# Manure surpluses in agriculture, 1970-2019

Indicator | 8 April 2021
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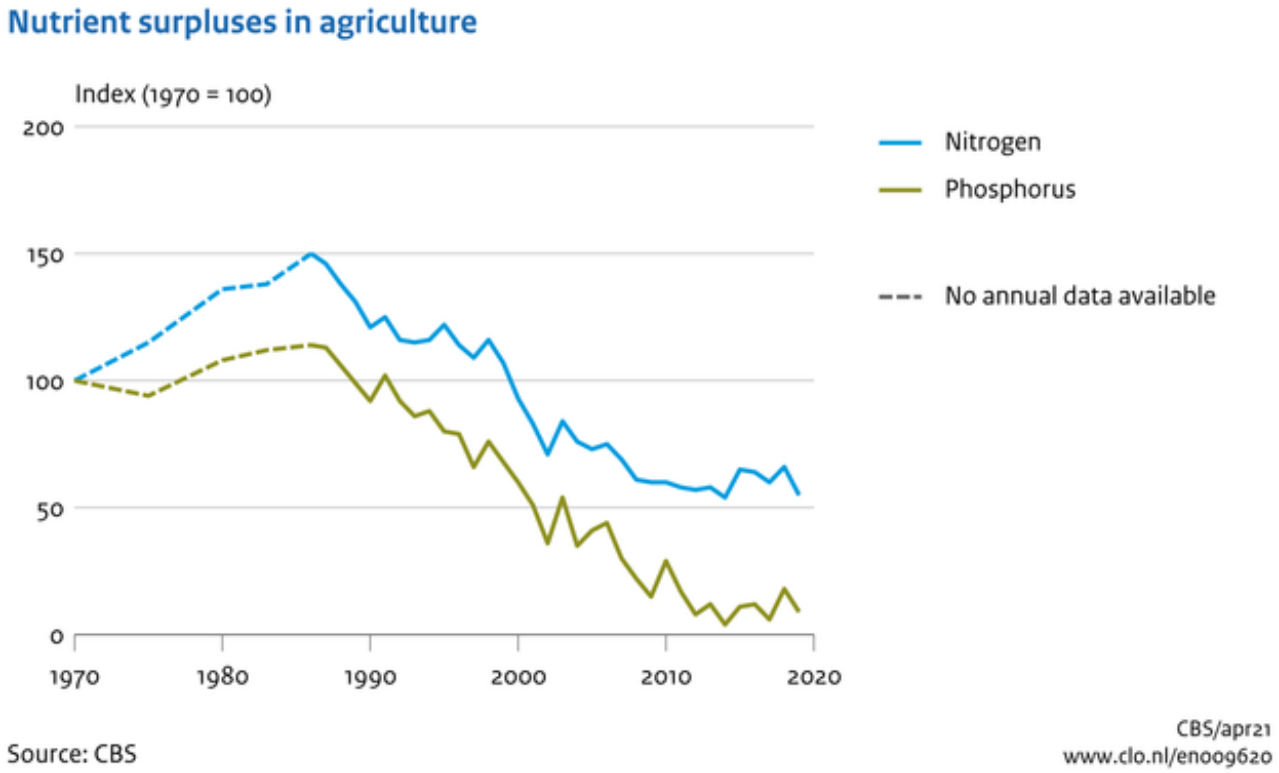
Since 2006, when a new fertiliser policy was introduced in the Netherlands, the nitrogen surplus in agriculture decreased by 27 percent. In 2019, the nitrogen surplus was at the lowest level since 2014. The phosphate surplus has virtually disappeared in the last few years.

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## Nitrogen surplus

The nitrogen surplus trend has been downward since 1986, after having risen since 1970 due to an increase in intensive livestock farming. The maximum level was reached in 1986 and was subsequently reduced by half over the next two decades. Since 2006 the nitrogen surpluses were further reduced significantly. In 2018 there was a substantial increase in nitrogen surplus due to the long dry summer in the Netherlands which ruined many crops. 2019 was a good year for the crops and the nitrogen surplus, with one of the lowest surpluses in the last 10 years.
In 2019, 62 percent of nitrogen input on agricultural land was absorbed in vegetable growing. In the 90's this percentage was still around 47 percent. Since then the application of inorganic fertilisers and manure production have been reduced considerably. Also, more manure is being used outside the agricultural sector.

## Phosphorus surplus

In 2019, the phosphorus surplus in agriculture has almost disappeared, which means that nearly 100 percent of phosphorus applied on agricultural land was used in crop growing. In 2019 92 percent of phosphorus was used for crops.
On average, 89 percent of phosphorus was used during the period 2011-2016, as against 50 percent in the 1990s. Over the past 10 years, less phosphorus was applied on agricultural land, as a result of a reduced application of inorganic fertilisers. Also more manure was used outside the agricultural sector. For phosphorus the share of disposal outside the agricultural sector in the total of manure production was 24 percent between 2011 and 2019, versus approximately 6 percent in the 1990s.

## Policy

In 2006 a new fertiliser policy based on application criteria for fertilisers was introduced in the Netherlands. Manure production has also been restricted. In terms of nitrogen and phosphorus, the annual Dutch manure production is not allowed to exceed the 2002 level. Since 2010,varies policies were introduced to reduce nitrogen and phosphorus. The two most well-known examples are Fosfaatrechten (Phosphorus Rights) and Programma Aanpak Stikstof (Program Approach Nitrogen) or better known as PAS. In 2018 "Fosfaatrechten" were introduced by the Dutch government. In 2015 the "PAS" was introduced for nitrogen, but rejected in 2019.

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CBS, PBL, RIVM, WUR (2021). Manure surpluses in agriculture, 1970-2019 [10] (indicator 0096, version 20 , 8 April 2021 ). www.environmentaldata.nl. Statistics Netherlands (CBS), The Hague; PBL Netherlands Environmental Assessment Agency, The Hague; RIVM National Institute for Public Health and the Environment, Bilthoven; and Wageningen University and Research, Wageningen.

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