

A WORLD LUSH AND BLUE

Have you ever wondered how much water is wasted per each person in a day? Or how many kilograms of food are produced to feed a country? And how much of this food is produced by agriculture? We don't have the answer to any of these questions but all of them share a common denominator: they involve environmental impacts that many people may not know.



"Río Riguel: Bardenas, Zaragoza" AgrosOS ,IGME.<http://www.igme.es/AgrosOS/obje.htm> Accessed 12 April 2021.

Even if the volume of water on Earth is always the same, humans are increasing the amount of water used and the consequence of this fact is that the equality of the water has been immensely impaired in the last years because of waste and pollution.

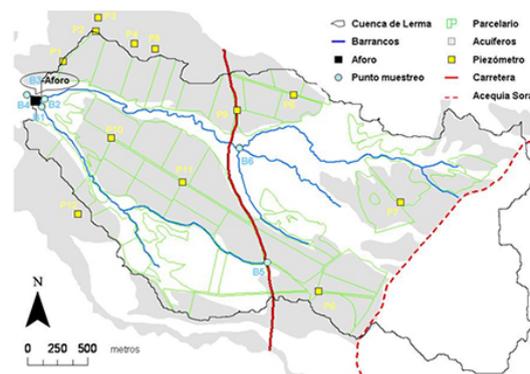
The influence of agriculture on this issue is significant because it consumes up to 70% of available water in the world. It cannot be forgotten that, due to the annual increase of population and the problems that take place in the soil(degradation of nutrients, desertification, droughts, floods, etc), this influence would increase and worsen because of the increasing need of food.

In order to face the problem and find solutions, a study has been carried out by Jesus Causapé, a researcher at the Geological and Mining Institute of Spain (IGME) in the experimental plot "Ecoregadium of Lerma", in the Cinco Villas region of Aragon (Spain).Causapé's main objective is to get to know the real needs of water and fertilizers of crops in an effort to minimize the impact in the ecosystems, to improve the use of resources and to protect the quality of water by implementing a series of general solutions that can be applied in any area of the world.

The first idea of the project is getting to know the real need of water a certain type of crop requires to verify the availability of water and to avoid over-irrigation. A soil study, which can be done by a specialized company with the help of a geologist is a very useful tool that can help farmers. It helps to figure out what the soil is like, and thus to supply water in a specific amount for its complete performance and a suitable use of resources.

Once we know the needs of water, adapting the irrigation mode can save a lot of this precious resource. Because the problem of over-irrigation is not only a waste of water but also a waste of fertilizers and the consequent pollution of aquatic ecosystems. And that's the reason why it's very important to focus on the fertilizers used to accelerate and improve harvest results. Farmers must realise that it doesn't matter how much product you use because plants can only absorb a specific amount, the rest is going to end up in the water, polluting it as well as the soil, as proved in the experimental plot of the project. An specific alternative to the use of common fertilizers t in the fields thrown at will is the use of concentrated fertilizers, such as urea capsules, that release the nutrients as the plant needs them. In addition to this, reusing irrigation water decreases the amount of fertilizers needed because the amount of them that was not absorbed by plants is dissolved in the water.

Data obtained from the research carried out in the project "Ecoregadium of Lerma" shows, an increase from 50% to 80% in the exploitation of water by comparison to traditional agricultural practices. So it is widely demonstrated that applying these tips (soil study, water needs, adaptation of types of irrigation, reusing water and the use of concentrated fertilizers) would solve two of the more challenging problems we are facing as humanity, which are the lack of water and growth of food demand.



Geographic information in the project "Ecoregadium of Lerma", Jesús Causapé. "Bardenas II Zaragoza" AgroSOS, 2003.

These general solutions are not totally unknown by farmers. Nevertheless, we should continue raising awareness of the importance of taking care of the environment. A key step is the implementation of gubernamental aids in the form of training consultancies from qualified staff who

is familiar with these problems and is able to verify the enforcement of these solutions and the complete acquisition of required techniques.

As the Sustainable Development Goals (SDGs) implemented by the United Nations establish, we are all responsible for achieving the rights of the entire population in terms of no poverty, zero hunger, good health and well-being, clean water and sanitation, decent work and economic growth, sustainable cities and communities and climate action. In short, agriculture is the basis of food and water is the basis of agriculture.

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