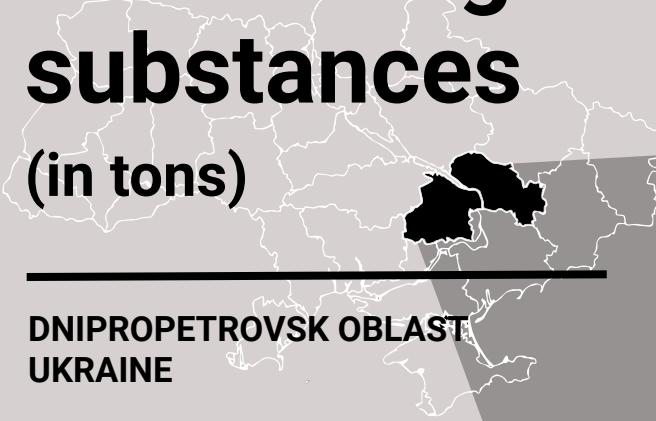


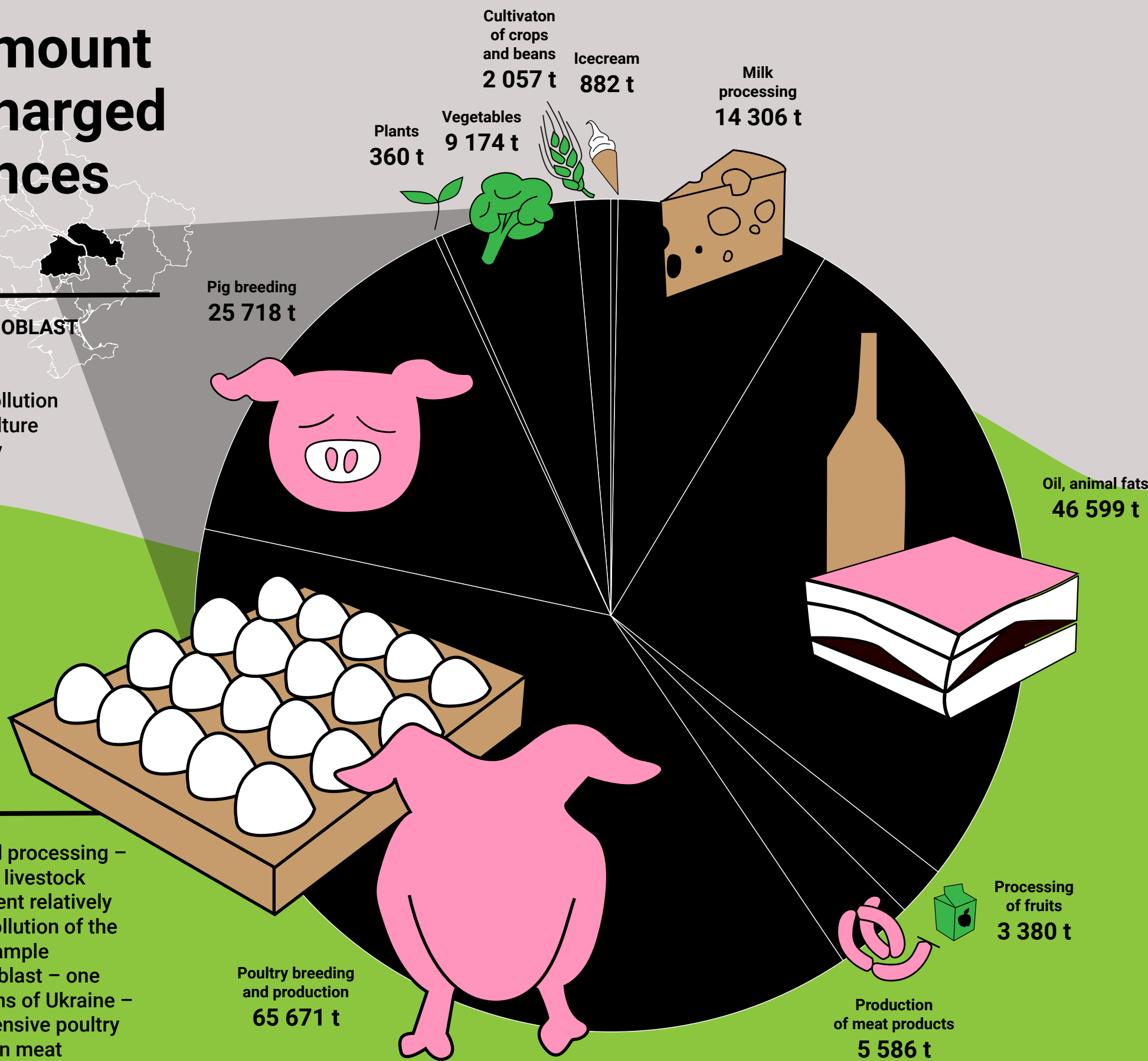
Total amount of discharged substances

(in tons)



**DNIPROPETROVSK OBLAST
UKRAINE**

Environmental pollution caused by agriculture and food industry



Agriculture and food processing – especially extensive livestock production – represent relatively serious source of pollution of the environment. On example of Dnipropetrovsk Oblast – one of agricultural regions of Ukraine – we can see that extensive poultry breeding and chicken meat production is the most important polluter of air and water, followed by oil production and animal fats processing, and pigs breeding.

Discharge of selected greenhouse gases CO₂ / N₂O / CH₄



DNIPROPETROVSK OBLAST
UKRAINE

Environmental pollution
caused by agriculture
and food industry

Greenhouse gases are one of the biggest threats of basically any industrial facility. The biggest share of discharged greenhouse gases is represented by the carbon dioxide. Emissions of CO₂ significantly contribute to the global climate change. Extensive livestock production is one of their important source. Emissions of greenhouse gases are recalculated by their effects on the CO₂ equivalent – for methane (CH₄) is GWP* = 21, for nitrous oxide (N₂O) is GWP = 310

* GWP = global warming potential

According to the UN Food and Agriculture Organization, the agricultural area accounts for approximately 39 % of the landmass (49,116,227 km²) of which arable land occupies about 14 million km², permanent crops over 1.5 million km² and pastures incredible 33.5 million km². One third of the total area of arable land is also intended for further animal feed. Overall, livestock production occupies more than 2/3 of the total agricultural area and approximately 30 % of the landmass. Livestock production in the world is steadily increasing. Meat consumption has more than doubled since 1970.



CO₂ – CARBON DIOXIDE ●
N₂O – NITROUS OXIDE ●
CH₄ – METHAN ●

Source of Data: State Statistics Service of Ukraine
Data for the year 2015
(<http://www.dneprstat.gov.ua/>)

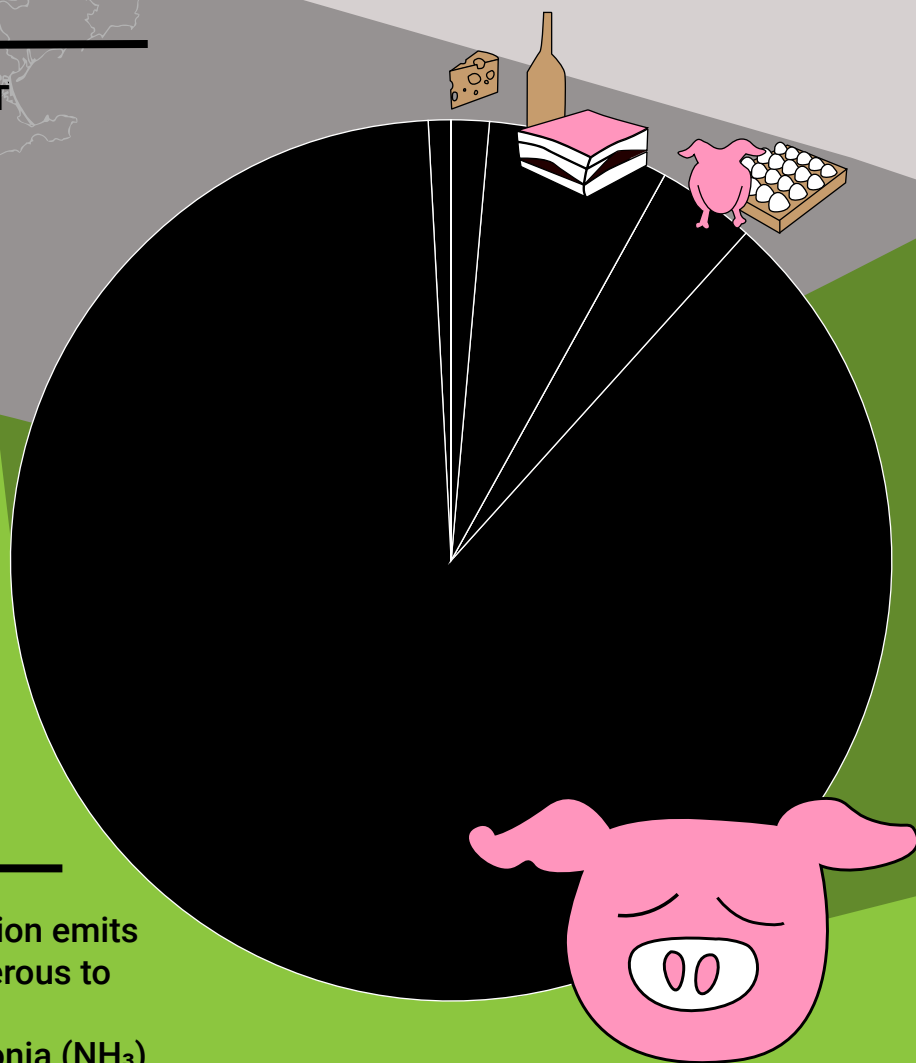
Discharge of selected substances causing "acid rain"



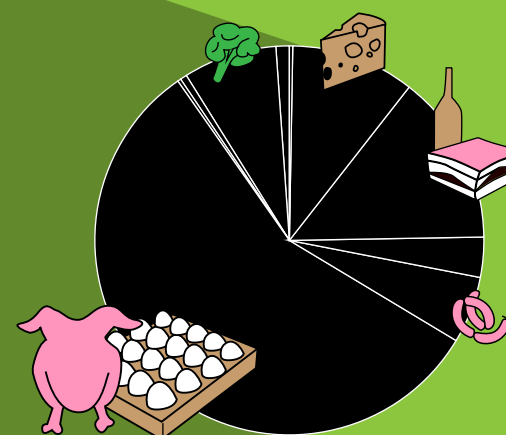
**DNIPROPETROVSK OBLAST
UKRAINE**

Environmental pollution caused by agriculture and food industry

NH₃



NO₂



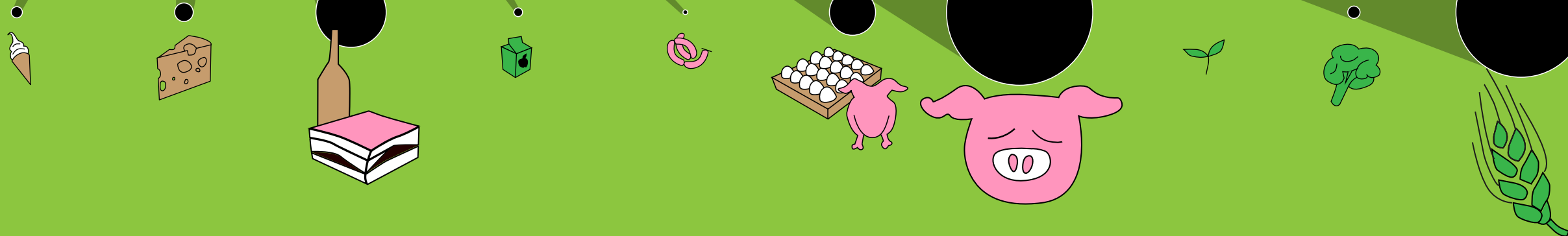
Extensive livestock production emits number of chemicals dangerous to the environment. The most significant polluter is ammonia (NH₃) polluting water. Nitrates leaching into the groundwater cause that it is either unsuitable for human consumption or requires expensive modifications. Ammonia is one of the gases contained in "acid rain", which plays an important role in the transport of acidic pollutants over long distances with negative effects on vegetation and animals.

Emissions of MICRO-PARTICLES



**DNIPROPETROVSK OBLAST
UKRAINE**

Environmental pollution caused by agriculture and food industry



Icecream	Milk processing	Oil, animal fats	Processing of fruits	Production of meat products	Poultry breeding and production	Pig breeding	Plants	Vegetables	Cultivation of crops and beans
1,4 t	3,9 t	56,9 t	0,8 t	0,2 t	24,6 t	246,7 t	—	1,7 t	195,6 t

The biggest polluters

TOP 10



**DNIPROPETROVSK OBLAST
UKRAINE**

Environmental pollution
caused by agriculture
and food industry

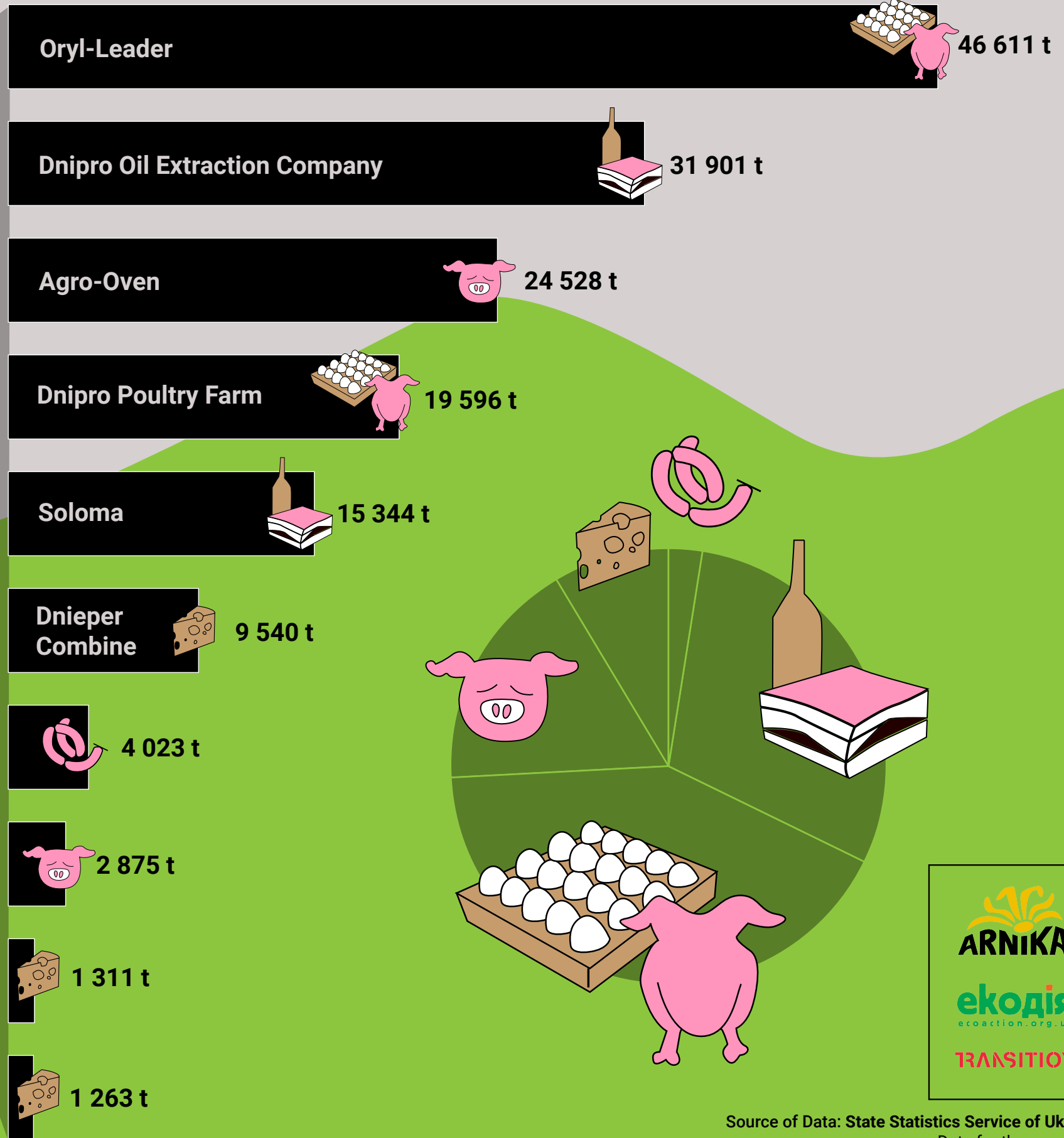
We can see, that the ten biggest polluters of the environment in Dnipropetrovsk Oblast regarding agricultural and food production are represented by livestock production companies. The biggest share of the total amount of discharged substances is gained by poultry production companies. Dnipro Oil Extraction Company emits about one third pollutants of the air and water in the region, followed by Agro-Oven. Although the data source claims the company major focus is on pork production, chicken meat is also one of company's production interests.

Meat Factory
Favorit Lux

Agro-Soyuz

Agrolight

Kryvyi Rih
Milk Company



Source of Data: State Statistics Service of Ukraine
Data for the year 2015
(<http://www.dneprstat.gov.ua/>)