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# Introduction

World population is growing as never before and it is no secret. This increase has been made possible thanks to the progress that technologies have brought in the agriculture domain. The modern agriculture use lot of useful tools whether it is machinery, fertilizers, chemical pesticides, and so on. They made the humans able to harvest bigger areas, being more efficient, deal with illnesses and parasites, keep the food consumable longer... Those revolutions drastically changed the agriculture habits. Of course, progresses often come with drawbacks and modern agriculture isn't exempted. One of the most common examples is the increase in gas emissions. On the following graph, one can see the evolution of the global population and the evolution of gas emissions due to agriculture.

PICTURE

One must be aware to check the units: The two curves don't represent the same thing here. However, the conclusion is that the gas emissions due to agriculture is roughly increasing collinearly with the global population until now. This is no good prediction for the future as we already feel the environmental consequences of our way of life. To have better clues on the topic, let's study more deeply the relationships between food production, use of fertilizers and environmental impact.

# Back to the last decades :

TO BE COMPLETED (CLELIE’S PART)

This is no big surprise, the quantity of producted food is skyrocketting for more than 50 years. Moreover, some countries are way more producing than other countries, regardless on their superficies. To find their secret, let’s study one big improvement of modern agriculture, the fertilizers. More precisely, let’s try to link the producted quantity of food to the fertilizers use: do several models of agriculture exist or do we have a similar use of fertilizers for a same production? How can we relate the fertilizers use to the type of food that is produced?

# Fertilizers