

# cdfa Vaccine Handling Guidelines



- Proper handling and administration of vaccines is fundamental
- Vaccination failure is mostly related to vaccine mishandling and improper usage
- Vaccines work together with other BMP to ensure healthy and productive animals

### Vaccination steps as components of the Best Management Practices:





# Antimicrobial Use and Stewardship Best Practices Management Series VACCINE HANDLING GUIDELINES // PLANNING



## Set Goals & Protocols With Your Vet

Consider what has worked well for your farm in past years, and areas to improve upon.

Pay special attention to your herd health records from previous years to help identify needs.

Discuss upcoming potential health challenges due to disease status in your area, weather, geography, and production goals.

# **Training & Troubleshooting**

**Educate employees** on their role in ensuring proper vaccination, including the following:

- Emphasize the value of utilizing prevention methods for keeping the herd healthy
- Demonstrate proper technique including injection location and needle size
- Explain protocols to ensure appropriate injection
- Discuss proper disposal for empty bottles and residual vaccine
- Monitor for adverse reactions

**Create and maintain a <u>Material Safety Data Sheet</u> (MSDS)** book for all the chemicals and drugs (including vaccines and antibiotics) that are stored on the farm.

**Talk to your veterinarian** about how to fix common problems. What will you do if:

- A vaccine was left at room temperature
- A bottle was mixed with the wrong diluent



## Assign Specific **Duties**

- Order supplies
- Create vaccination protocols with veterinarian
- Educate workers
- Receive vaccine shipments
- Ensure proper vaccine storage
  - Check temperatures
  - Expiration dates
- Administer vaccines
- Keep records
- Read and save manufactured vaccine guides or directions for use

# Acquire Tools & Materials

Purchase and gather necessary materials to ensure appropriate record-keeping, such as:

- Clipboards and whiteboards
- □ Record-keeping software, paper forms, or designated notebooks
- Pens, permanent marker
  - Securing the pen to the refrigerator door or clipboard may prevent losing them; have backup pens in office
- □ Refrigerator to store vaccines
- □ Standalone or wireless thermometer
- Needles & syringes
  - Account for adequate number of needles, including extras for those broken or dropped
  - Consider appropriate gauge and size of needles according to the type of animal and route of injection
  - □ Use a new needle to draw vaccine into single or multiple dose syringe or gun. Follow your quality assurance plan recommendations for number of animals per needle.
- □ Sharps disposal containers
- □ Vaccine vials
  - Ensure your vaccine provider follows appropriate precautions regarding storage, transportation, and records. Inquire if policy is not publicly stated.
  - Write out estimated vaccine dose needs including current head counts and potential buy-ins or births
  - Where possible, purchase smaller bottles of vaccine for smaller groups of animals to reduce wasted product or accidental vaccination with product that may be expired, less effective, inactivated or contaminated
  - Dispose of vials soon after use
- □ Staff teaching materials such as videos, visuals, or flowcharts





# Antimicrobial Use and Stewardship Best Practices Management Series VACCINE HANDLING GUIDELINES // TRANSPORTATION



#### **Packaging Guidelines**

- Use properly insulated containers such as commercially available coolers; maintain them properly and discard if broken or if it loses its insulating properties
- Place insulating barrier between frozen packs and vaccines (such as bubble wrap, paper, Styrofoam peanuts or similar material) when transporting to prevent direct contact
- Clearly identify the contents as fragile and perishable on the outside of package
- Pack refrigerated vaccines first before frozen vaccines
- Properly layer contents in shipping container
- Ship or transport vaccines in original packaging
- Note the packing time on outside of package
- Include enough ice packs to maintain a safe temperature while shipping
- Minimize the number of times a vaccine is transported and the container is opened

#### **Temperature Guidelines**

- Maintain appropriate temperature range (per the packaging) at all stages of vaccine transportation, to ensure the cold chain is maintained. Most vaccines are stored at 2 to 7°C (35 to 45°F)
- Delay opening refrigerator or freezer until ready to administer vaccine to maintain appropriate temperature
- Do not freeze and then thaw vaccines
- Monitor and record the temperature commercially available single-use cold chain monitors can be a useful tool to identify if the vaccine has experienced dangerous temperature variations
- Thermometer or other cold chain device should be placed next to vaccines and checked to confirm the packaging is at the correct temperature
- Guarantee that delivery person does **not leave vaccine package outside** your farm or office, exposed to the elements (heat or freezing)
- If travelling by car, stow the packed vaccines in the passenger compartment, not in the trunk to maintain consistent temperature
- Immediately open package on arrival and move vaccines to refrigerator







### Antimicrobial Use and Stewardship Best Practices Management Series VACCINE HANDLING GUIDELINES // STORAGE



- 🗆 -When vaccines arrive, **immediately** remove shipping packaging and move to the refrigerator. Record vaccine arrivals in log. Keep invoice and record lot numbers to refer to in case of vaccine adverse reactions. Record expiration dates to prevent economic losses or use of expired vaccines. Photographing the bottle label may be useful backup in case they are lost or accidentally disposed of. Refer to manufacturer's recommendations for storage and verify vaccine insurance policy in case of accidental loss due to temperature variations. Always maintain appropriate storage temperature for vaccines. Most vaccines are ..... stored at 2 to 7°C (35 to 45°F). Monitor and record refrigerator temperatures daily by physical inspection or automated sensors that alert when the temperature is out of its set range. Bluetooth thermometers allow monitoring without opening the refrigerator door. Establish standard operating procedures to use if the refrigerator goes outside the target temperature range or loses power.

Store vaccines in the **middle** of the refrigerator.

- Store multi-dose bottles completely sealed, ensuring removal of any needles from vials prior to storage to reduce airflow and contamination of the bottle.
- Perform regular maintenance of the refrigerator (temperature control, connectivity, door seal, locks in place, etc.) and record in log.

Keep a functional thermometer inside the refrigerator to monitor temperature daily.

Label shelves to clearly indicate where each vaccine is stored; store similarly named vaccines on different shelves to avoid confusion.

Rotate vaccine supply so the bottle or lot with the shortest expiration date is in front.

Do not store in the door, refrigerator drawers, near the cold air vent or against walls of the refrigerator as these will provide inconsistent temperature.



Placing water bottles in doors and drawers may help maintain a consistent temperature.

Do not store food in a vaccine fridge.

Do not freeze vaccines unless permitted by label. Freezing may reduce the effectiveness of the vaccine by changing the chemical structure.





# Antimicrobial Use and Stewardship Best Practices Management Series VACCINE HANDLING GUIDELINES //

# PREPARATION & ADMINISTRATION









### Antimicrobial Use and Stewardship Best Practices Management Series VACCINE HANDLING GUIDELINES // & FOLLOW-UP, MONITORING & RECORDS



### **Follow-up and Monitoring**

Contact your veterinarian immediately in the event of an adverse reaction, such as:

- Swelling at injection site
- Rapid breathing
- Muscle tremors

- Facial swellingDrooling
- Collapse

#### Store purchasing receipts and label information

- Stick the label onto the paper record
- Store receipts in a binder

**Provide additional training** employees might need, such as:

- Sterile technique to fill syringe
- Appropriate injection site, route, and needle size
- Vaccines that can and cannot be used together
- Sanitation of vaccine syringes if reusable

# **Discuss withdrawal times** for groups that are at high risk of culling

• Culling an animal before the end of the withdrawal period can lead to a residue



#### Vaccine supply:

- Name of vaccine
- Date of purchase or receipt
- Temperature at time of receipt
- Quantity
- Expiration date
- Lot/serial #
- □ Storage location
- Daily refrigerator temperatures



#### Vaccine administration:

- Animal or herd ID
- Date
- Name of vaccine
- Lot/serial # (can place sticker)
- **Expiration** date
- Dosage
- Route and location of administration
- □ Withdrawal time (in days)
- Earliest date the animal could clear withdrawal time
- Name of person who administered
- Follow-up notes (record adverse reactions)

