EEB
European Environmental Bureau

# #LastChanceCAP

## AGRICULTURE MUST REDUCE ***AIR POLLUTION***

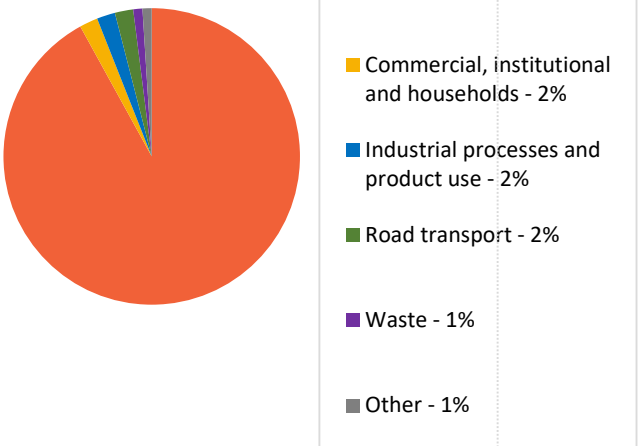
The agricultural sector is polluting the air we breathe. It is time for it to do its part to save lives and to preserve our environment.

## FACTS

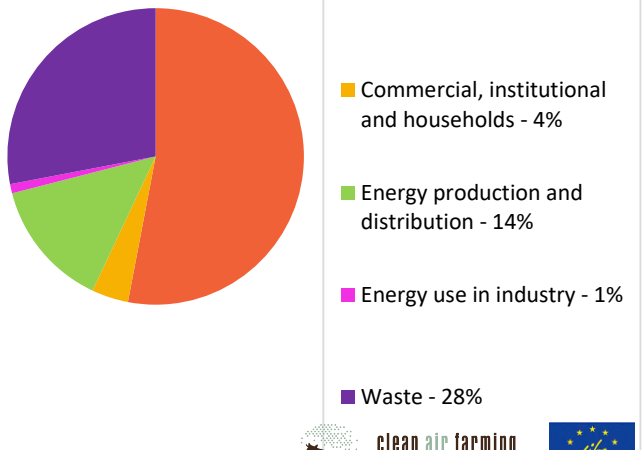
- Air pollution is causing more than 400,000 premature deaths per year in the European Union.
- In 2016, the agricultural sector was responsible for **92% of ammonia** (NH3) emissions, mainly from manure and synthetic fertilisers; **15% of primary particulate matter** (PM) emissions, mainly form agricultural waste burning; and **53% of methane** (CH4) emissions, mainly fom enteric fermentation and manure management. Methane is also a powerful green-house gas (EEA Air Quality in Europe – 2018 report).
- **Ammonia** reacts in the air to form **secondary particulate matter**, which is very harmful for human health. Ammonia emissions cause eutrophication of soil and water and acidification of soil, lakes and rivers.
- Methane is a **green-house gas** and a **precursor of ground-level ozone**. Ozone is harmful to human health and damages vegetation, forests and crops.
- Ground-level ozone, ammonia and nitrogen oxides are air pollutants which also **damage ecosystems** (eutrophication and acidification); they are also responsible for **biodiversity loss**.
- In the period 2013-2016 ammonia emissions by the agricultural sector have increased by about 3% (EU average) – **ammonia is the only pollutant which increased** over this period.
- 80% of ammonia emissions in the EU come from 5% of farms
- In Europe, a shift by -50% in meat and dairy consumption would reduce CH4 emissions by 45% and overall GHG agricultural emissions by ca. 20-40% (JRC study); a shift of -63% in meat and eggs consumption would reduce NH3 emissions by

### THE AGRICULTURE SECTOR IS THE MAIN EMITTER OF AMMONIA AND METHANE IN THE EU

EU-28 ammonia emissions in 2016 (EEA report)*




EU-28 methane emissions in 2016 (EEA report)*




*EEA Report No 12/2018: Air Quality in Europe – 2018 report
*JRC report 'Global trends of methane emissions and their impacts on ozone concentrations', October 2018

clean air farming
Reducing Ammonia and Methane Emissions from Agriculture

# Ammonia ($NH_3$) and fine Particulate Matter ($PM_{2.5}$)

Ammonia, once emitted, reacts with other substances in the air, such as sulphuric and nitric acid, to form ammonium sulphate and nitrate salts (fine particulate matter). These particles travel for long distances, affecting air quality in cities as well. Many measures to reduce ammonia emissions are economically beneficial for farmers since they reduce nitrogen losses.

## PM 2.5 peaks

As described in the European Environment Agency 'Air Quality in Europe – 2018 report', three major $PM_{2.5}$ pollution events took place in 2016, in the spring (9-20 March), autumn (24-28 October) and winter (4-9 December). In the spring's episode, agricultural NH3 emissions were the most significant cause of the high $PM_{2.5}$ pollution levels, with western, central and eastern Europe particularly hit. The October $PM_{2.5}$ episode occurred across central, western and northern Europe, and Copernicus Atmosphere Monitoring Service CAMS (2017) linked the PM2.5 pick in the United Kingdom, France and central Europe primarily with NH3 emissions from agriculture. Agriculture NH3 emissions played an important role also in the winter episode.
Agriculture is also responsible for the 15% of $PM_{10}$ primary emissions and 4% of $PM_{2.5}$ primary emissions; to which open fires contribute too.

# Methane and ground-level ozone ($O_3$)

Ground-level, or tropospheric, ozone is produced by the interaction of sunlight with emissions of nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC) and methane (CH4). Ozone Is predicted to cause losses in wheat production of 16.5 million tonnes in 2020, corresponding to a value of 1.96 billion euro (http://nora.nerc.ac.uk/id/eprint/15071).

## Ozone in Spain

Public health costs resulting from ozone pollution in Spain are around 5,000 million euros per year, or 0.33% of Spanish GDP, according to the World Bank. This is without taking into account the cost of the damage caused to crops and natural ecosystems

# RECOMMENDATIONS

- The next Common Agricultural Policy has to effectively contribute to the reduction of air pollution from the agricultural sector; the establishment of real and accountable objectives has to be a priority for Member States when agreeing on the new CAP and developing their Strategic Plans.
- The next Common Agricultural Policy has to provide real money for nature, the environment and climate. No more perverse subsidies have to see the light in the next CAP.
- Consumers have to right to be informed about the impact that the products they buy have on the environment, the CAP should support this.
- Increase awareness among farmers about their key role in preserving our environment and the quality of the air we breathe.

The 'Clean Air Farming' project is funded by the European Commission's LIFE Programme.

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