

# Fertilizer wastage costs China 52 million tons of grain

May 27 2011, By Albert Sikkema

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If China could divide its available fertilizers better among its provinces, it could produce 52 million tons more grain. This would enable China to tackle its growing demand for food and animal feed within its own borders.

This is the result of a study conducted by Xiaobin Wang of the Chinese Academy of Agricultural Sciences (CAAS) and the Wageningen UR agrotechnologist Willem Hoogmoed, as reported in this month's *Journal of the Science of Food and Agriculture*.

In the wealthy eastern part of China, farmers spread more than 180 kilogrammes of nitrogen on each hectare of their land. Excessive amounts of nitrogen cannot be absorbed by the crops; instead, they pollute the [groundwater](#) and the air. In the poorer western part of China, nitrogen use is below 100 and even 50 kilogrammes per hectare per year. If the eastern provinces were to limit their fertilizer use to 180 kilogrammes per year, the remainder - 1.2 million tons of nitrogen - could go to the poorer agriculture areas. That would result in additional [grain production](#) of 52 million tons, Wang calculates.

That would make quite a difference in the global grain market. For comparison, China currently produces about 500 million tons of grain annually, and the European Union produces about 130 million tons. The inefficient use of nitrogen is one of the major limiting factors in [food supply](#) in China, writes Wang.

The Chinese Academy of [Agricultural Sciences](#) is adviser to the agriculture ministry in Beijing. Its conclusions have already been shared among policy makers, says Hoogmoed. But the re-distribution of fertilizers has not yet been put into practice. The distance between China's capital city and its countryside is big, and every province has its own policy and fertiliser factories.

Provided by Wageningen University

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