Sampling for Swine Influenza Virus –(IAV-S) Isolation

Clinical Signs and Sampling:

At the earliest signs of SIV (IAV-S) infection, sample the herd and send for diagnostic testing and viral isolation. Choose pigs that are showing symptoms including fever, nasal discharge and coughing. Sample the nasal cavity with a sterile nasopharyngeal calcium alginate swab.

Swab Stabilization and Pooling:

Swabs should be placed in viral transport media tubes to maintain virus viability. Swabs can be pooled up to 4 swabs per tube. Ensure that the viral transport media (VTM) or universal transport media (UTM) covers the absorbent end of the swab. **Saline and Phosphate Buffered Saline are not ideal for optimum viability of the virus and are not recommended for transport.**

Storage and Shipping:

The ideal temperature for freezing viral samples is -80°C. If you do not have access to this type of freezer it is better not to freeze the samples. Store samples refrigerated and ship cool for delivery within 24 hours of sampling. **Viability can be lost with incorrect freezing or delayed shipment to the lab.**

Sample Considerations:

Ensure that swabs in transport media and other liquid samples have enough volume for testing, a minimum of 1.5 mL is required at Gallant Labs. For tissue submissions, ensure that multiple areas of the lung are sampled or send the entire lung. If secondary testing is anticipated at another lab, consider split sampling and sending the sample to each lab at the same time. Gallant can hold the processing of split samples until the clients give the go ahead to proceed with SIV testing and/or isolation.

Virus Viability:

Although PCR testing can accurately detect SIV in samples, it does not indicate viability of the virus. In addition, real-time PCR testing can determine the amount of virus present in a sample but does not guarantee that SIV can be isolated. It is probable that samples having a high concentration of SIV will yield a viable isolate. However, this is not assured and depends on the quality of the sample received. It is imperative that the sample:

1. Originates from a pig in the early stages of SIV infection
2. Comes from representative tissues.
3. Uses appropriate swabs and transport media.
4. Is stored properly prior to and during shipping.
5. Is transported immediately to the Lab(s). Not forwarded through another lab.
6. Is processed rapidly at the lab or stored at -80°C until testing can be initiated.