



## **POSITION OF BFFE/NBC ON CLIMATE EFFICIENT AND SUSTAINABLE NORDIC LIVESTOCK BREEDING**

**Background:** Climate change is one of the most pressing environmental challenge in which our generation must find the solution. Due to increasing population more food is needed and at the same time farmers all over the world already experience consequences and challenges of the climate warming. We need climate actions to mitigate and reduce the climate footprint and adapt food production for changing conditions. Using the principle of sustainable intensification climate footprint is minimized and resources are used efficiently to produce more with less. Water scarcity is the most severe challenge for food production. In the humid northern countries, we have an abundance of water resources to be used by animal and dairy sectors. By land-use management we have potential to increase the adsorption and storage of carbon in soils and forests, but also by sustainable management of grasslands and croplands used for feed.

**General views by BFFE and NBC:** The Baltic Farmers' Forum on Environment (BFFE) together with the Nordic Farmers' Council (NBC) strongly argue that the Nordic sustainable animal production is of critical importance to contribute climate smart and resource-efficient production of nutritious good food. Animal production gives us a potential to make most use of our natural resources. We remind that farmers need knowledge and economic viability to invest climate friendly technologies. Similarly, future EU climate policy design, targets and implementation must allow European agriculture to realize their full potential of land management to sustain photosynthesis and sequester and store carbon. The role of temporal grasslands, typical in many of Nordic countries, have a key role. Animal production, in turn, is a prerequisite for sustainable use of these grasslands and for biodiversity. In general, there is a limited mitigation potential in agriculture sector, and measures can differ between the Nordic countries.

### **BFFE/NBC highlights for climate efficient meat production in northern conditions:**

#### **1. Grasslands sequester and store carbon thus compensating emissions from agricultural sector**

Even with the further development, mitigation potential of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) is limited. Therefore, land based carbon dioxide (CO<sub>2</sub>) emissions and their mitigation potential will be an important measure. Farmers efforts sustaining photosynthesis and sequestering and storing carbon is essential when tackling climate change. There is great potential in mitigation of GHG emissions through removing of CO<sub>2</sub> by plants and thus storing carbon in agricultural soils, especially by grasslands.

#### **2. New EU climate framework offers a role for managed crop and grasslands**

European Commission presented on 20 July 2016 the proposal for a regulation on how to include carbon dioxide emissions and removals by Land Use, Land Use Change and Forestry (LULUCF) into

the EU 2030 Climate and Energy framework. This proposal enables opportunities to include the positive effect of Nordic efficient animal production, which bases on well managed grasslands and croplands. This is a first time the LULUCF sector is included in the EU energy and climate framework with proposals to carbon sequestration. The total net removals of CO<sub>2</sub>-equivalents can be taken into account for compliance the reduction targets as follows for NBC countries: Finland 4.5, Denmark 14.6, Sweden 4.9, and including other BFFE-countries: Estonia 0.9, Latvia 3.1, Lithuania 6.5, Germany 22.3, and Poland 27.7 Mt CO<sub>2</sub>-ekv for the period 2021 to 2030. As in many Nordic countries we have a limited potential for afforestation, we highlight the importance of carbon sequestration by the soil management along with feed production.

### **3. Livestock sustains nutrient recycling and biodiversity**

Sustainable livestock production maintains long term productivity of soils and recycles nutrients. Good yields, diverse crop rotation including temporal grasslands and leguminous plants sustain soil productivity. By recycling animal manure and slurry, valuable nutrients fertilize soils with organic matter. Improved manure management and biogas production will enhance livestock sector's energy efficiency and reduce GHG emissions. Enhanced soils structure ameliorates the soil permeability and water management, and most importantly proper agricultural land management enables climate change actions, both mitigation and adaptation. In addition, that our meadows and temporal grasslands stock carbon, grazing animals also sustain traditional rural landscapes. A properly managed grazing prevents over-growing, and grassland plants respond positively to grazing and species richness increases. Livestock sector also maintains a large diversity of different animal species and breeds. Investing in diverse animal production ensures food security and continuity of farms and rural areas.

### **4. Precautionary animal healthcare enables sustainable livestock production**

Sustainable livestock production also includes precautionary animal healthcare instead of treating cattle with antibiotics, which decreases greenhouse emissions. Antibiotics alter microbial emissions of greenhouse gases by affecting livestock gut microbiota.

Ruminants have higher emission intensity, compared to other animals. Combined milk and beef production has approximately one third less GHG emissions, compared to pure beef production. On the other hand, ruminants are able to convert into high quality protein grass inedible to humans.

### **5. Energy efficiency and sustainable water use are in the core**

Animal production consumes a lot of water, and global freshwater availability is in increasing pressure. Importing water intense products from highly water-scarce countries is unsustainable. That's why countries having significant rainwater, ground and surface water resources, could produce more water intense products in the future. Livestock sector has a potential for a very high energy efficiency. Healthy and properly nourished animals decrease production losses and enhance the state of environment. Livestock sector is a vital part of sustainable agriculture and local nutrient recycling. Farmers can tackle climate change by renewing biomasses and sequestering carbon.

### **6. Research and innovation needed for further improvements**

There is a strong need to develop new methods to measure and monitor agricultural performance with production system under varying soil and weather conditions. It is critical to find out the efficiency of different climate actions to select the most efficient measures and to evaluate the effect of measures already put into action. This includes both carbon sequestration potential and emissions of greenhouse gases. In addition to mitigation, there is a need to adopt the food production to a new climate condition. Adaptation challenges are connected to existing and new pests and weeds including invasive species, new technology and production methods, and breeding with development and testing out new varieties.

Sånga-Säby 26 August 2016

Federation of Swedish Farmers (LRF)

Central Union of Agricultural Producers and Forest Owners (MTK)

The Central Union of Swedish-speaking Agricultural Producers in Finland (SLC)

Danish Agriculture & Food Council (L&F)

Norwegian Farmers' Union (NB)

The Farmers Association of Iceland (Bondi)