



# Handbook

Biosecurity for animal care students

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## Introduction

This handbook is made for the people who, like us, have worked on a project or have simply gone abroad and want to know more about safety, rules and about biosecurity. This document is divided into a few chapters such as: The background where we talk more about biosecurity, why biosecurity is so important and more is told about the sign of the biohazard, furthermore, a list has been made with so many difficult words that we knew so that if you do not remember something you can take a look. In addition, a list has also been made with many different diseases, including symptoms, way of infection, what animals, is it a zoonosis, treatment and prevention word described. The routines of biosecurity are also described, in this chapter you will be told more about how to work safely with animals and how you can travel safely with animals. The last chapter is more about importing and exporting animals what the rules are of different animals, why the rules are so different between countries, where you can find the rules and what happens if you don't follow the rules.

This is a brief description of what is in the handbook. We hope this handbook will help you more in everyday life



Figure 1. Group picture when we were hiking in Åkulla.

The handbook was written in the period from March 27 to April 9, 2022.

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## 1. Background

### What is biosecurity?

Biosecurity is a measure meant to prevent the introduction and spread of infection, genetically modified organisms and invasive species. The biosecurity management of the risks to the economy, the environment, and the community of pets and diseases.

Biosecurity aims to have a safe genetic engineering. It is important so we don't get unwanted species and get more disease outbreaks.

There are many factors that can cause the diseases. The host is one. Hosts can be animals, plants or microorganisms. The susceptibilities to a disease can be influenced by age, strength of immunity, nutritional status, genetic makeup or hybrid vigor, vaccinations and breeding.

Agents can cause diseases, this can be biological, chemical or physical in nature. Biological agents include bacteria, viruses, insects, prions and fungi. Chemical agents are poisonous substances (which are produced by many types of organisms such as bacteria, plants and fungi), substances that cause allergies, and agricultural chemicals.

The last factors that are needed to cause any diseases is the environment. Environments can spread a disease, including the weather. Geographic area, animal housing, animal health practices, sanitation, biosecurity procedures and the presence of an organism, typically a biting insect or tick, that transmits a disease or parasite from one animal or plant to another.

### Importance

Biosecurity is important for a couple of reasons. The first one is health. With a proper biosecurity routine and rules, you make sure that the chance of diseases entering a building and jumping from animals within the same building is decreased. Proper biosecurity also prevents humans getting diseases from the animals. If this happens it could spread very quickly between humans. A second reason why biosecurity is important is that it can have a huge impact on the economy. With the whole covid-pandemic we have seen that a fault in our biosecurity can have severe impact on our world-economics with stores and restaurants getting closed because of a lack of visitors and thus money while prices of products increase due to a decreased amount of production. On a more local level there could be poultry farms needing to put down all their animals due to one individual animal having bird flu, which happened on a farm in the Dutch town of Hekenburg in begin-March 2022. The putting down of animals could lead to stores not having chicken-products and eggs.

### The sign for biohazard

Biohazard or biologic danger are biological substances that pose a health hazard to humans, animals and the environment in general. Examples of pathogens are bacteria, viruses and microorganisms.



To warn people of the presence of the biological danger, a warning sign was developed years ago. Before that sign there were many different warning signs. The problem with this was that many people didn't know what they were for. Someone thought there should be a general board for all chemical sources. The man who ultimately designed the board with other people thought it was important that the board was striking and unique.



Figure 2. The sign for biohazard.

### The meaning of the four circles

The four circles represent the infection chain.

- Agents: the type of pathogen that causes the infection.
- Host: the organism that becomes infected.
- Source: the host from which the pathogen descends.
- Transfer: the way the pathogen is transmitted.

### The different levels of the biohazard sign

The biohazard is divided into four levels.

- Biohazard level 1: bacteria and viruses that have a minimal risk to human health.
- Biohazard level 2: bacteria and viruses that only cause mild disease in humans.
- Biohazard level 3: bacteria and viruses that cause serious to deadly diseases in humans, but for which there are vaccinations.
- Biohazard level 4: bacteria and viruses that cause serious to deadly diseases in humans, but for which there are no vaccinations.



## 2. Vocabulary

### Tools

English	Dutch	Swedish	Norwegian
<b>hand sanitizer</b>	handreinigingsmiddel	handsprit	håndsprit
<b>overall</b>	overall/ketelpak	overall	kjeldress
<b>boots</b>	laarzen	stövlar	støvler
<b>gloves</b>	handschoenen	handskar	hansker
<b>disinfect</b>	desinfecteren	desinficera	desinfisere
<b>microscope</b>	microscoop	mikroskop	mikroskop
<b>band aids</b>	pleisters	plåster	plaster
<b>parasite killing agent</b>	parasiet dodend middel	parasitdödande medel	parasittdrepende middel
<b>antibiotics</b>	antibiotica	antibiotika	antibiotika
<b>vaccination</b>	vaccinatie	vaccination	vaksinasjon

### others

English	Dutch	Swedish	Norwegian
<b>lab technician</b>	laboranten	labbtekniker	laboratorieteknikere
<b>biotope</b>	biotoop	biotop	biotop
<b>housing</b>	huisvesting	hus	oppstalling/Husly
<b>veterinarian</b>	dierenarts	veterinär	Veterinær
<b>hay</b>	hooi	hö	høy
<b>hygiene lock</b>	hygiënesluis	hygienlås	smittesluse
<b>straw</b>	stro	sugrör	strå
<b>kale</b>	boerenkool	grönkål	grønncål
<b>occasionally</b>	soms	ibland	noen ganger
<b>cattle grid</b>	wildrooster	färist	ferist
<b>vicinity</b>	nabijheid	nära	nærhet
<b>contaminated</b>	vervuild	kontaminerad	forurenser
<b>transmissible</b>	overdraagbaar	överförbar	overførbar
<b>source</b>	bron	källa	kilde
<b>prohibited</b>	verboden	förbjuden	forbudt
<b>citizens</b>	burgers	medborgare	innbyggere
<b>wall outlet</b>	stopcontact	vägguttag	stikkontakt



<b>headquarters</b>	hoofdkwartier	huvudkontor	hovedkvarter
<b>identify</b>	identificeren	identifiera	identifisere
<b>prevention</b>	voorkomen	förhindra	forhindre
<b>treatment</b>	behandeling	terapi	terapi
<b>recover</b>	herstellen	att återhämta sig	å gjenopprette
<b>reject</b>	verwerpen	avvisa	avise
<b>necessary</b>	nodig	nödvändig	nødvendig
<b>inhibit</b>	verhindren	hindra	blokkere
<b>mountain</b>	berg	berg	fjell
<b>expertise</b>	deskundigheid	expertis	ekspertise
<b>sustainable</b>	duurzaam	hållbar	varig
<b>provide</b>	voorzien van	utrustad med	forsynt med
<b>excellence</b>	uitmuntendheid	förträfflighet	fortreffelighet
<b>bunch</b>	bunch	knippa	flokk
<b>completely</b>	volledig	fullt	fullt
<b>important</b>	belangrijk	Viktig	viktig
<b>urge</b>	drang	enträget uppmana	trang
<b>receive</b>	krijgen	att få	å få
<b>fluid</b>	vocht	fukt	fuktighet
<b>high school</b>	middelbare school	gymnasium	videregående skole
<b>sea</b>	zee	hav	hav
<b>hiking</b>	hiken	vandring	fotturer
<b>Coffee break</b>	koffiepauze	fika	kaffepause
<b>Netherlands</b>	Nederland	Nederländerna	Nederland
<b>Norway</b>	Noorwegen	Norge	Norge
<b>Sweden</b>	Wweden	Sverige	Sverige
<b>Zoo</b>	dierentuin	zoo	dyrehage
<b>study</b>	studie	studera	studere
<b>distribution routes</b>	verspreiding routes	distributionsvägar	distribusjonsveier
<b>biosecurity</b>	bioveiligheid	biosäkerhet	biosikkerhet
<b>diseases</b>	ziektes	sjukdomar	sykdommer
<b>sources</b>	bronnen	källor	kilder

## Diseases

English	Dutch	Swedish	Norwegian
<b>mad cow disease</b>	gekke koeien ziekte	galna ko-sjukan	Kugalskap
<b>zoonosis</b>	zoönose	zoonos	zoonose
<b>respiratory infections</b>	luchtwegenonsteking	luftvägsinfektion	luftveisbetennelse
<b>virus</b>	virus	virus	virus
<b>bacteria</b>	bacteriën	bakterie	bakterie





<b>common cold</b>	verkoudheid	kall	kald
<b>common leopard gecko</b>	luipaardgecko	leopardgecko	leopard Gekko
<b>common blue-tongued skink</b>	Gewone blauwtongskink	blåtungad skink	Blåtungeskink
<b>blotched blue-tongued skink</b>	Gevlekte blauwtongskink	fläckig blåtungad skink	Flekkete blåtungeskink

## Species

English	Dutch	Swedish	Norwegian
<b>poultry</b>	gevogelte	fjäderfän	fjærfe
<b>mallards</b>	wilde eenden	vildänder	villender
<b>cattle</b>	runderen	nötkreatur	kveg
<b>pig</b>	varken	gris	gris
<b>cow</b>	koe	ko	ku
<b>chicken</b>	kip	kyckling	kylling
<b>dog</b>	hond	hund	hund
<b>cat</b>	kat	katt	katt
<b>sheep</b>	schaap	får	sau
<b>reptile</b>	reptiel	reptil	reptil
<b>Bird of prey</b>	roofvogel	rovfågel	rovfugl
<b>moose</b>	eland	älg	elg
<b>fish</b>	vis	fisk	fisk
<b>rodents</b>	knaagdieren	gnagare	gnagere
<b>farm animals</b>	boerderijdieren	bondgårdsdjur	husdyr
<b>horse</b>	paard	häst	hest
<b>donkey</b>	ezel	åsna	esel

## Anatomy

English	Dutch	Swedish	Norwegian
<b>digest</b>	verteren	smälta	fordøye
<b>paralysis</b>	verlamming	förlamning	lammelse
<b>cough</b>	hoest	hosta	hoste
<b>contamination</b>	besmetting	infektion	infeksjon
<b>headache</b>	hoofdpijn	huvudvärk	hodepine
<b>birth</b>	geboorte	födelse	fødsel
<b>to give birth</b>	bevallen	att föda	å føde
<b>cramps</b>	krampen	kramper	kramper
<b>organs</b>	organen	organ	organer
<b>liver</b>	lever	lever	lever
<b>heart</b>	hart	hjärta	hjerte



<b>lungs</b>	longen	lungorna	lungene
<b>skeleton</b>	skelet	skelett	skjelett
<b>fever</b>	koorts	feber	feber

### 3. A description of important diseases

Diseases	Pathogen	Animals	Zoonosis	Symptoms	Treatment	Prevention
African swine fever	Virus	Pigs (swines)	No	Fever, lack of appetite, red skin, (bloody) diarrhoea, vomiting	No known of treatment	The only way to prevent this disease is to practice a good biosecurity, like wearing working clothes, washing your hands, cleaning your boots etc. do not feed leftover food( meat) to pigs.
Anthrax	Bacteria	Sheep, goats, cattle, horses and pigs	Yes	Respiratory infection, severe shortness of breath, high fever	Antibiotic, such as ciprofloxacin , doxycycline or levofloxacin.	You can lower the risk of getting Anthrax by getting a vaccine. Wear protective clothes like gloves. Do not handle dead animals expected to have anthrax.



Bird flu	virus	Birds and some strains of the virus can affect mammals, such as pigs, cats, horses, dogs and ferrets.	Yes	Fever, headache, muscle aches, cough or eye inflammation , issues with breathing, diarrhea sudden death.	Virus inhibitors or hospital in the Netherlands all bird who get it are killed and destroyed.	If u know there are cases of bird flu in your area keep your birds inside and don't touch or come close to wild birds.
Canine distemper virus (CDV)	Virus	Dogs	No	Discharge from eyes, fever, nasal discharge, coughing, lethargy, reduced appetite and vomiting.	There is no cure for this virus. Treatment consists of supportive care and efforts to prevent secondary infections.	Vaccination and distance from infected animals and wildlife.
Echinococcus is (Echinococcus multilocularis)	Parasites	Dogs, sheep, cattle, goats and pigs.	Yes	Pain in the stomach, weakness, weight loss, itching, coughing, chest pain and fever.	Surgery, chemotherapy, cyst puncture, and PAIR (percutaneous aspiration, injection of chemicals and respiration).	Limiting the areas where dogs are allowed and preventing animals from consuming meat infected with cysts. Prevent dogs from feeding on the carcasses of infected sheep. Control stray dog populations.
Equine herpes virus (EHV-1)	Virus	Horses	No	Incoordination, hind limb weakness, loss of tail tone, lethargy, urine dribbling, head tilt and inability to rise.	Anti-inflammatory drugs. Some horses may require intravenous fluids.	Vaccination and biosecurity protection.



Feline immunodeficiency virus (FIV)	Virus	Cats and hyenas	No	Poor coat condition, fever that keeps coming back, inflammation in mouth and gums, infections in the eyes, skin or blather, eye problems, diarrhoea, seizures.	There is no cure or treatment to this disease. The veterinarian will treat the symptoms with anti-inflammatory drugs and immune-enhancing drugs.	Keep cats indoors, this because the disease is mostly transmitted by cat bites. So, keeping them indoors helps keeping them away from potentially contaminated cats.
Feline panleukemia	Virus	Cats and dogs	No	Depression, loss of appetite, high fever, vomiting, nasal discharge, severe diarrhoea, dehydration.	They have no official treatment but they use therapy	Keeping cats apart and moving cats to areas where few cats as possible live
Heartworm (dogs)	Parasites	Mostly feline and canid but it can also occur in other mammals	Yes	Chronic cough, weight loss and shortness of breath	Anthelmintics. Antibiotics kill bacteria.	The best means to prevent heartworm is a worm remedy with active ingredient Milbemycin Oxime
Kennel cough	Bacteria and viruses	Dogs	No	Forceful, hacking cough. Some will have a runny nose, sneezing or eye discharge.	Antibiotics, pet-safe cough suppressants, anti-inflammatory, pain medication and rest.	Vaccination. You can also reduce the risk by choosing facilities (boarding, grooming, etc.) wisely.



Leishmania	Parasites	Dogs, rodents, foxes or coyotes	Yes	Lack of appetite, weight loss, fever, anaemia, Lymph nodes enlarged.	Liposomal amphotericin B	Wear clothes that cover as much skin as possible. Use insecticide on exposed skin and in inside rooms.
Leptospirosis	Bacteria	Raccoons, skunks, squirrels, insectivores (moles, shrews, hedgehogs, deer's, rodents, buffalo and marsupials.	Yes	Fever, severe headache, sore muscles, chills, vomiting and red eyes.	Antibiotics, such as penicillin.	Avoid touching water that has been contaminated with animal urine. Avoid touching object that may be contaminated with animal urine, such as animal beddings.
Mad cow disease (BSE)	prions	Cows and small ruminants	Yes	To walk unsteadily; suffer from stiff or vibrating muscles; jerky and clumsy movement; become incontinent; speaking slowly and slurred; lose their speech and sight; be confused; are not or hardly aware of their surroundings.	None	Don't eat meat from cows. And do not feed anything of animal's origin to ruminants, do not eat brain or spinal tissue of ruminants.



Mouth and hoof disease	virus	It occurs in cloven-hoofed animals: cattle, pigs, sheep, goats and also wild boars, deer, roe deer and some zoo animals.	Yes	<p>Salivate smack, teeth grinding , do not eat</p> <p>Blisters in the mouth that come off like skins when touched. Blisters on lips, tongue, gums, nose, udder (teats)</p> <p>blisters on coronary margins, interdental fissure</p> <p>lameness ,lethargy fever &gt; 41°C (one to three days). Acute mortality in young animals. Weight loss. Significant drop in milk production</p>	Vaccine	Follow strict hygiene protocols.
	Bacteria	Farm animals and pets.	Yes	Impetigo, furuncle and carbuncle, wound infection, mastitis puerperalis and other abscesses or invasive infections.	Antibiotics	Think about hygiene so wash your hands properly after contact with farm animals.





Parvo virus	Virus	Dogs	Yes	Loss of appetite, abdominal pain, bloating, fever or low body temperature, vomiting and bloody diarrhea.	Treatment at the vet. The dog will be put on a drip and given intravenous fluids to stop it from becoming dehydrated. Drugs may be given to help control vomiting, which also help to prevent dehydration.	Vaccination, limit exposure to unvaccinated dogs, see a vet when in doubt and keep a clean home.
Pig flu	Virus	Mostly Pigs, but turkey and ducks can get it to.	Yes	Fever, depression, coughing, discharge from the nose or eyes, sneezing, eye redness.	Antivirals: Reduces symptoms and slows down the production of viruses.	<ul style="list-style-type: none"> <li>- Clean hands regularly with soap.</li> <li>- Do not get close to people who are sick.</li> <li>- Stay away from crowds if there is an emission of swine flu in your area</li> </ul>
Q-fever	bacteria	Goats, cows, sheep and pets.	Yes	Flu like symptoms.	Vaccinate	Don't go to sheep farms or goat farms if you're pregnant or have a weak immunity system.





Rabies	virus	Dogs, cats, foxes, apes, bats and other mammals	Yes	Fever, headache, decreased appetite, sore throat and nausea are basic symptoms other symptoms are irritability, increased muscle tone, hypersensitivity to light and loud noises, disorientation and hallucinations	vaccine	You can get vaccinated if you go to an area where rabies is prevalent, don't pet dogs in foreign countries.
Salmonella	Bacteria	<p>Reptiles, Amphibians Poultry (chickens, ducks, geese, and turkeys) Other birds (parakeets, parrots, and wild birds) Rodents</p> <p>Other small mammals (hedgehogs)</p> <p>Farm animals (goats, calves, cows, sheep, and pigs)</p> <p>Dogs, Cats, Horses</p>	Yes	Diarrhea, vomiting, fever, and abdominal cramps are human symptoms. Pets usually have diarrhea that may contain blood or mucus	They have to drink a lot, if the case is bad you may have to use antibiotics.	Wash your hands properly and don't let weak humans get in contact with animals that can spread the disease. Also important that many animals do not show any symptoms.



<p>Strangles (Streptococcus equi)</p>	<p>Parasites</p>	<p>Horses</p>	<p>Yes</p>	<p>Lethargy/lack of interest in normal activities, thick white to yellow nasal discharge and swelling under the jaw or in the throat latch region.</p>	<p>They require antibiotics and treatment with corticosteroids for days to weeks. This to quiet the overactive immune reaction.</p>	<p>Perform twice daily monitoring of rectal temperatures of all horses in an outbreak to identify new cases. Stop all movement of horses to and from the farm when strangles is identified. Disinfect water buckets daily and use strict hygiene between horses to reduce spread of the disease.</p>
<p>Toxoplasmosis</p>	<p>Parasites</p>	<p>Wild and domestic animals including birds, cats, sheep, goats, cattle, pigs and poultry.</p>	<p>Yes</p>	<p>Fever, muscle pain, sore throat, headache, swollen lymph nodes and fatigue.</p>	<p>Usually involves a course of an antibiotic called clindamycin, either alone or in combination with corticosteroids.</p>	<p>Good hygiene, as for example sanitize hands.</p>
<p>Tuberculosis</p>	<p>bacteria called Mycobacterium tuberculosis</p>	<p>All animals can get it. But not all animals get sick of it. There are different types of tuberculosis. For instant there is Bovine Tuberculosis. This type mostly affects cattle and other mammals.</p>	<p>yes</p>	<p>Coughing for more than three weeks, Coughing up blood, fever, chills, weight loss, fatigue.</p>	<p>antibacterial medications for a period of six to 12 months. Isoniazid INH in combination with three other drugs—rifampin, pyrazinamide and ethambutol</p>	<p>There does not appear to be an effective way of preventing tuberculosis. What you could do is to get the animals tested once year to see if they are positive for tuberculosis.</p>



## 4. Routines for biosecurity

### Working with animals

Wearing special clothing that isn't worn outside when not working with the animals, decreases the risk of making the animals sick because potentially pathogens could live on your normal clothes. If you wear your normal clothes when working, there is a possibility that the pathogens jump from the clothes to the animals. Storing and putting on the clothes, in separate rooms also prevents the spread of pathogens to the working clothes. Think about needing to cross a line or door before being allowed to put your work clothes on and off. In some buildings certain areas can only be visited when wearing special shoes or boots, which may not be worn anywhere else outside that area, even if it is in the same building. (Like in the picture on the right) Of course, washing and cleaning the clothes and footwear are very important when ending the workday.



Figure 3, Only clogs behind the line

Tools/equipment are also a way that pathogens can use to spread around. It is advised to give enclosures their own tools, so workers don't need to walk back and forth around the work floor. Not only is it hygienic, it is also efficient. It is of course, encouraged to clean tools after use.

Vehicles are widely used for transport of different stuff. Around animals they are used for food, manure and carcasses. If these trucks all cross the same path, there is a chance that they will take something that fell off another vehicle without knowing. If this ends up in the food the animals are going to have a bad time. For vehicles that don't belong to the company it is important that they get as little as time as possible on the company ground to prevent them taking diseases from one company to another.

Wash your hands, a lot.

Cattle grid (figure 4) is designed to keep wild animals out. By keeping wild animals out, you also keep the diseases they might be carrying out.



Figure 4, a cattle grid

Keeping the enclosures as clean as possible by refreshing bedding periodically. Clean enclosures have less pathogens and by refreshing bedding you take the old, wet bedding out and put new, dry bedding in.

Eating in the assigned areas, which are most of the time away from the animals, makes sure you don't start eating at a dirty surface. Washing hands before eating is also a must, because hands are really dirty.



Vaccinating animals makes them immune or at least stronger against a certain disease preventing them of getting sick or spreading it to others.

Quarantining animals before you introduce them to a group is very important. An animal could have a disease for 2-3 weeks without showing symptoms, thus it is required to put new animals in a separate enclosure away from the other animals.

When milking animals, it's important to keep their teats clean so the pathogens don't get into the machine or the tank full of milk. It can contaminate the milk, making it unsafe to drink and the pathogen in the machine, and can maybe jump to another animal. To check if the milk is fine, we milk in a little cup before setting the milking machine on, then we see if it is something wrong with the milk. If the milk is lumpy, it is something wrong with the milk, then it is important that the milk is not coming to the milking tank. This comes from microbes, bacteria, fungus or virus which gets into the udder, and it gets infected. This is one reason to always have it clean around the cows and the equipment. After the cows are finished milking, we spray the teats, the spray is reducing the risk of infection in the udder.



The cow's teats are very susceptible to bacteria entering and it is very important to have clean boxes and it is enough and clean splinter, so the teats do not get dirty or hurt.

When the cows are eating it is a big risk that they eat unwanted bacteria, which is not good for their stomach. Then it is very important that the feed table is clean and that you have washed your boots before you go on the feed table. It is not only on the feed table that must be clean. Around the silo it is important that is clean and that you use clean equipment. If it's not clean it can begin to grow bacteria and the feed gets bad, then the risk to lose feed increases. And cows get sick from the bad feed.

When having stable duty in the morning you need to wash all floors and walls in the cow stable with a pressure washer. This is one example of a routine that is good for biosecurity and get rid of bacteria.

With the pigs you are working with different ages, which makes it important that you don't bring infections to the different age groups. The piglets are most exposed to infection and it is important that you begin with the youngest and the oldest last, when you are cleaning the boxes or just check. A smart thing to prevent infection from younger to older pig is to have different boots. You also have to use different equipment in the different departments, then you for example have red in to one department and blue to the other (figure 5).



If the feed is laying in the feed crip too long, the bacteria will grow and the sows will get these bacteria. This is bacteria which are not good for the sows, so it is very important that we see and remove old food, this also for the piglets.

When the pigs are moved or sent away it is very important to clean the boxes carefully, especial for the piglets.



Figure 5, one example of having different equipment for different departments.

## Travelling with animals

It is a big risk of infection for people and animals. Then it is important that everyone who want to bring their animal or be in contact with animals in another country has to read about the risk of infection in the country you are travelling to. It is many infections who can be topical in pets who can introduction from other countries. It is also some rolls for quarantine when your come home who is important.

It is many rolls if you wanted to travel with animals.

Her is one example of rolls if you want to go to Sweden with your dog from an Eu- country:

- The dog must be id marked
- The dog must have a valid vaccination against rabies
- The dog must have animal passport
- The dog must be reported to customs

It is also rolls who is important to follow:

- If the dog travels within 5 days before or after the owner
- If the dog is going to fly
- If the dog is traveling in a group with more than 5 dogs who are going to compete or train
- If the dog traveling with owner from Andorra, Gibraltar, Iceland, Liechtenstein, Monaco, San Marino, Switzerland, Vatican City, then they need a pet statement
- If the dog traveling through a country where the rabies situation is not under control, it also needs a pet owner's declaration of transit

Preventing the spread of infection after travel (Norway):

- Everyone who has been in contact with stool from birds or animals in another country should be cleaned when you are coming home. This special if you have a farm with pets, lives close by or have a job there you visit farms.
- Clothing and shoes have to been in another country should be washed after coming home special if you have contact with Norwegian pet. Shoes and boots who has been in another country should be cleaned and disinfected, and stand for some days before you are using, they with Norwegian pet.
- Infectious agent can hang with skin, hair and mucous membrane so you should shower and clean your hair when you are coming home. If you had been or are sick when traveling/coming home you have to think about if it is a zoonoses who can infect animals. If you are traveling with your pet you have to be obs if they are having some infest with, they. You can also use the same routines to animals as in humans when it comes to preventing of infection after traveling.
- When you are coming home you should try to not be in close contact with animals and family members before you have completed a cleaning process and change clothes and shoes. Clothes who can't be washed can hang in quarantine one week.
- If you have been in contact with an animal husbandry inn another country you have to wait 48 hours from coming home to you have contact with Norwegian animal husbandry. If you are coming from an area with mouth- and hoof diseases you have to wait 72 hours before you have contact with Norwegian animal husbandry.
- Clothes, boots and other equipment you had used in another country can't be used in Norwegian animal husbandry.

If you are unsure, you can contact a veterinarian at your local food safety authority for advice on how to proceed.



## 5. Importing/exporting animals and travelling with pets

### 5.1 What regulations when importing/exporting animals of different species?

#### Chickens

##### *European Law*

There are special rules for the export of less than 20 chickens in the EU. When you want to export/import chicken within EU, the animals must be inspected by a veterinarian and examined by the Animal Health Service for Salmonella pullorum/Gallina rum. And they must wear a leg ring. The animals must also be vaccinated against New Castle Disease. When all this has been done you can request a certificate with the government to travel.

There are also rules for the transport of chicken within EU. The means of transport must in any case be cleaned and disinfected. If the journey lasts longer than eight hours, you must have a valid "certificate of approval of the means of road transport for long transports as referred to in Article 18 of Regulation (EC) 1/2005". The official veterinarian certifies that the animals are suitable for the journey. The carrier has a "Permit carrier art. 10 or art. 11" if the transport distance is more than 65 km. amounts to. The driver has a certificate of professional competence in accordance with Article 17 of Regulation (EC) 1/2005. This rule applies to all animal transport.

#### Horses

##### *European Law*

If you want to travel with your horse within EU, you need a passport for the horse. The passport must contain the horse's medical history. In addition to that, the horse must be inspected by a veterinarian. If needed you will get a health certificate.

the carriage in which the horse is transported must be designed in such a way that the horse cannot be injured and their safety is guaranteed. The staff handling the animals shall be suitably trained or competent, as appropriate, and shall carry out their duties without using force or any method which causes undue distress, injury or suffering to the animals. A transport permit is not required. The driver must be in possession of a valid driver's license for the transport combination.

#### Cattle

##### *European Law*

If you want to transport cows within EU, you will have to take the following into account. The animals can't show any sign of illness. The animals are officially identified in accordance with EU directives and regulations. When the animals travel within EU, the animal health certificate must be presented. The animals may also only travel within EU if they come from a herd that is officially recognized as free from tuberculosis, brucellosis and enzootic bovine leukosis. During transport, the cows must not come into contact with animals with a lower health status. After transport the vehicle



must be cleaned and disinfected as soon as possible. Because there are no border controls for movements between the Member States, non-discriminatory spot checks are carried out and at the destination according to the to ensure that consignments are in compliance with the guarantees provided by the animal health certificate. (This of course applies to all animals traveling within EU).

## Pigs

### *European Law*

It is important when transporting animals that the animals are treated well during transport, that the vehicle is suitable for transporting certain animals and travel schedules must be used. EU regulations stipulate that animals must have adequate space horizontally and vertically. They must be able to stand and lie in their natural position. Because pigs can get a lot of stress during transport it is important to not travel that for and make the transport so comfortable as possible.

## Dogs

### *European Law*

Make sure your dog is microchipped before receiving it's rabies vaccination or other treatments. The dog must also have a dog passport. You can get this from the vet and may only be given away by vets. In some cases, a blood test must be done on the dog before travel. This is to see if the rabies vaccination has been successful. In many European countries and regions it is mandatory for dog owners to have liability insurance. If you travel to a country where this is required, but you do not have insurance, you will be fined.

## Sheep

### *European Law*

You do not always have to apply for a permit to transport sheep within the EU. If you transport less than 10 animals, you do not need a permit, everything above that does. Transport over distances greater than 65 km, but shorter than 8 hours, the means of road transport used must be suitable, but it does not have to be inspected. These means of road transport do not therefore need to have a certificate. When you travel longer than 8 hours or when you transport more animals you do need a permit and certificate for that. The sheep must also be registered and have an earring in it. Only animals that originate from a registered or approved establishment can be moved to another Member State. The animal health requirements for movements within the Union of ovine and caprine animals are laid down in [Commission Delegated Regulation \(EU\) 2020/688, section 2](#) [Search for available translations of the preceding linkEN●●●](#). These rules and risk mitigation measures ensure that movements of animals do not pose a significant risk of spreading diseases that affect human or animal health.

## Entering EU

Live animals entering the Union are inspected at a Border Control Post. [Regulation \(EU\) 2019/2130](#) provides detailed rules for official controls at Border Control Posts on animals entering the Union from non-EU countries. Animals which do not comply with the Union's health requirements cannot



enter or transit the Union. Below there are two examples for what you should do if you want to come in the EU with cows and sheep.

#### Cows

Bovine animals being presented for entry into the European Union must be accompanied by an official health certificate. Basic information on the non-EU country of origin, the place of destination and the identification of animals in the establishment must be included in the certificate. The health certificate also contains confirmation that the animals do not have zoonoses, such as brucellosis, anthrax and rabies.

#### Sheep

Ovine and caprine animals must fulfil the animal health requirements laid down in Regulation (EU) 2016/429 establishes the general animal health conditions for the entry into the territory of the Union for ovine and caprine animals. The general animal health requirements and the requirements a non-EU country has to fulfil to be authorized to enter animals into the EU are based on:

- the health status of livestock, of other animals and wildlife
- the legislation of the non-EU country
- the country's rules on the prevention and control of animal diseases
- the organization, structure, competence and power of the veterinary services
- membership of the World Organization for Animal Health (OIE)
- the regularity and rapidity of information on infectious animal diseases provided by the non-EU country to the Commission and the OIE

## 5.2 How can these regulations be different between countries?

the rules within EU are usually the same because they belong to Europe and they have to follow them, but each country has its own disease and working program.

Import requirements within the EU make sure that the animal has been vaccinated against rabies and has a valid passport that also states that the animal has been vaccinated. Also, in some cases, it is mandatory to do a blood test so that they can be sure that the vaccination has been successful.

Import requirements outside the EU: make sure that the animal has been vaccinated against rabies and has a valid passport that also states that the animal has been vaccinated. Also, in some cases, it is mandatory to do a blood test so that they can be sure that the vaccination has been successful.

#### Rabies

**Sweden:** If you want to go to Sweden with your dog then it must be vaccinated against rabies. Important to take into account, you can only go to Sweden with the dog 21 days after the animal has been vaccinated

**Spain:** Dogs and cats must be vaccinated against rabies (rabies vaccination) at least 21 days before the trip. The period of validity depends on the guidelines of the manufacturer of the vaccine (1-3 years). Please note: the chip must be inserted before the rabies vaccination (on the same day).





No mandatory additional treatments are required in Spain. Dogs and cats do not need to be quarantined in Spain.

**Netherlands:** in the Netherlands we have a reporting obligation if someone is discovered with rabies. in the Netherlands it is also mandatory to vaccinate your dog against rabies if you want to travel within the EU.



### 5.3 How can you find these regulations?

Most of the time you can find information about the regulations around transport on a government website or food authority. For instance, the website of the Dutch food authority NVWA: <https://www.nvwa.nl/onderwerpen/vervoer-levende-dieren>.

Sweden has the SVA on [www.sva.se/en](http://www.sva.se/en) and Norway has <https://www.toll.no/en/goods/animals/travelling-with-pets-to-and-from-norway/> and [https://www.mattilsynet.no/dyr\\_og\\_dyrehold/](https://www.mattilsynet.no/dyr_og_dyrehold/). Sometimes a species of animal has special rules attached to them according to the CITES-rules. These rules can be found on [this website](#). If you want to know which rules apply to a certain species, you can search them up via <https://speciesplus.net/>. For rules across the whole of Europe see <http://www.animaltransportguides.eu/materials/>

### 5.4 What if you don't follow them?

1. If a competent authority finds that a provision of this Regulation is not being complied with, it shall take the necessary measures to protect the welfare of the animals or shall instruct the person responsible for the animals to do so.
2. These measures must not cause unnecessary or additional animal suffering and must be proportionate to the seriousness of the risks involved. The costs of the measures shall be recovered in an appropriate manner by the competent authority.

If the regulations are broken authority can take the following measures:

- Change of driver or attendant;



- Temporary repair of the means of transport in order to avoid immediate injury to the animals;
- Transhipment of the consignment or part thereof to another means of transport;
- Return of the animals to the place of departure by the shortest route or, if this is better in the interests of the welfare of the animals, continued transport of the animals to their place of destination by the shortest route;
- Unloading the animals and placing them in suitable housing with adequate care until the problem is resolved.

If the welfare of the animals cannot be protected in any other way, the animals are killed humanely and painlessly.

3. Where, as a result of non-compliance with this Regulation, measures as referred to in paragraph 1 have to be taken and it is necessary to transport the animals in contravention of certain provisions of this Regulation, the competent authority shall authorize the transport of those animals off. The permit shall clearly identify the animals concerned and specify the conditions under which they may be transported until full compliance with this Regulation is achieved. This permit accompanies the animals.

4. The competent authority shall ensure that the necessary measures are taken without delay if the person responsible for the animals is unavailable or fails to follow the instructions of the competent authority.

5. The decisions taken by the competent authorities and the reasons for them shall be communicated as soon as possible to the carrier or his representative and to the competent authority which granted the authorization referred to in Article 10(1) or Article 11(1). If necessary, the competent authorities shall assist the carrier in taking the necessary emergency measures.



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