

Pilot Project:

Air Cleaning Units for Fattening Pig Barns

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For some time the focus regarding environmental concerns has been on livestock production. This agricultural sector is seen as one of the main “originators” of airborne emissions and air pollution: As is commonly known about 95 % of ammonia is being emitted from agriculture. Therefore a significant reduction of ammonia emissions as demanded by the European NEC-Directive can only be realized by starting in this specific sector. Ammonia emissions not only affect air pollutants, but also have consequences for the formation of particulate matter. In the atmosphere secondary particulate matter emerge from gaseous precursor substances and ammonia represents the limiting factor for this process. When addressing reduction of ammonia emissions from livestock production systems “turning the right screws” is crucial. In this pilot project the emphasis is on the pig producing sector. In this context examples for expedient options are protein adapted feeding and application of feeding additives that demonstrably reduce ammonia release.

Furthermore reduction of ammonia emissions can be obtained by the use of air cleaning technologies. – An approach that is commonly used in Germany but rarely being applied in Austria so far. Before the widespread use of these technologies in Austrian pig production can be recommended, further research regarding practical feasibility and economic impact on Austrian farm’s operational structure is essential. It has to be questioned whether air cleaning units can be retrofitted and affiliated to existing barns and which the minimum size of a farm’s compartment has to be so that usage is still reasonable. Apart from that it has to be analysed what the actual rates of ammonia and odour reduction are and how high the investment costs, operating expenses as well as supervision expenditures are.

To clarify these pending questions a new testing facility for fattening pigs has been built at AREC Raumberg-Gumpenstein. Basing on the “Styrian program for clean air 2014” the building was financed through public means – for the most part by Styrian provincial government (Department “A 10: Agriculture and Forestry” and Department “A 15: Unit Air Pollution Control”).