

Denmark case study – Requirements for fixed covers on manure and slurry tanks

Country	Denmark
Sector	Agriculture
Year	2013
Narrative description	<p>Covering manure and slurry storage tanks is an easy and cost-effective measure to reduce methane and nitrous oxide emissions. Instead of providing incentives, Denmark chose regulatory law to tackle these sources of emissions. At the same time, this regulation is accompanied by standards and guidance for farmers and manufacturers.</p> <p>Until 2020, it is estimated that 78.000 tonnes of CO₂eq can be saved in Denmark at about 310EUR/tonnes (excluding other social and economic benefits) from covering slurry tanks alone.</p> <p>Overall, the Danish approach to mitigate GHG emissions from agriculture is dominated by increasing efficiency and reducing emission intensity. Therefore, many measures bear the risk of causing rebound effects, lock-ins and other negative side effects of further intensification. While covering manure and slurry tanks is an uncontroversial measure it still does not address the general problem of emissions from livestock, which can never be zero. Accordingly, this measure is still just a bridge technology.</p> <p>The measure comes with several environmental, social and economic co-benefits. Most notably air quality and public health are improved due to the reduction of ammonia and methane emissions. This reduction in ammonia emissions leads then to higher nitrogen content of the slurry, which can be used as fertiliser. Additionally, the cover prevents rainwater to enter the tanks which increases tank capacity and reduces costs for applying the fertiliser to the fields.</p>
Responsible authority	Danish Environmental Protection Agency (Miljøstyrelsens)
Relevant legal basis	Simplified land consolidation procedure -Flurbereinigungsverfahren mit der besonderen Zielsetzung „Flächenmanagement für Klima und Umwelt“ (§§ 86ff. FlurbG")

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Policy Type	Public Intervention
Governance Level/ Target audience	Denmark - National Farmers and agricultural company
Objectives	Reduction of methane, nitrous oxide and ammonia emissions
Summary of reasons for success	Regulation is successful if compliance is monitored and enforced. In this case the regulation has been embedded in a wider set of measures that combine different instruments targeting various overlapping policy objectives such as water pollution, air quality and climate change, thereby increasing acceptance.
Replication potential	Covers for manure and slurry are a well-established technology with many environmental, social and economic benefits. Making their application mandatory therefore is justifiable. Depending on the national farm structure it might be necessary to financially support the needed investment, especially for smaller farmers.
Relevant website	https://ens.dk/sites/ens.dk/files/Analyser/dk_climate_change_mitigation_uk.pdf https://oldwiki.mst.dk/Default.aspx?Page=Opbevaring-af-fast-g%C3%B8dning&NS=Husdyrvejledning&AspxAutoDetectCookieSupport=1 https://oldwiki.mst.dk/Husdyrvejledning.Opbevaring-af-flydende-husdyrg%C3%B8dning-ensilagesaft-mm.ashx