

**The hungry always has been a stimulus to change the World, and it still is.  
Paul Roberts**

Personally I do not have any empiric experience. But there is a text that I discovered during my investigations that reflects some ideas described into the Cozzo and Marino articles. This text provides the bases for a project that I'm writing. It is very inspiring.

#### **The systemic future: polyculture**

In the Kyushu Island, in the South of Japan, one of the principal battles of the next food economy configuration is happening in a rice farm of almost 3 hectares. All years, during June, Takao Furuno releases hundreds of small ducks inside his recent rice planted farm; the small ducks ignore the germinal rice plants (which contain too much silica mineral for its taste), but are very happy by eaten the insets and microorganisms. Their excrement fertilize the rice plantation, and at the same time, their constantly movement in the earth shakes the water and stimulate the rice plants root's faster growth During the season evolution, Furuno fill the rice plantations with a sort of little fish known as "botia", which he protects from the ducks with a type of coverage aquatic plant called as "lenticilha d'agua". The "lenticilha d'agua" (water's lentil) uses solar energy in order to fix nitrogen into the earth of the rice plantation for fertilization reasons; along with that process, the "lenticilha d'agua" promote the development of a blue-green plant that serves as food for a type of earthworm eaten by the fishes. In autumn, Furuno removes the ducks (otherwise they would eat the rice at that stage) to a henhouse for eggs production until they achieve

the sales market weight. When he harvest the rice, he seeds wheat as a coverage plant and, in his all land, produces all kind of vegetables, that he sales together with the rice, ducks, eggs and fishes to the neighbor community.

The Furuno system is called as Aigamo, it is everything that an alternative model of food production should be: a closed circuit system (all nutrients are produces *in loco*) which uses solar energy; free of herbicides and synthetic insecticides; and, with the exception of some external grains to feed the ducks and some trainees, the system doesn't requires external inputs. But the fundamental: it is productive! Although systems like that – known as integrated agriculture, adaptive management and polyculture – are recognized by its natural environment respect, Furuno obtain almost 10 tons of rice per hectare (almost the same that his neighbors, which are conventional farmers), besides the vegetables, ducks, eggs and fishes enough to feed 100 families during the year. Such abundance generates an income of U\$ 136 thousand and justifies the statement on his business card: “*The World in which one duck generate unlimited treasures*”<sup>1</sup>

### Personal and academic inquietudes

The food systems are complex, interconnected and dependents.

The people linked to the land, which I had have the opportunity to hear, seems to be together linked by believes regarding the agricultural production. Simplifying without being simplistic: one side believes that needs to produce in scale and become completely dependent of the economic system that distributes incentives to the land profitability without considering the effects in a long term perspective that this intensive production generates; the other side, small and traditional farmers that produce towards a minimum return of personal and economical subsistence.

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<sup>1</sup> (Roberts, 2008).pág 275

I want to learn a method as described by Mr. Furuno. Adapted to the local traditions, economical productive, ecological respectfully. To achieve it, I do believe that we need to work the land in a systemic methodology.

### **Texts Mentioned**

**Giada Cozzo, Brunella; Paolo Marino, Gian;** An Integrate approach to products and productions. - Torino : [s.n.], 2010.

**Roberts Paul** O Fim dos Alimentos [Livro]. - Rio de Janeiro. Brasil : Elsevier, 2008.