When to vaccinate and why?

Practical immunology for pig farms

SvineVet Årsmøde 2026

SvineVet

Professionel svinerådgivning

Why vaccinate?

Vaccination is a management tool that:

- reduces clinical disease and deaths
- reduces production losses (growth, feed conversion)
- improves animal welfare
- reduces antibiotic use
- creates a more uniform herd immunity

SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

Immune system in 60 seconds

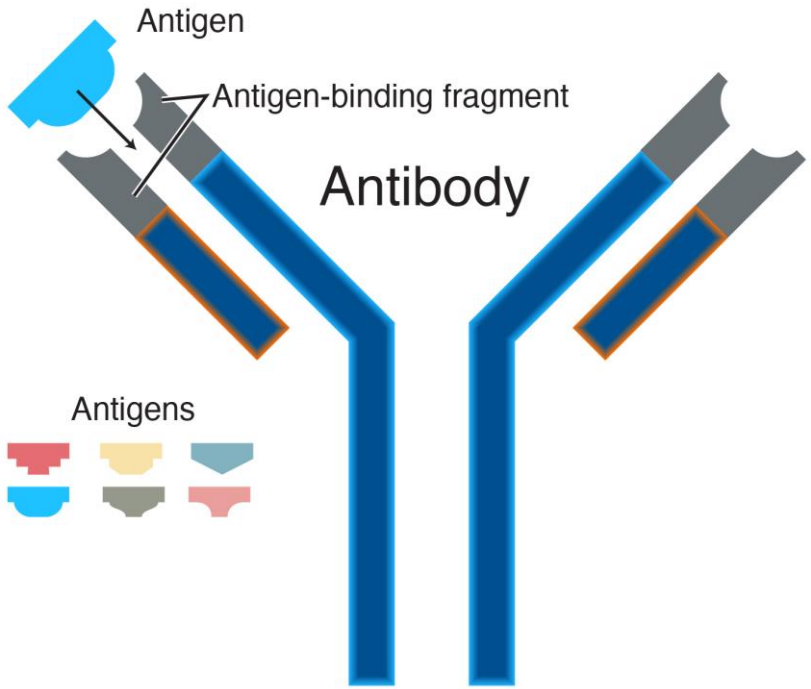
Key idea:

The immune system learns to tell “self” from “non-self”. Non-self particles are antigens. Antigens trigger antibodies (specific—like a key in a lock).

Vaccination = controlled exposure to antigen

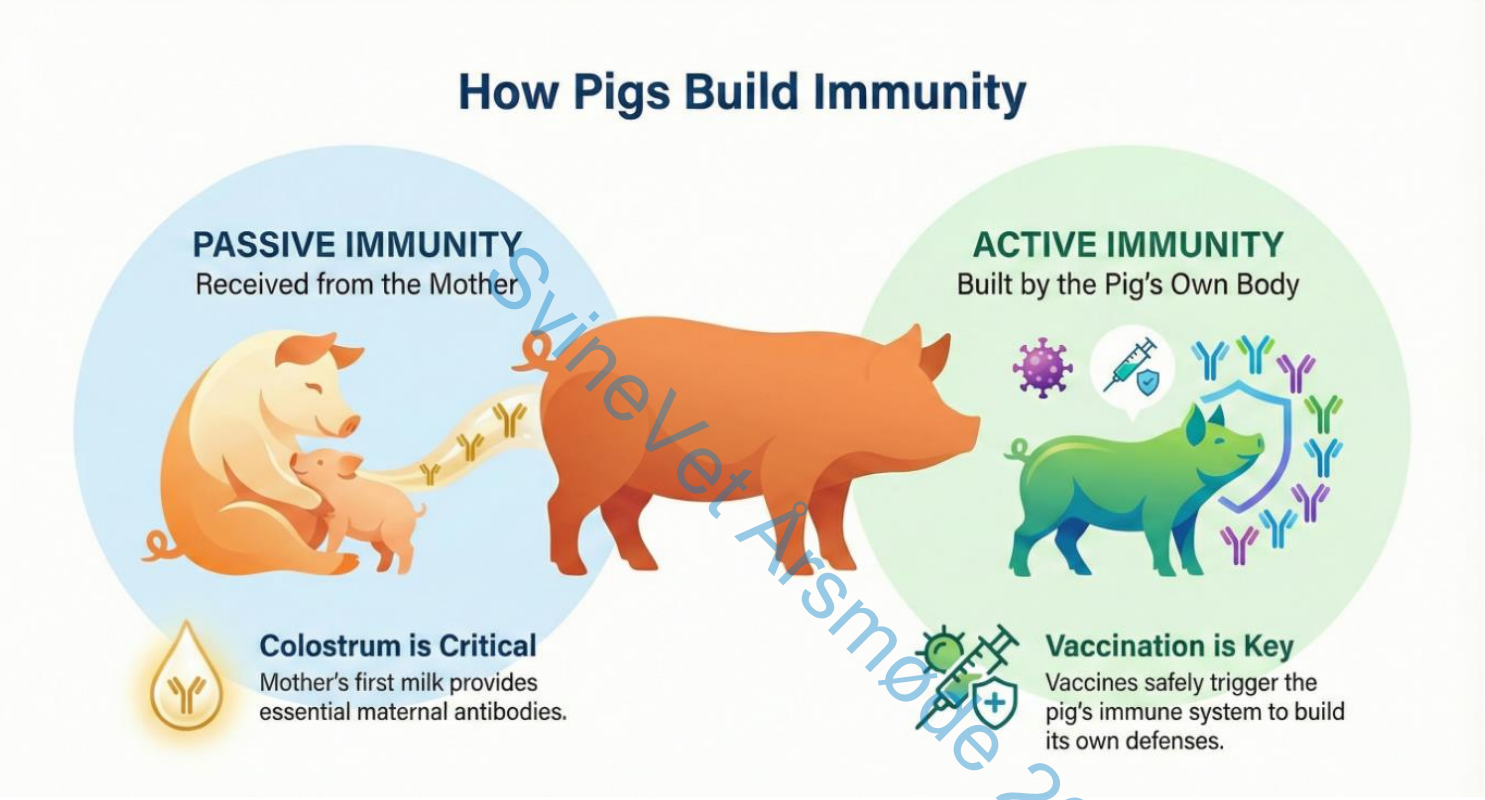
- Prime the immune system before real infection
- Create memory cells for faster response later
- Aim for protection OR reduce severity

SvineVet Årsmøde 2026



Antibody–antigen binding is highly specific.

Types of immunity



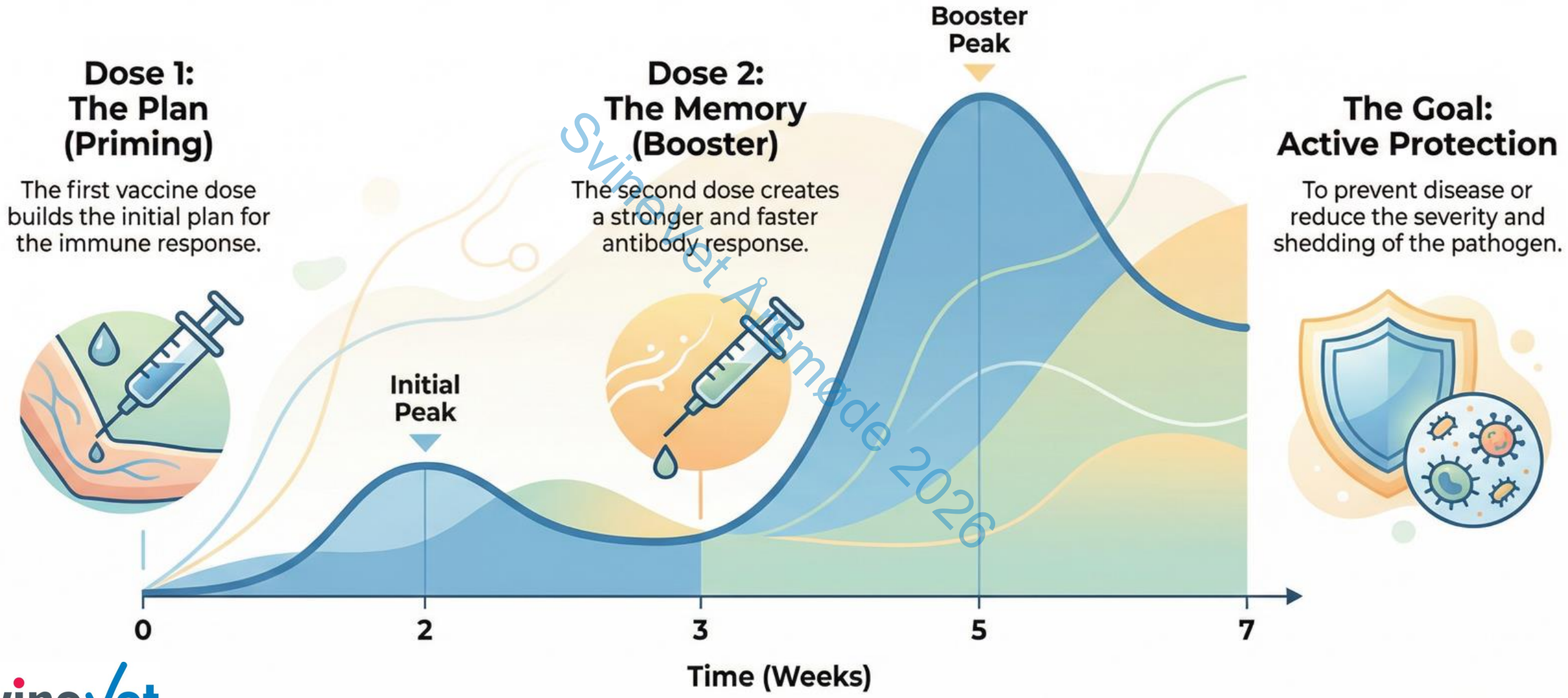
SvineVet Årsmøde 2026

Two practical distinctions:

- Passive protection: antibodies are GIVEN (colostrum, serum) — fast, but short-lived.
- Active protection: the pig MAKES antibodies (infection or vaccine) — slower, but memory lasts longer.

SvineVet
Professionel svinerådgivning

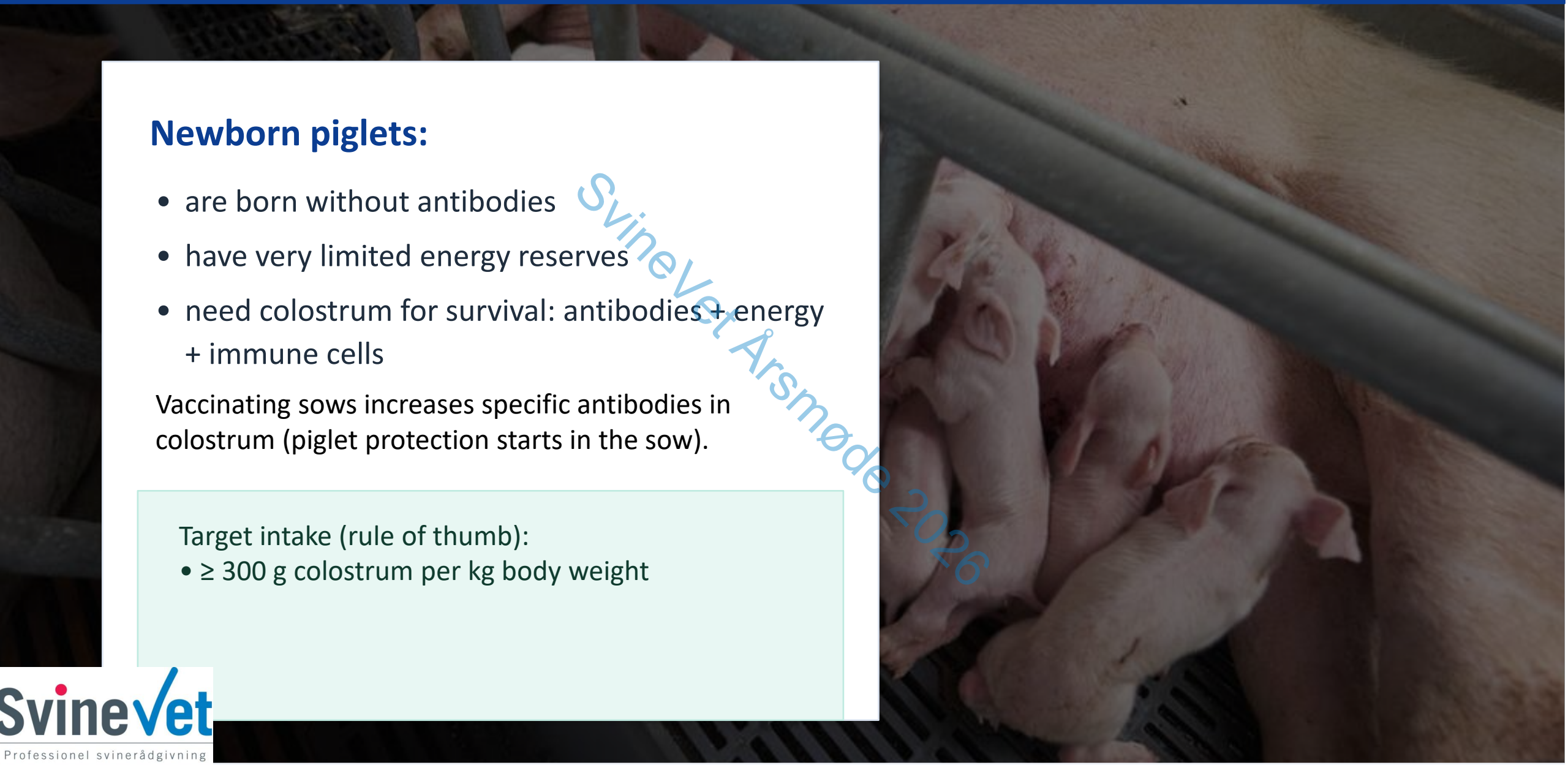
What vaccines do (and don’t do)



SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

The #1 “vaccination” in the farrowing unit: colostrum



Newborn piglets:

- are born without antibodies
- have very limited energy reserves
- need colostrum for survival: antibodies + energy + immune cells

Vaccinating sows increases specific antibodies in colostrum (piglet protection starts in the sow).

Target intake (rule of thumb):
- ≥ 300 g colostrum per kg body weight

SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

Sow vaccination: protecting piglets via colostrum

1. The Protected Sow

Vaccinating the sow **3-6 weeks before** farrowing fills her colostrum with specific antibodies.

2. The Vulnerable Piglet

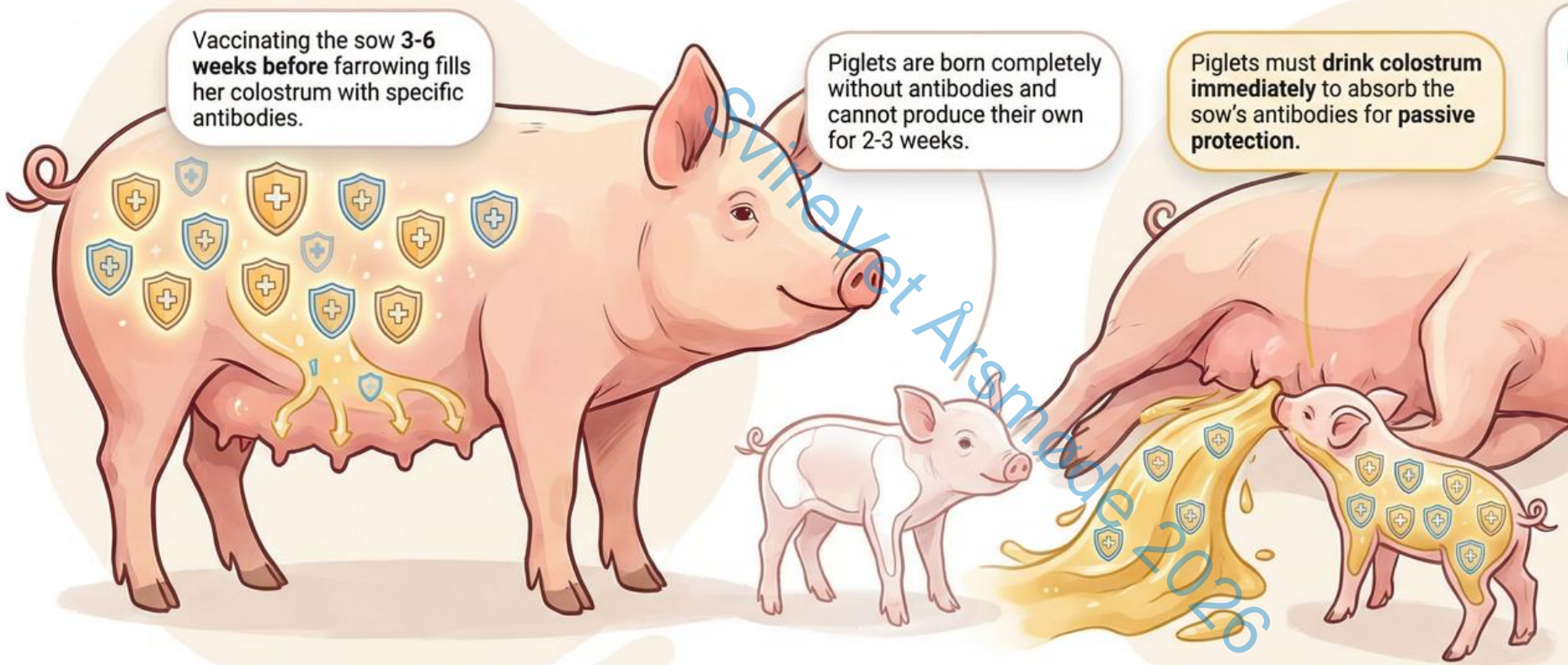
Piglets are born completely without antibodies and cannot produce their own for 2-3 weeks.

3. The Critical Transfer via Colostrum

Piglets must **drink colostrum immediately** to absorb the sow's antibodies for **passive protection**.

A Critical Window: The First 24 Hours

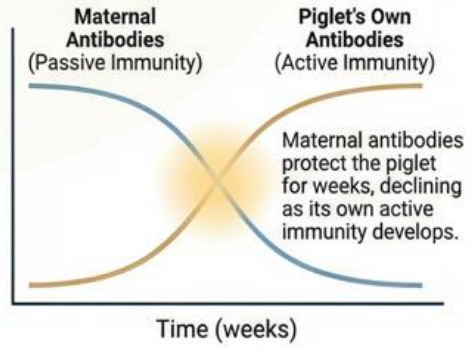
The piglet's gut can only absorb antibodies for about **24-36 hours** before it "closes."



Target Intake: ≥300 g/kg

Each piglet needs at least 300g of colostrum per kg of body weight.

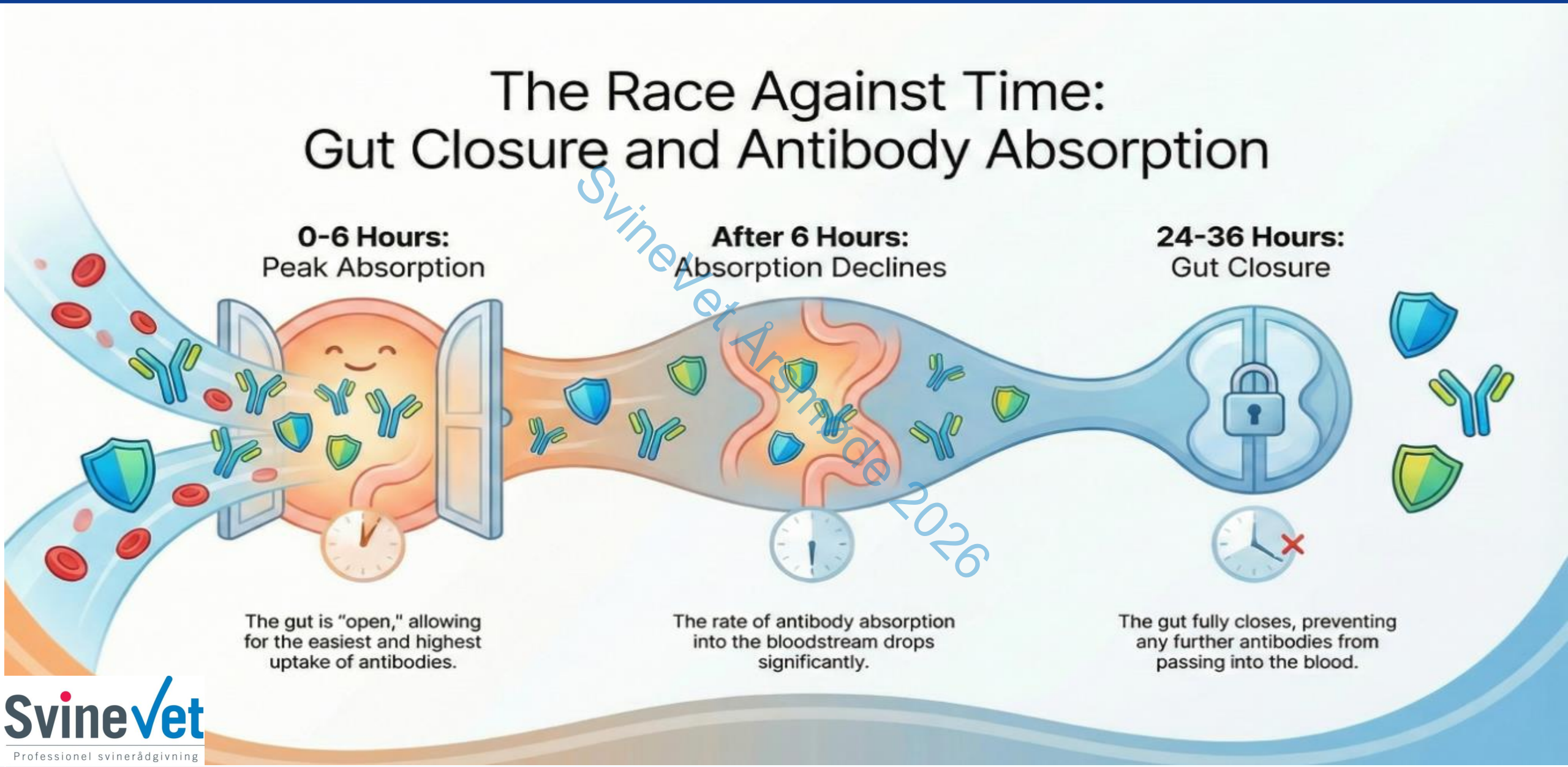
The Immunity Handover



SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

Timing matters: the gut closes



SvineVet Årsmøde 2026

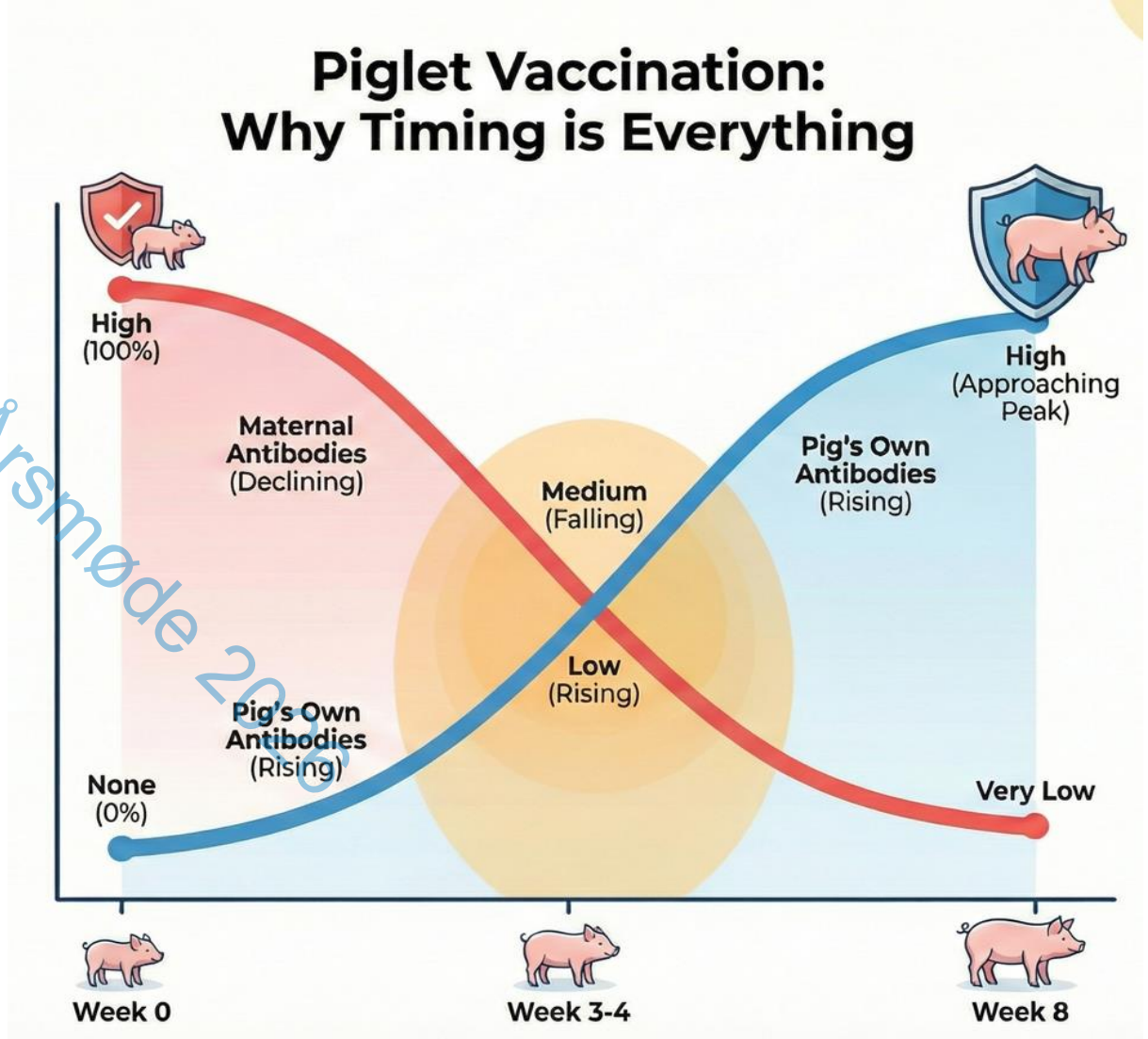
SvineVet
Professionel svinerådgivning

Piglet Vaccination

This is why timing is tricky:

- Colostrum antibodies protect early…
- …but can block (neutralize) some vaccines.
- Piglets start making their own antibodies after ~2–3 weeks (if conditions are good).

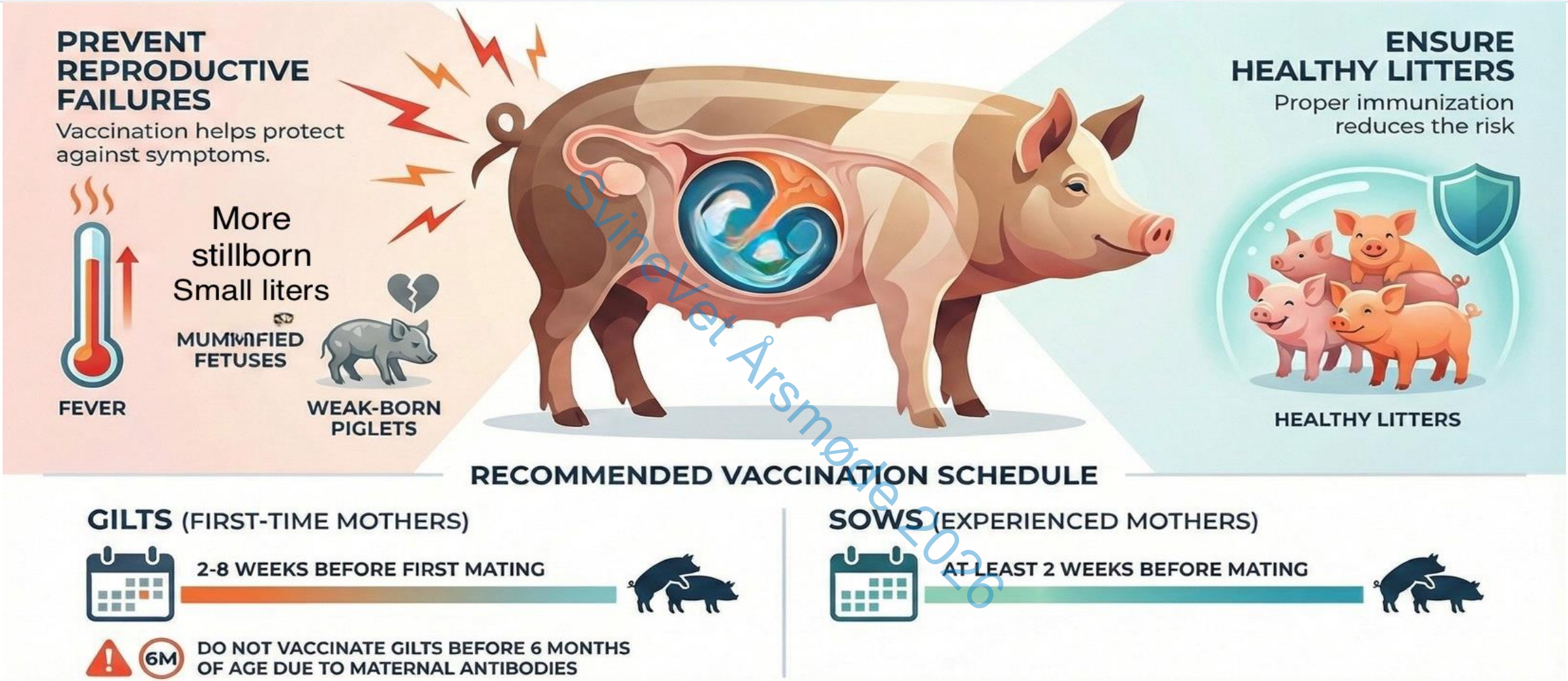
"Window of susceptibility" = when maternal antibodies are low low but pig immunity is not strong yet.



SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

Vaccination timing for Sows & Gilts



SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

When to vaccinate: 5 rules

1. **Vaccinate BEFORE exposure**
   Plan ahead: immunity takes time to develop.

2. **Respect maternal antibodies**
   Too early can mean weak response—use the farm's schedule.

3. **Avoid vaccinating sick/stressed pigs**
   Climate, hunger, iron deficiency and other disease reduce response.

4. **Booster on time**
   If the booster is late, the "memory boost" is weaker.

5. **Stable routines beat "one-off heroics"**
   Consistency across batches gives herd-level benefit.

SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

Why vaccines fail (most common reasons) People + Pig + Product

The Correct Injection Site

Administer Vaccine Behind the Ear

Use the correct site in the triangular area on the neck for proper administration.

Train Your Staff

Ensure new staff are trained on the correct site and route, and provide regular refreshers.

Why Vaccines Fail: Common Pitfalls

Poor Technique & Timing

Using the wrong site, dirty needles, or vaccinating too early/late are primary errors.

Improper Product Handling

Vaccine potency is lost due to cold chain problems or using opened bottles too long.

Compromised Pig Health

High stress, other diseases, or high infection pressure can prevent a proper immune response.

SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

How to Store Vaccines Correctly

Step 1: Upon Delivery

Refrigerate Immediately

Move delivered vaccine packages from outside into the refrigerator right away.

Avoid Direct Sunlight

Never leave vaccine deliveries in the sun, as heat can damage them.

Step 2: Refrigerator Storage

Store in the Refrigerator Door

This keeps vaccines away from the freezing element at the back of the fridge.

Maintain 2-5 °C

Freezing will destroy the vaccine, making it completely ineffective.

Svinevet Årsmøde 2026

Svinevet
Professionel svinerådgivning

Accidental Self-Injection: Next Steps

1. Rinse the Area Immediately

In case of skin or eye contact with the substance, rinse thoroughly with water.

2. Seek Medical Attention

Go to a doctor if you experience skin irritation or if you have self-injected.

3. Inform Your Doctor

Crucially, show the substance's package leaflet to your General Practitioner (GP).

SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning

A simple vaccination checklist

Core principles for proper swine vaccination to ensure safety and effectiveness

SvineVetArsmøde 2026

1. Right Pig

Vaccinate the correct age group and ensure pigs are healthy enough to respond.

2. Right Product

Use the correct vaccine for your farm's specific pathogens and strategy.

3. Right Dose

Administer the correct volume, mix correctly, and take no shortcuts.

4. Right Route/Site

Follow the label for route (IM/ID/SC/PO) and use the correct neck location.

5. Right Time

Administer the vaccine before exposure and give boosters on schedule.

Critical Reminders

Proper Storage

Keep vaccine at 2–8°C and avoid freezing.

Cleanliness is Key

Always use clean needles for every administration.

Keep Records

Record the batch/lot number and the date of vaccination.

SvineVet
Professionel svinerådgivning

Take-home messages

Colostrum first: the immune system starts in the farrowing room.

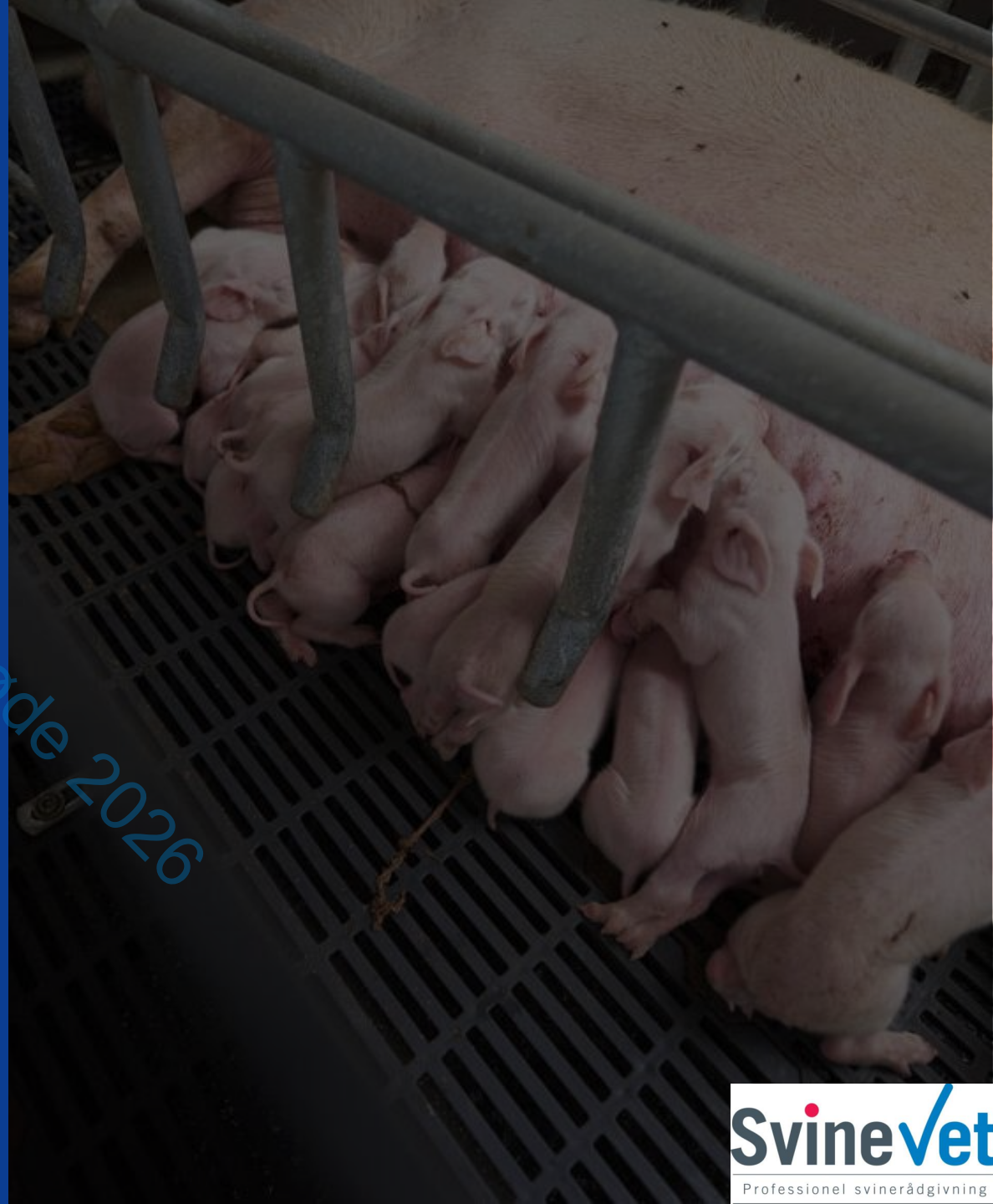
Sow vaccination can protect piglets via colostrum—timing matters.

Vaccinate at the right time—before exposure and with respect to maternal antibodies.
Grow-finish vaccines can also pay off: fewer clinical problems and better uniformity.

Technique + storage matter as much as the product.

Consistency across batches gives the biggest payoff.

Questions?



SvineVet Årsmøde 2026

SvineVet
Professionel svinerådgivning