Registration Code of Publication: 13-33-3-98 Subsection: Additives to Fish Fodder. Publication is available for discussion in the framework of the on-line Internet conference "Chemical basis for the rational use of renewable natural resources". http://butlerov.com/natural resources/ Contributed: March 10, 2013.

Thematic direction: Feed additives of amaranth for fish. Part 2. Features of the mineral composition of amaranth leaves

© Anatoly A. Lapin,^{1*+} Valery N. Zelenkov,² and Lilia G. Grechuhina¹

¹Department of Water Bioresources and Aquaculture. Kazan State Power Engineering University. Krasnoselskaya St., 51. Kazan, 420066. The Republic of Tatarstan. Russia. Phone: +7 (843) 519-43-53. E-mail: lapinanatol@mail.ru ²Department of Physico-chemical Biology and Innovations. Russian Academy of Natural Sciences, All-Russian Research Institute of Vegetable Crops Russian Academy of Agricultural Sciences, Moscow. Russia.

*Supervising author; ⁺Corresponding author

Keywords: amaranth, amaranth stalks and leaves, amaranth seeds, biologically active supplements, *macro - and microelements, a forage production, animal husbandry, pisciculture.*

Abstract

The review shows promising use of feed additives from amaranth for growing fish. The high concentration of macro-elements, such as calcium, magnesium, phosphorus, and microelements, as manganese, silicon, iron, zinc and copper are typical for plants from amaranth. There are prospects of application of amaranth as feed additive in forages for fishes as a source of biogene mineral elements in order to prevent the diseases connected with their deficit.