

BIRD STRIKE COMMITTEE EUROPE

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A NEW PROBLEM ON SCARING BIRDS ON AIRFIELDS INDUCED BY
PLANTING TREES AND SHRUBS

Dr. J.Hild, W Germany

A new problem on scaring birds on airfields induced by planting trees and shrubbs. By Dr.J.Hild, GAF

By directives of the German Ministry of Defence it is not allowed to have fruit bearing trees and shrubbs on airfields; an other order demands planting of trees for protection against noise, air pollution and sight. These two directives seem to stay in contradiction but the reality is that these two demands are completely compatible.

Being based on the assumption that airfields and airports were built into a more or less natural landscape with corresponding bird species we have to realize that the natural form of landscape in most parts of Germany was the wood or shrubb. By cutting down the woods as done at construction of airfields/airports the typical wood birds - mostly small birds-removed, too. Instead of woods and shrubbs large grassland areas were built up, mostly grassland with extensive agricultural use. So the corresponding birds followed : crows, lapwings, pigeons, starlings, hawks. The consequence was : birdstrike problem !

In case we are successful in changing structure of landscape on airfields, that means replacing grassland- and agricultural areas on airfields/airports by woods/shrubbs the birds should change, too, the birdstrike risk could be reduced and the nature could be favoured in its natural development. But there is a very important biological or ecological point which is to consider in order to avoid the contrary. Afforesting of woods on airfields/airports displaces balance of bird species quantitative and qualitative by the changed food conditions and nesting possibilities. By corresponding investigations we know that large and close woods have nearly the tenfold of bird species than grassland areas, but mostly small birds. Afforesting of trees and shrubbs on airfields/airports therefore should avoid large and close areas and should be based on special ecological research. The grassland areas should be planted, so far as possible, very dense with medium size trees and that in an uniform manner avoiding fruit bearing trees and areas which are too large. Between these woody areas should be planted shrubbs consisting on strong, hard and/or thorny species. As example I can give you information about such provisions on Cologne airport. By more years observation we know that the different types of vegetation now show the following bird densities:

Moist or wet grassland areas:		high
Dry grassland areas	:	light
Old woods	:	high
Young woods, shrubbs	:	light
Water areas	:	high

Regarding number of birds, weight of bird, frequency of appearance and behavior of birds we found the following birdstrike-risk-numerals:

Old wood with pinus and betula	:	3.01
Moist grassland	:	2.41
Swamps	:	2.18
Shrubbs(genista, Erica)	:	2.00 - 1.64
Young wood(picea abies)	:	1.41
Moist, young wood with betula	:	1.29

Regarding the bird species and adding all numerals of all vegetation-types we found the following risk-numerals:

Hawks	:	3.83
Pigeons	:	3.58
Crows	:	3.50
Thrushes	:	3.33
Falcons	:	3.08
Starlings	:	3.08
Lapwings	:	1.25
Small birds	:	1.00 - 1.83

(highest numeral = 7, can only be reached by one bird species in one special type of vegetation). All values for airport Cologne.