There has been an exponential growth in GM crop cultivation worldwide over the last decade, and localised studies which explore the direct and indirect consequences of GM crop cultivation on farmers' health are beginning to accumulate. In order to obtain a global perspective, we have initiated a systematic review to analyse this increasing body of scientific evidence.

A systematic review is an internationally-accepted and well-established methodology whereby a protocol is developed in order to challenge a clearly-formulated hypothesis. This protocol first requires an extensive search of the scientific literature, from which individual publications are selected and their results analysed in a transparent, reproducible and unbiased manner.

In order to assess the likely impacts of GM (as compared to non-GM) crop cultivation on farmers' health, we developed two research pathways, investigating: 1) the direct health impacts derived from any changes in insecticide and herbicide usage; and 2) the indirect health impacts of any changes in on-farm income.

On the basis of an exploratory pilot phase, initial results indicate that: 1) GM crop cultivation decreases insecticide usage in general; however the results concerning herbicides are less clear. A smaller sub-set of studies correlated a decrease in pesticide-associated illnesses with GM crop cultivation; and 2) most cultivators of GM crops experience economic gains compared to non-GM crop cultivators. However no studies were found which further analyse the impacts of the modified incomes on farmers' health.

We are now extending the review to a wider set of studies in order to provide greater detail in identified health impacts.

Keywords: GM crops, farmers, health, systematic review