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Pig vaccination programs

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This Primefact provides information to pig owners and veterinarians on routine vaccination programs to prevent common diseases in pig herds. Herd-specific vaccination programs should always be developed in consultation with a veterinarian.

Routine vaccination programs for gilts/sows and boars

Vaccination is low-cost insurance against disease.

A number of vaccines are available off-the-shelf for routine use in pigs. Some vaccine manufacturers are also licensed to produce specialist 'autogenous' vaccines. Autogenous vaccines are used to protect against diseases when no commercial vaccines are available. These vaccines are made from bacteria isolated from diseased pigs on a specific farm. In most states, these vaccines can only be used on the farm from which the isolate was derived.

The major diseases that can cause infectious reproductive failure in gilts and sows are erysipelas, leptospirosis and porcine parvovirus. Pigs affected with erysipelas will have a high temperature, will often have 'diamond-shaped' skin lesions and may abort as a result. Leptospirosis typically causes late-term abortions and occasionally stillbirths. Porcine parvovirus usually infects unborn piglets, causing their death and resulting in a high proportion of mummies. Herds should be investigated for infectious reproductive failure if stillbirth rates exceed 8-10%, mummies exceed 3% (particularly in gilt litters), if a number of sows/gilts abort and/or if more than 3% of pregnant sows fail to farrow.

The following information will assist you to develop a routine vaccination program.

The vaccination program starts with an injection soon after gilt selection. Full protection comes only 2 weeks after a booster shot. Combination vaccines are now available.

Routine vaccination against erysipelas, leptospirosis, parvovirus and *E. coli* should be considered when introducing young gilts to the herd.

When naïve animals are introduced into a herd with endemic disease, other vaccines are recommended. These include *Mycoplasma hyopneumoniae*mycoplasma, Glassers disease, proliferative enteropathy and pleuropneumonia vaccines.

Leptospirosis, parvovirus and erysipelas boosters must be given before mating so the foetuses are protected.

With *E. coli* vaccinations, the aim is to produce maximum antibodies in the gilt's colostrum at her first farrowing. The booster for *E. coli* must be given 3-4 weeks before farrowing. The primary injection can be given at selection, or as late as 4 weeks before the booster shot.

Booster vaccinations should be given for erysipelas and leptospirosis about 3-4 weeks before farrowing. This will boost antibody levels in the sow's colostrum, giving additional protection to the litter, as well as providing protection to the sow for her next pregnancy.

Vaccination of older sows against *E. coli* and parvovirus may not be necessary and will depend on the immune status of the herd.

Boars should be vaccinated every 6 months against erysipelas and leptospirosis.

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A vaccination schedule for gilts and sows

	Leptospirosis	Erysipelas	*E. coli*	Parvovirus
Gilts at selection	+	+	+	+
4-6 weeks later	+	+		+
3-4 weeks before farrowing	+	+	+	

Vaccines for weaners, growers and finishers

Vaccination of progeny should be undertaken with the following considerations:

Cost

As individual vaccination of progeny is relatively more expensive that vaccinating the breeding herd, the costs of any vaccination program should be weighed against the potential performance benefits.

Timing

Some vaccines will not work when maternally-derived antibodies from the sow are still present. Examples of this include killed erysipelas and pleuropneumonia vaccines in pigs less than 8-10 weeks of age.

Method of delivery

Most vaccines are killed, and are injected into the muscle. Newer vaccines (Enterisol® Ileitis, APPAlive®) are live, and should be given orally (Enterisol®) or into the nose (APPAlive®).

Storage and handling

Always refer to the manufacturer's instructions for handling vaccines. Most should be stored at 40°C (in a refrigerator). Never use vaccines that have been frozen or heated. Take care to discard any leftover vaccines that may be contaminated.

There are off-the-shelf vaccines available for weaner, grower and finisher pigs to prevent:

- enzootic (*Mycoplasma*) pneumonia
- pleuropneumonia
- Glassers disease
- proliferative enteropathy ('ileitis')
- erysipelas
- post-weaning colibacillosis

Special 'autogenous' vaccines can be made to prevent:

- pleuropneumonia
- Glassers disease
- post-weaning colibacillosis (including oedema disease)

Consult your specialist pig veterinarian for further information on these specialist vaccines.

For further information about vaccines for pigs, please contact:

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