

## Naturschutz in der Landwirtschaft mittels Flächenstilllegung – Profitiert (auch) der Laubfrosch (*Hyla arborea*) davon?

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### Nature conservation in agricultural landscapes by using set aside – Does the tree frog (*Hyla arborea*) take advantages?

Between 2000 and 2002 investigations were conducted on the importance of wet spots within arable fields for amphibians and the opportunity of using set asides for goals of protection of this animal group. In our study area, an agricultural landscape of more than 4000 ha in the north-eastern plain of Germany 141 wet spots, consisting of cultivated areas as well as set asides, were investigated. From 1996 to 2000 in one particular area of 750 ha (»Eggersdorf«) a complex modification of land use by setting aside of 3,4 % of arable land was established. In the period from 1995 to 2002 the number of males and the used ponds as well as the success of reproduction of the tree frog were recorded. More than 85 % of wet spots were inhabited by amphibians in the investigated areas, which have a high density of ponds. Most of them were populated in more than one of three years. Wet spots within fields, which were dry enough for being cultivated, were ploughed between late summer and early autumn. All amphibians were killed on these spots. Hence, cultivated wet spots within fields must be characterised as sink biotopes for amphibians. On set asides there is no obligation for cultivation by ploughing. The number of amphibians on these spots increased by the beginning of autumn. These areas are obviously secure habitats for amphibians. Set asides in form of stripes along woods provided summer habitat for amphibians, particularly for the tree frog. Compared to the period from 1995 to 2000 the complex application of set aside in the area of Eggersdorf was followed in 2001 by an increase of the number of males from about 0–5 to more than 80. The percentage of used ponds was enhanced from 0–6 % to more than 40 %. Number and size of the groups of calling males also increased. In 2002 a substantial reproduction of the tree frog was detected for the first time during the whole investigation period. The trend of a positive development of the population of tree frog is obvious. Therefore, a goal oriented set aside is an appropriate measure for providing habitat areas and for improving the situation for amphibians. All species of amphibians in general and particularly the tree frog take advantage by this measure of nature conservation.

**Key words:** *Hyla arborea*, set aside, wet spots, edges of ponds, edges of woods.

### Zusammenfassung

Im Zeitraum von 2000 bis 2002 wurden umfangreiche Untersuchungen zur Bedeutung von Nassstellen innerhalb großer Ackerschläge für Amphibien sowie zur Nutzung von kleinflächigen Ackerstilllegungen für den Schutz und die Entwicklung von Landlebensräumen dieser Tiergruppe durchgeführt. Innerhalb eines etwa 4000 ha großen Agrarraumes des Nordostdeutschen Tieflandes wurden 141 sowohl bewirt-