bacteria are resistant to sulfa drugs. To control secondary pneumonias it may be valuable to use sulfamethazine or sulfathiazole and broad spectrum antibiotics to market weight. Antibiotics may be injected for treatment of individuals showing respiratory problems. (See pneumonia baby pigs)	Sulfamethazine-7 days Sulfathiazole-10 days
Arthritis (Pyogenic): *Bacteria* *Streptococci sp* *Corynebacterium sp* *Staphylococci sp*	Clip needle teeth in first few hours, ear notch and dock pigs in a clean and sanitary manner. Avoid rough floors. Mechanical abrasions of the feet and knees occurs in first few hours of life. Disinfection of navels is important but other sources of infection are the ears, knees and tail in modern swine units. The use of epoxy paints to improve the floor surface may be important; avoid excessively smooth floors.	Oxytetracycline[2] Penicillin[2] Tylosin[2]	18 days 5 days 4 days
Lameness: *Navel infection* *Tail docking* *Foot and leg abrasions* *Other injuries*	(See above) Use a sanitary method to reduce infection and control hemorrhage. Chicken debeakers are useful for this purpose as it cauterizes the tail stump.	Injectable antibiotics (See above)	

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DISEASE/CAUSE	PREVENTION[5]	TREATMENT[5]	WITHDRAWAL
Bacterial enteritis: *Bacterium* *E. coli most common* *Erratic diet of sows milk and creep fed* *Pigs immune system at low point*	Avoid chilling and drafts. Keep pens dry. Consider using creep feeds with lower protein levels that have additional lysine and other fortification added. Use nitrafurazone or sulfas in the drinking water at weaning. Carbadox in the feed may be of value. See note concerning the use of carbadox under Weanling Pigs and Finishing Hogs (Necrotic enteritis).	Nitrafurazone or Tetracyclines in pig's drinking water[2]	5 days 4 days
Weanling Pigs and Finishing Hogs			
Colibacillosis (Post weaning diarrhea) **Feeder pig enteritis** **Non-specific bacterial enteritis:** *Bacterial* *Usually E. coli*	Avoid stresses, feed changes. Medicate feed and/or water for 5-7 days during stress periods	See Necrotic enteritis Correct anemia if present Use injectable iron and feeds with additional iron and copper. Normal electrolytes may be of value in the water. Additional fortification with B vitamins in the diet may be helpful at this time.	
Edema disease (Enterotoxemia): *Bacteria* *E. coli* *Stress such as weaning, shipping, feed changes*	Avoid stresses, Use feeds with higher fibre content during this period	Starvation for 24 hours Nitrafurazone or Tetracyclines in pig's drinking water[2]	 5 days 4 days
Parakeratosis: *Zinc deficiency* *High calcium* *Rations or other mineral imbalances*	50 ppm. of zinc added to the ration	150 ppm. of zinc added to the ration	
Hemorrhagic syndrome (Bleeding disease) *Anti-vitamine K factors?* *Mycotoxins* *Moldy feeds* *Unknown causes*	Menadione Sodium Bisulfite 2 gm./ton of feed	Increased levels of Menadione Sodium Bisulfite in feed and/or water	
Jowl absess (Cervical abscesses): *Bacterial* *Streptococci sp most common* *Many others also associated with abscess formation*	Vaccination at 10-15 weeks of age[1,3] Chlortetracycline 50-100 gm./ton to reduce incidence	Surgically drain abscesses (Limited value on a herd basis) Penicillin[2] - Do sensitivity testing of bacteria present to determine correct antibiotic[4]	 None established 5 days
Erysipelas: *Bacteria* *Erysipelothrix insidiosa*	Erysipelas vaccine[1,3] (Avirulent) Erysipelas bacterin[3] Oral Erysipelas vaccine (water mix) Vaccination at 6-8 weeks of age	Penicillin[2] Anti-swine erysipelas serum[2]	5 days
Necrotic enteritis **Necro** **Bacterial enteritis** *Bacteria* *Salmonella sp.* *May be present as a systemic disease with little or no diarrhea present.* *Contaminated feed sources* *Carrier animals*	Isolate new animals for 3-4 weeks before mixing with other swine Bacitracin 50-100 gm./ton of feed Chlortetracycline 50-100 gm./ton of feed Furazolidone 150 gm./ton of feed or Furazolidone 200 gm./ton of feed, 2 weeks; 150 gm./ton of feed, 3 weeks; 100 gm./ton of feed, 5 weeks Neomycin sulfate 35 gm./ton of feed Oxytetracycline 50 gm./ton of feed Penicillin-Streptomycin combinations 45-90 gm./ton of feed	Bacitracin Not less than 100 gm./ton of feed Carbadox 50 gm./ton Not to be fed to swine over 75 lb. Chlortetracycline 100-200 gm./ton of feed Furazolidone 300 gm./ton of feed feed for 10-14 days Neomycin sulfate 70-140 gm./ton of feed Nitrafurazone 500 gm./ton of feed 5-6 days Water soluble form[2] Oxytetracycline 100 gm./ton of feed Penicillin-Streptomycin combinations 90-270 gm./ton of feed for not more than 14 days Sulfathiazole in drinking water[2]	None established 10 weeks None established None established None established None established None established None established 2 days 10 days

At this time carbadox has not been cleared for use in combinations with sulfa drugs. If you need sulfa drugs to aid in controlling rhinitis and pneumonia consult your veterinarian for proper application of these products in your herd.

DISEASE/CAUSE	PREVENTION[5]	TREATMENT[5]	WITHDRAWAL
Hemorrhagic dysentery **Vibrionic dysentery** **(Bloody scours)** *Vibrio coli* *Large spirochete* *Possible other unknown casues*	Isolate new animals Avoid contaminated trucks and equipment	Carbadox 50 gm./ton Not to be fed to swine over 75 lb.	10 weeks
	Arsanilic acid or Sodium arsanilate 0.005-0.01% 45-90 gm./ton of feed	Arsanilic Acid or Sodium arsanilate 0.025-0.04% for 5-6 days 230-360 gm./ton of feed	5 days 5 days
		Sodium Arsanilate[2] Water soluble for drinking water	5 days
	Chlortetracycline 50-100 gm./ton of feed	3 Nitro-4Hydroxy Phenyl Arsonic Acid[2]	5 days None established
	Furazolidone 150 gm./ton of feed or Furazolidone 200 gm./ton—2 weeks 150 gm./ton—3 weeks 100 gm./ton—5 weeks	0.02% feed for 5-6 days Furaxolidone 300 gm./ton Feed for 10-14 days	None established None established None established
	Neomycin sulfate 35 gm./ton of feed	Neomycin sulfate 70-140 gm./ton of feed Nitrafurazone—water soluble	None established None established
	Oxytetracycline 50 gm./ton of feed	Oxytetracycline 100 gm./ton of feed	None established
	Tylosin 100 gm./ton of feed for 3 weeks, then 40 gm./ton of feed to market weight	Tylosin 40-100 gm./ton of feed for 2-6 weeks after treating with tylosin in drinking water for 3-10 days[2]	None established
Pneumonias: *Secondary to Atrophic rhinitis* *Secondary to influenza* *Pasteurella sp.* *Mycoplasma*	See Atrophic rhinitis baby pigs Early treatment Avoid drafts Problem herds can use bacterins[3] containing Pasteurella organisms Avoid bringing in new animals; isolate all additions to the herd Reduce migration of Ascarids (Round Worms) Passage of the larva through the lung makes the pneumonia more severe	Individual[2] Oxytetracycline Penicillin Herd[2] Chlortetracycline Oxytetracycline Sulfamethazine Sulfathiazole Other sulfa drugs Expectorant drugs All of the above drugs for herd use are to be used in the drinking water. Tylosin plus sulfamethazine 100/100 (gm./ton) Feed at least 3 weeks	18 days 5 days 24 hours 24 hours 10 days 10 days Dependent upon the drugs used 5 days
Atrophic rhinitis: *See baby pigs*	Avoid stresses. Enteritis, pneumonia, parasites all make rhinitis more severe. Sulfamethazine, or sulfathiazole in the feed of small pigs, use for at least 5 weeks, preferably to 75 lb. in weight. (Many strains of Bordetella are resistant to sulfonamide therapy).	Sulfathiazole Sulfamethazine	10 days 7 days
Arthritis: *Bacterial* *Mycoplasma hyosynoviae (granularum)* *Erysipelas*		Tylosin[2] Lincocin[2] Early treatment essential Penicillin[2] Anti-swine erysipelas serum[2]	4 days 48 hours 5 days
Tail biting: *Tail biting* *Injuries* *Crowding* *Dietary deficiencies* *Lack of enough feeders and waterers* *Lack of bedding (bare concrete floors)* *Weather changes* *Manure pit gases* *Unknown causes*	Remove tails on baby-pigs Well fortified rations Avoid crowding	Individual[2] Penicillin Oxytetracycline Early treatment is essential Herd Organic iodides[2] Magnesium oxide in feed Hay, paper sacks, tires, bowling balls, to give hogs something to reduce boredom. If closely confined move pigs to a larger pen or outdoors.	5 days 18 days None established None established

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DISEASE/CAUSE	PREVENTION	TREATMENT	WITHDRAWAL
Anemia: *Nutritional (iron deficiencies)* *Eperythrozoonosis (blood parasite)* *Moldy grains (blood loss from hemorrhages)* *Gastric Ulcers (blood loss)* *Vitamin K deficiency or interferences with absorption and utilization* *Post weaning diarrhea (secondary effect)*		Acute hemorrhages as from ulcers and the effects of mold are seldom observed early enough to justify treatment. Other anemias are corrected by adding iron and copper to the diet. Injected iron is used in conjunction with other post weaning diarrhea treatments.	

Common Parasites — Internal

PARASITES/CAUSE	PREVENTION	TREATMENT	WITHDRAWAL
Ascarids **Large round worm:** *Ascaris suum*	Worm the sow prior to breeding or 2 weeks prior to farrowing. Wash sow thoroughly before farrowing. Raise pig in cleaned buildings or new hog pastures. Avoid old lots.	Sow Dichlorovos 7-10 days prior to breeding and/or 2 weeks prior to farrowing. Piperazine in feed or water same schedule as for Dichlorovos Pig Dichlorovos mixed in feed at 4-5 weeks of age. Piperazine compounds in feed or water 6 weeks of age or older. Levamisole Hydrochloride in feed or water at weaning.	None established None established None established None established 3 days
	Pigs Hygromycin B 12 gm./ton of feed Thiabendazole 0.005-0.1% (45.4-908 gm./ton) in feed (administer continuously, feed containing 0.05-0.1% for 2 weeks followed by feed containing 0.005-0.02% Thiabendazole for 8-14 weeks) Pyrantel Tartrate 96 gm./ton (0.0106%)	Pyrantel Tartrate 800 gm./ton (0.0881%)	48 hours 30 days 24 hours
Lungworms: *Metastrongylus sp.*	Raise pigs in confinement. Avoid ingestion of earth worms.	Cyanacethydrazide 1 cc./35 lb. body weight Repeat in 24 hours to 2 weeks if necessary (See your veterinarian) Levamisole Hydrochloride in feed or water at weaning.	3 days
Whipworms: *Trichuris sp.*	General swine sanitation Hygromycin B 12 gm./ton	Dichlorovos in feed as needed. Have your veterinarian check for the presence of parasites. Hygromycin in feed. (An aid in treatment)	None established 48 hours
Nodular worm: *Oesophogostomum sp.:*	Hygromycin B 12 gm./ton of feed Pyrantel Tartrate 96 gm./ton (0.0106%)	Hygromycin B in feed Dichlorovos in feed Phenothiazine in feed Piperazine in feed or water Levamisole hydrochloride in feed or water Pyrantel tartrate 800 gm./ton (0.0881%)	48 hours None established None established None established 3 days 24 hours
Strongyloides: *Stongyloides ransomi:*	Strict sanitation in the farrowing house, Maintain sows and gilts in clean dry pastures during gestation. Thiabendazole in feed at a level of 0.05-0.1% has been reported to be of value.	Thiabendazole Baby pigs 1-8 weeks of age 200 mg. to each 5-7 lb. of body weight. Repeat in 5-7 days if necessary.[2]	30 days 30 days

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Common Parasites — External

PARASITE/CAUSE	PREVENTION	TREATMENT	WITHDRAWAL
Mange: *Sarcoptes scabiei* *Demodex phylloides*	Dip or spray all new animals arriving at the fram. Routinely schedule spraying at 2 week intervals of animals and premise until control is achieved.	Toxaphene Malathion Coumaphos (Do not use on pigs before weaning) Use above as a dip or spray	28 days None established None established 14 days
Lice: *Hematopinus suis*	Dip or spray all new animals arriving at the farm. Routinely schedule spraying at 2-3 week intervals of animals and premise until control is achieved.	Toxaphene Malathion Coumaphos (Do not use on pigs before weaning) Use above as a dip or spray Crotoxyphos (Ciodrin)	28 days None established 14 days None established

CAUTION: In the use of products for mange and louse control, follow manufacturers instructions for proper mixing and application. Avoid medicated hog oils on pregnant animals as abortions may occur. It is not safe to spray small nursing pigs.

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