Hidrolizas: semi-closed system of water recirculation, to improve the quality parameters of water, avoiding the waste of water in crops.

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Water is a vital factor for the survival of all living beings, in both industry and agriculture. Hidrolizas, is an initiative that seeks through the implementation of a semi-closed system of water recirculation, to improve the quality parameters of it, and be reused for irrigation of both plants and fish pond. The water in this semi-closed recirculation system follows the nitrogen cycle, starting its journey in the fish pond, then passes by gravity through a series of filters, and finally get pumped and distributed by PVC pipelines to the hydroponics system and to the bed germination of lettuce, finally the cycle is closed when the water leaked goes back to the fish pond. This research shows that the recirculated water optimizes the percentage of germination and cultivation of this vegetable as well as the parameters of water quality in the fish pond. Rainwater is collected to supplement the water evaporated and consumed by plants. The water that is discharged is used as irrigation for cultivation on soil, that is why it has been called a System of semi-closed water recirculation, avoiding the waste of this vital resource. No insecticides or chemical fertilizers are used, since the nutrients required by plants for growth are present in the recirculated water. The substrate used in the system germination, helps to regulate the pH of the water, strengthening the symbiotic relationships between plants and fish. This project also pretend to avoid contaminating water sources with waste from the fish farming, and it also result as entrepreneur idea to cross-farming.

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