

Damage Analysis of Trees in the Woodland Owned by the August Klasing Family Foundation in the Forestry Office Bielefeld, NRW, Germany Caused by the European Mouflons (Ovis Gmelini Musimon, PALLAS 1811)

Weigelt H*, Fest B

Ruhr University of Bochum, Department of Bioeconomy, Faculty of Biology and Biotechnology, Germany

***Corresponding author:** Weigelt Hartmut, Ruhr University of Bochum, Department of Bioeconomy, Faculty of Biology and Biotechnology, Germany



ARTICLE INFO

Received: 📅 September 12, 2022

Published: 📅 September 21, 2022

ABSTRACT

Citation: Weigelt H, Fest B. Damage Analysis of Trees in the Woodland Owned by the August Klasing Family Foundation in the Forestry Office Bielefeld, NRW, Germany Caused by the European Mouflons (Ovis Gmelini Musimon, PALLAS 1811). Biomed J Sci & Tech Res 46(2)-2022. BJSTR. MS.ID.007327.

Short Communication

Related to an ecological, sustainable forestry and the calculation of the disprofit as a consequence of these damages. The Bachelor of Science thesis, „Damage analysis of trees in the woodland owned by the August Klasing family foundation in the forestry office Bielefeld, NRW, Germany caused by the European mouflons (Ovis gmelini musimon, PALLAS 1811) - Related to an ecological, sustainable forestry and the calculation of the disprofit as a consequence of these damages“ deals with a data analysis that concentrates on tree damages which are caused by the European mouflon. The analyzed damages deal with only those damages which can be seen on the trunks of young and mid-aged trees. In two ways mouflons can cause damages on the trunk of trees. The first one is eating the bark of trees by sheep and rams. The second one is ramming the trunk of trees by the rams only. The main question of this thesis is if sustainable forestry in the described region can be arranged with the behavior of the mouflons. Besides the economical disprofit of those damages has been calculated, too. To get an overview of the current damage situation eleven crop units have been

analyzed by an inventory of the damages attached to every single tree. Moreover data has been taken in account to get information's whether there are factors that influence the risk for a tree to be damaged by mouflon. This data has been collected by examining four of eleven crop units. To get more information about the size and the structure of the mouflon population in the research area the mark-recapture-method has been applied and in this case the mark was made via photo identification. The economical disprofit in the future - because of the damages - has been calculated based on the diminution in timber value at the time the timber might be harvested.

The Most Important Results of this Research are as Follows

- 1) To minimize the damages on trees in the future it will be no ultimate solution to reduce the wildlife stock of the mouflon. The reduction of this wildlife stock would mean that the inbreeding-rate would increase being already on a high level in the current population.

2) The damages of the trunks are distributed diversely within the species of trees. The data show that the mouflons prefer deciduous trees instead of conifers. Considering this data it is explicit that the biodiversity of the research area could decrease. This means that the management of this forest cannot be combined with a sustainable forestry that aims for mixed forests.

3) The data indicate that young crop units of the research area are strongest affected by the damages. A sustainable forestry is based on the growth of these young crops, so it is not in accordance with the damages caused by the mouflons.

4) In every single crop unit, the damages of the trunks are randomly distributed. The stability of every single unit is aggravated if the forester would harvest the damaged trees. Therefore, the total damage cannot be reduced by harvesting those trees. As a consequence, the damaged trees need to stay in a crop unit until the whole timber forest can be harvested. Furthermore, the risk for damages due to ice and storm breakage increases;

5) The data show that knots and branches sitting on the trunk reduce the risk for a tree to be damaged by mouflons. Other factors that reduce the risk of damaging could not be found.

6) Based on the data the disprofit that can be expected in the future lies between 8000€ and 15000€. The disprofit has been calculated upon crop units measuring in total 10 hectares. The calculation of the disprofit is based on the diminution in value of the timber. Furthermore, the disprofit could even increase due to weather calamities like storm, snow- or ice-rain [1,2].

The results of the data analysis show that the current damage situation could influence the sustainable, ecological forestry in a negative way. The only way to reduce the risk of damages caused by the mouflons is to take precautions for trees or crop units. Minimizing the size of the mouflon population is not an advisable precaution because the current population is already too small. Admittedly other kinds of preventive measures will generate a lot of costs for the forestry and unfortunately the use of preventive measures like fencing crop units disagree with an ecological forestry. Therefore the only way to solve this problem is to remove the whole mouflon population from the research area.

References

1. Türcke F, Tomiczek H (1982) Das Muffelwild : Naturgeschichte, Ökologie, Hege, Jagd.
2. <https://www.wald.sachsen.de/Wildschadensschaetzung.pdf>.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2022.46.007327

Weigelt H. Biomed J Sci & Tech Res



This work is licensed under Creative Commons Attribution 4.0 License

Submission Link: <https://biomedres.us/submit-manuscript.php>



Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<https://biomedres.us/>