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Organic Farming in Water Catchment Areas; Information for Water Utilities and Water Protection Consultants

WATER

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Foreword

This DVGW Information Water was compiled by the project group “Agriculture and water protection” of the joint DVGW technical committee / DWA expert committee “Groundwater and resource management”. It supplements the existing technical rules of the DVWG regarding water-protecting agriculture with information for water utilities and water protection consultants in respect of water protection services, cultivation aspects and possibilities of promoting organic farming.

1 Motivation and Objective

Even in water catchment areas, organic farming can constitute an important component in reaching the water protection objectives regarding the pollution of ground and surface water with active ingredients from pesticides, their decomposition products (metabolites), nitrate, phosphor, and veterinary drugs. Although the systemic benefits for the protection of our drinking water resources are documented by numerous studies (among others Sanders & Heß, 2019) and organic farming receives financial and political support and is increasingly demanded by society, its share in terms of surface area continues to be marginal. The same holds true for the water protection and water catchment areas.

With the information on hand, the DVGW recommends the promotion and extension of organic farming in water catchment areas as an additional opportunity to reduce the pollution of drinking water resources caused by agriculture. Prerequisite for a successful implementation of the measures proposed in this document are agricultural holdings that are interested in a conversion (see also Section 4) and the permanent cooperative collaboration of water utility and agricultural holdings.

Section 2 illustrates the benefits of organic farming for water protection and refers to further literature.

However, it is also known that individual management measures in organic farming may be associated with pollutions of the drinking water resources. Section 3 therefore explains measures in nutrient management, soil cultivation and crop rotation configuration that are suitable for avoiding or minimising these pollutions. These measures serve to optimise the water protection merits of organic farming and should therefore be observed by water utilities and water protection consultants.

Given the current framework conditions, an increased conversion of conventionally operating farms to organic farming in water catchment areas will only succeed with the additional support of the water utilities that goes beyond the assistance of the federal states. For this reason, Section 4 will provide guidance on opportunities for providing assistance based on case studies.

Section 5 provides bibliography and cites important Internet portals offering further information and consulting services for the promotion of organic farming.

With the compilation of the different aspects to be considered, the DVGW supports the development of purposeful, efficient, and feasible concepts for organic farming in water catchment areas. The positive image of organic farming and its high, drinking water quality-affecting quality standards is to also enhance the public perception of drinking water as a natural and unadulterated foodstuff.