

A day about animal protection

Background

The 17th of May, Formas invited representatives mainly from the food industry together with reserachers that applied for funding in Formas last call for Animal protection and animal welfare promoting measures in 2016, to a workshop “A day about animal protection”. The participants were asked to present areas in need of research and development regarding animal protection and animal welfare. The identified challenges are compiled below.

All farm animals

Economical gain with a high level of animal helath and welfare	Which and how large expenses can be avoided trough good animal welfare? Which investments are profitable?
Sustainable small-scale production	Can small- scale production with high animal welfare be economically sustainable and climate smart?
Sustainable large-scale production	How do we manage larger farms in respect to sustainability and animal welfare?
Incresaed production with high welfare	How do we keep a high production with a maintained animal welfare and higher longevity?
Development of systems for production follow-up generating Big Data	Follow- up systems on farm level as well as on a national level
Development of positive welfare indicators	How do you see if an animal are feeling well? Positive indicators instead of abnormal behaviours
Feed of the future	What does the feed of the future consist of in regard to climate change and sustainability?
Challenges within organic production	What are the challenges in regard to animal welfare in organic production and how should they be handeled?
Effects of climate change on animal welfare	What may climate changes bring in regard to animal health, for example spreading of new diseases or extreme weather?
Effects of biosecurity measures	What effects of bioscurity measures can be observed in regard to animal welfare and production? What profits may be expected?

Models for routes of infections	Models for routes of new infections
Animal welfare and antibiotic resistance	How to handle the increased risk of antibiotic resistance and at the same time maintain a good animal welfare?
Development of technical and digital tools	For example drones for pasture monitoring, digital autopsy, etc
Development of mobile and on farm slaughter	Development of mobile and on farm slaughter
Good animal welfare during transport	How does, for example time of transportation affect animal welfare?

Pig

Tail biting	Feeding of new genetic lines. Is there a genetic connection to tail biting?
Feeding new genetic lines under Swedish conditions	Update of the SLU standard
Good welfare in Swedish sows	With larger litters, how is sow welfare affected? Which are the most common reasons for culling with the new genetic lines and how may they be prevented?
From gilt to sustainable sow, good welfare during rearing.	How to rear gilts to be sustainable sows under Swedish conditions?
Increased survival in piglets	How can the piglet survival increase?
Housing of sows at farrowing	Development of farrowing boxes for Swedish conditions
Breeding for mothers in loose housing systems	Is it possible to select for good mothers?
Transponder systems	Using transponder systems to monitor animal welfare, functions and preventive measures
New stables	How do we develop smart and cost efficient buildings for Swedish conditions?
Removal of zink oxide	How do we remove zink oxide from the feed?
New technique	Usage of new technique to monitor the animals and identify sick individuals earlier
Stunning at slaughter	Develop new methods for stunning at slaughter

Enrichment for slaughter pigs	Practical solutions to enrich the environment for slaughter pigs
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Cattle

Housing in the whole production chain	How do we improve the welfare even more at housing of cattle?
The newborn/young calf	How is the animal welfare affected by different types of housing, group size or volume of air/calf?
Quality of colostrum	How is the breeding affecting the calfs ability to absorb colostrum?
Foot health in growing bulls	How big is the welfare problem regarding long hoofs?
Rubber slats	What type of rubber slats works well in respect to animal welfare?
Weakened sucking reflex in calves	Is a weak sucking reflex an effect of a difficult calving?
Usage of antibiotics	Which factors are requisites for a low level of antibiotic usage?
Sustainability	How can we increase the sustainability and longevity of the dairy cow?
Pasture	Wich practical solutions can be administered for a long pasture period.
Prolonged time of suckling	Practical solutions for a prolonged time of suckling in the diary production
Lameness in dairy cows	Which factors affect foot- and bone health? How can they be prevented and treated in the best manner?
Big Data foot health	How reliable is registered data for foot health?
Treatment effectiveness	How effective are different registered foot treatments?

Sheep

Body condition score	What is a good body condition at good welfare? How to use different body scoring systems?
Parasites	Early detection of antihelminthic resistance

Minerals	What reference values should apply for Swedish conditions in respect to especially copper and selenium?
Foot health	Development of diagnostics and treatment of foot disease.
Predator attacks	What is the effect of predator attacks on the welfare in sheeps in a short- and long term? How can predator attacks be prevented?

Horse

Sustainable horse- orthopedic health	How do we sustain a good orthopedic health? Which environmental factors affects, for example housing, competition, hoof care? How can we use animal health data?
Sustainable horse – mouth health	How do we maintain a good mouth health and decrease the incidence of injuries? What factors and situations are affecting?
Indicators of bad welfare	Identification of indicators of bad welfare of, for example, training or equipment?
Training and learning	How should horses be trained? How should, in turn, horse owners be educated?
Implement of knowledge	How to implement new knowledge of , for example, management to maintain the new routines?
Functional requirements	Studies of the functional requirements for a good welfare, for example, the amount of social contact and air quality.
Roughage	Development of balanced roughage to low performing horses that permits long eating times
Safe stable equipement	Development of safe stable equipement
Stable of tomorrow	How should the stables of tomorrow be designed to forfil the needs of the horse as well as the working environment of the owner?
Reproduction	Development of methods to anticipate ovulation and thereby reduce the number of hormone treatments. Development of methods to anticipate and supervise foaling.

Access to water	How much access to water does a horse need?
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Poultry

Egg	
Male chicks	Methods to sex eggs in a large scale.
Air quality	Development of better methods to reduce the levels of dust and ammonia in layer stables
Light	Studies of hen vision as well as the optimal light source in layer stables in respect to quality and location
Housing systems	Further development of housing systems that fulfill the needs of the hen and the working environment in the stable, while maintaining a good biosecurity.
Red mites	Development of new methods to decrease the spreading of red mites
E.coli	Studies of serotypes which are causing diseases in poultry. Which serotypes can be detected in Sweden? Biosecurity and development of vaccines
Erysepelas	Methods to prevent outbreaks of erysepelas, development of effective methods and disinfection. Development of vaccines and routines of vaccination
Organic feed	Development of alternative protein sources in organic feed.
Feather pecking	Development of preventive measures to decrease outbreaks of feather pecking.
Round worm	Development of preventive measures to decrease the spreading of round worm. Development of treatment methods
Meat	
Development of technique	Development of stables and techniques for Swedish conditions.

Climate change	Identification of new diseases and their effect on animal welfare as result of climate change
Resource effectiveness	How is welfare affected by different resource effectiveness in the stable ?
Control	Development of animal welfare control with new types of techniques
How to measure good welfare?	Identification of indicators for good animal care and good animal welfare
Feeding	Routines for feeding broiler mothers in order to obtain a good welfare
Slow growing hybrids	Welfare of slow-growing hybrids in conventional production systems
Light programs	Design of light programs in broiler stables

Consumer

Eating quality	Is eating quality affected by the conditions during rearing of the animals, for example by housing, feed, age and outdoor pasture?
Effect on climate	What are the climate impacts by different housing systems and what measures can be conducted to decrease possible impacts?
Legislation and volunteer certification	How to create a control system of animal welfare, which the consumer can rely on
Marking	How to obtain the best dissipation of marking information among consumers?
Consumer	How can consumers affect animal welfare by their choice of products ?

Slaughter and transport

On farm loading	Development of methods for effective on farm loading (in regard to time) with reduction of stress and mechanical injuries
Design of transports	Design of transports for a good animal welfare
Legislation	Investigation of why the legislation differs between on farm situations, during transport and at the slaughter house

Drivning without pressure	Need of clarification and scientific knowledge regarding the legislation for driving of animals at the slaughter house
Increase in DFD/PSE	Can breeding be a causing factor to the observed increase in DFD/PSE?
Increased bruising in cattle	Why is there an observed increase in bruising after the introduction of euthanasia by air pressure guns?
Tools for optimising transportation	Development of tools for optimising transportation, for example considering road surface condition or loading time
Stocking density during transport	How are the animals affected by different factors such as stocking density or temperature during transport? Development of a scientific foundation for the legislation of today
Sexual maturity in lambs	Need of definition of sexual maturity in lambs in relation to grouping and legislation
Feeding before slaughter	Development of feeding routines before slaughter
Handling	Development of handling routines for animals not used to be housed indoors
Housing over night	Routines for housing and feeding routines over night at the slaughter house for different species

Insects

Animal welfare in insect production	What is good animal welfare in insect production? Insects are also classified as production animals but the knowledge regarding good welfare is low
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