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Feasibility study on the cultivation of *Cyprinidae*, in springlet of sugarcane farms (Mirza Kuchak Khan-Khorramshahr agro-industry)

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Abstract

Nowday aquaculture is accepted as one of the most important sources of human food production and experts consider it to be the most reliable way to reduce the pressure on aquatic reserves and overfishing. In our country many water resources that are not suitable for drinking and agricultural purposes are very good environments for aquaculture. In some people's thinking, sugarcane springlet is considered as a harmful and destructive environmental hazard. This research was conducted to determine the possibility of cultivation of *Cyprinidae* using the sugarcane springlet of Mirza kuchak Khan agro-industry (Iran, southeastern Khuzestan Province). In June 2018, the storage of fingerling fish was carried out in two soil pools with areas of 0.5 and 1.2 hectare. The storage density was 3000 fish per hectare and the duration of the breeding period was 180 days. During the breeding period, no change in water has been made and the physico-chemical parameters of the water have been monitored. Each of the pools was aerated overnight for 8 hours (3 hours at noon and 5 hours at night) with two air-conditioning and air-handling units. During the breeding period, in a specific time interval, with a digital scale and a biometric ruler, 15 fish were separately weighed and measured. During the breeding period, the trend changes of EC, pH and TDS in sugarcane farms springlet are 6.61 ± 0.53 , 8.07 ± 0.07 and 4387.9 ± 425.5 , respectively. During the period, the average electrical conductivity of EC and PH pool water was 7.22 ± 0.36 ppt and 8.43 ± 0.24 , respectively. At the end of the period, the average weight and length of common crap, grass crap, big head and silver crap fish were 1248.5, 798.5, 1361.5, 1069 grams and 38.9, 35.1, 35, 40, 40.95 cm, respectively. And the total fish taken from the 1.7 hectare (two pools) was 5083 kilograms. The feed conversion factor of crap was 4.88. At the end of the breeding period, fish were tested by the Laboratory of the Veterinary Office for viral and bacterial diseases as well as the accumulation of heavy metals, It was found that fish meat do not pose a risk to human consumption.

Keywords: *Cyprinidae*, Mirza Kuchak Khan agro-industry, Sugarcane springlet