

# Problem of the water use in agribusiness



Written by Ángeles Miranda, November 2020

Can you imagine the waste of water in agro-industries and the pollution it could cause? There are many food factories such as Agrozzi, which manufactures processed foods like tomato paste, ketchup, fruit pulps, and others, to deliver to the market, for people's consumption. These large factories use a lot of water in their processes to wash all the raw materials that they use for their production, with which they produce their final food for sale. The problem in this is that all the amount of water that they use for washing all these raw materials, finally ends up leaving this water highly contaminated. This highly polluted water cannot be returned to the environment, such as rivers, irrigation systems, and others.



The solution that is nowadays used in factories for this big problem faced by agro-industries that consume large amounts of clean water, is that they have to have a water treatment plant that helps them first to clean the water they use, removing solids and pollutants, breaking down organic matter and restoring the oxygen content of treated water, so that the clean water can be returned to the environment, in order to have a next use, reusing it in an irrigation system for example for farmers, or rivers, or for external uses. This process of wastewater treatment is mandatory for industries in order to operate.

These treatment plants are gigantic, which involve different stages for the mixture separation process like chemical coagulation, flocculation and sedimentation. The most common process is the sedimentation, in which two masses are separated, in this case separating all the materials that contaminate the water, for example the organic substance and waste materials. For this process, the induced sedimentation is used. Induced sedimentation refers to the sedimentation of colloidal particles, whose agglomeration has been previously induced by chemical agents. For this process it is used decanters to separate components of higher density than water, using grids (filtration) that separates them completely, releasing clean water to be reused in other external systems.

"This type of process is very important for big food factories, since they use large amounts of water that, when contaminating it, could not have a second use and would be lost. In addition to this, it is regulated by the government so that these kinds of plants can work. With the current water shortage it is extremely important that they can have a second use, for example for the irrigation systems of farmers, to continue producing the raw materials that these same factories will use later to continue producing." This is what Carlos Miranda, an agronomist, tells us about.