

The Impact of Catch crop Subsidy on Farm Economic and Environmental Performance: Empirical Evidence from Denmark

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Abstract

Agri-environmental schemes (AES) are integral components of the EU environmental and agricultural policies. AES pay farmers to encourage them to adopt agricultural practices that are environmentally sustainable. Here, we study the implementation of the Danish targeted catch crop program. The objective of the program is to reduce nitrogen losses to coastal and ground waters. Program participation is voluntary and a farmer can apply for a subsidy if she/he plants catch crops, or undertakes alternative measures with a similar effect, in a field mainly located within a coastal water catchments. We estimate the effect of the program on farm nitrogen use per hectare and farm total revenue per hectare for a representative sample of Danish farms using difference-in-difference (DID). Our results for arable farms suggest that the program exerts an impact consistent with public policy. Specifically, program participation reduces total nitrogen use per hectare by about 10 kilograms while it does not have any effect on total revenue per hectare. Surprisingly, the impact for dairy farms is not as expected. Program participation has no effect on total nitrogen use per hectare while it significantly increases farm total revenue per hectare. However, our results are sensitive to the number of treatment years included in the estimation.