



2nd Meeting of the AEWA Svalbard Pink-footed Goose International Working Group
14-15th October 2014, Sneek, The Netherlands

Agenda point: Discussion about agricultural crop damage caused by pink-footed geese

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The population target for the Svalbard pink-footed geese was originally decided as a means objective to keep agricultural conflicts at an acceptable level and to avoid degradation of tundra vegetation. The underlying argument and assumption is that 'population size matters', i.e., there is a positive and detectable relationship between the population size and the amount of damage and tundra degradation. However, although there is qualitative data to suggest this is the case, it has not yet been quantified. To improve the justification of the use of population target setting, it is recommended that a simple system is set up to monitor the amount of crop damage caused by pink-footed geese in the four range states Norway, Denmark, the Netherlands and Belgium.

The economic damage can be estimated is various ways:

- A) Economic cost of yield loss: is an integral of the intensity of damage (assessed by the dose-response relationship between goose feeding pressure and yield loss of pastures or a given crop type, including additional costs associated with possible need for more frequent reseeding) and the distribution of geese in habitats prone to damage. The research project MIGRAPOP carried out in Norway 2011-2014 and funded by the Norwegian Research Councils provides new insight and guidance on how to address yield loss at a regional scale (Nord-Trøndelag and Vesterålen). At the moment, data exist for pasture grass but not for spring-sown cereals and winter cereals.
- B) Economic costs of scaring geese: estimated on the basis of the time and resources it takes to keep geese away from fields with vulnerable crops. The research project MIGRAPOP has estimated the costs and efficiency of scaring at a regional level in Norway (Nord-Trøndelag).
- C) Economic costs of subsidizing accommodation areas for geese: is an integral of the area required to accommodate geese and the subsidy rate provided for a given crop type. It can also cover supplementary feeding (baiting).

Estimating A) and B) can be resource demanding; however, the MIGRAPOP project will provide dose-response relationships for goose grazing pressure/yield loss and scaring/goose use. Hence, indicators for assessing A) and B) can be developed, such as measures of: goose density, goose distribution, temperature (measure of grass growth) and scaring effort. Indicators for winter cereal and spring cereal damage have to be developed.

Costs of yield loss can also be assessed by the amount of money used for compensating damage, which is practiced in the Netherlands and Belgium, provided it can be separated to the species causing the damage, in this case to pink-footed geese.

Estimating C) can be done straightforward by the amount of money spent by the authorities; however, this has to be used with caution as a measure of the damage because it is likely to be affected by the interest by farmers and the budgets available.

More qualitative indicators can also be considered, e.g., amount of complains made by farmers (provided there is an authority handling complains).

The IWG is invited to:

- Discuss and recommend indicators for an assessment of the amount of crop damage caused by pink-footed goose, to be used in a monitoring system across the four range states