

Almanac of the **Future**

A STORY OF SUCCESS

Motivational experience No. 29



WHERE ENERGY FLOWS

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AulaViva Tropical is the name of the farm of brothers Jose and Juan Pablo Zarate, located in the plains municipality of Lejanias in the department of Meta - Colombia. The farm is a fairly complete agro-energy model, result of the conviction of the people. Water, sun, biomass and micro-organisms are used, in a friendly and sustainable way to generate energy in different ways. The energy balance is absolutely positive. The approach of the farm also incorporates people, practicing collaborative and reciprocal logics, viable in spite of (or precisely because of) the currency shortage. AulaViva Tropical is a site of inspiration and empowerment for some and a place where experiences are shared for others. In short: a place that makes energy flow.



United brothers

Jose and Juan Pablo Zarate, children of peasants, had a difficult childhood. They lost their father at an early age, worked at dawn in the markets to go to school. Thanks to a firm will and very united, they managed to move forward. Both finished university studies in the agricultural sector and became professors in several universities. During all this time they never lost their peasant essence. The trigger to see the countryside and agriculture with different eyes did not happen in the universities but when they did internships in the agro ecological center La Cosmopolitana, in the municipality of Restrepo, near Villavicencio. Getting aware of the approach based on the concept of abundance instead of scarcity, changed the “chip” in both of them. They are currently working with the Cosmopolitana Foundation, accompanying groups of peasant families in their empowerment processes, in the Orinoquia and Colombian Amazon region. In 2007 they decided to buy a farm in Lejanias. They put all their savings together for the purchase. It was the time of the armed conflict, with the presence of guerrillas and paramilitaries in the area; Lejanias was a “red zone” and everyone



wanted to leave the place. The desire of the Zarates to have land to make their dreams come true was greater than the fear and they bought.

Birth of Aulaviva Tropical (Tropical Living-Classroom)

The two agronomist farmers assumed a typical plains farm; the 35 hectares consisted of paddocks and more paddocks. They decided to gradually eliminate livestock to grow coffee, fruit trees and other crops to make abundance appear. After 11 years, the conversion process continues, but there are clear signs of change. The paddocks have been converted into orange, tangerine and avocado fruit trees. Twenty-two thousand coffee bushes grow next to native trees that later will serve as shade. There are chickens and pigs. All is produced organically, with zero agrotoxins (chemical agricultural products). AulaViva Tropical currently produces 40 products, some of them processed, such as coffee and Tangelo orange wine. The farm is self-sustained and reaches food security for those who live there. “We could live here and we would not lack



anything, but we still want to continue supporting other peasant families in their empowerment,” says Jose. For the two brothers, AulaViva Tropical is the cornerstone of their life plans. “You have to draw a path, a plan of life to put it into practice with mind, heart and hands; and this is what we’re doing here”, says Juan Pablo.

Together with 30 peasants, visiting the farm, Jose takes a tour. Walking towards the fruit trees, he stops and demonstrates the temperature of the soil; it’s ten o’clock in the morning and on the access road that doesn’t have any vegetable layer. The thermometer indicates 43° C. Located in the fruit tree plot where there is a thick vegetal layer that retains moisture, Jose repeats the exercise: 26 ° C. Juan Pablo adds another example that shows the importance of humidity for life on the ground: micro-organisms. “We did an analysis and discovered that here on the plot there are three thousand kilograms of worms per hectare on the ground. In plots from our neighbors that eliminate the vegetable layer under and in the surroundings of the fruit trees with herbicides or other agro-toxic substances, you can scarcely find up to 200 kilograms per hectare “. The vitality of the micro-organisms and with this, of the soil, is the main purpose of the tillage in AulaViva Tropical. “Thanks to the bio digester, taking advantage of pig manure we have methane gas for the kitchen and, particularly also obtain leachates, which contain a lot of nitrogen. Via pipeline we drive this liquid organic fertilizer to the fruit trees for drip irrigation. Here we follow the example of Roberto Rodríguez, one of the founders of La Cosmopolitana when he says »we have to put the sun to work « “, explains Jose.

The neighbors said we've gone crazy

“The neighbors said that the brothers have gone crazy and this despite having gone through the university,” José explains with a smile before a group of students of agronomy, visiting AulaViva Tropical. In fact, no field burning, planting native trees, managing the soil, protecting wildlife, abandoning livestock, not using agro-toxins, maintaining vegetable cover instead of stripping the soil is something new for both farmers and the academy. Juan Pablo explains to students and their professors: “The neighbors with conventional agriculture spend per year and hectare under production approximately 5 million pesos (equivalent to 1,700 dollars) in agro toxics. If we take as parameter the ten thousand cultivable hectares in Lejanias, the expenditure in agro toxics amounts to 50 billion pesos (approximately 17 million dollars). Here on the farm we do not spend anything but sweat to make our dreams come true “. José’s reflection on this situation fits like a glove: “Engineer is not the one who has studied,

but who uses his ingenuity to live. Our most sensitive organ is the pocket. The challenge is to change the fixed mental model”. Students, as teachers, keep silent.

AulaViva Tropical with all its production has the certification of sustainable production, granted by the Rainforest Alliance Foundation and its processed products have the guarantee seal of La Cosmopolitana. The Zarates achieved these certificates without any payment, thanks to the alliance with several universities. The farming style practiced on the farm is an example for the mitigation of global warming. According to calculations made in José’s Master’s thesis, in AulaViva Tropical about 380 tons of CO₂ per hectare are avoided, compared to the 120 tons avoided that are registered in other plots of the region that implement the technological package of the green revolution. Similarly, in this research it was demonstrated that in AulaViva more water is stored, without





hoses or tanks, 139 M3 more per hectare than in the other plots that do not implement the proposal for sustainable management of tropical soils implemented in AulaViva Tropical. Fumigation is done with Biol and bacteria as bio-regulators and for fertilizer the nitrogen, produced by the bio digester. “The farm, for us, is the essence of an alternative lifestyle in the countryside”, summarizes José

Energetic route

“From the beginning,” Juan Pablo explains, “we were looking for energy autonomy on the farm. We started with a solar panel, found it as waste and fixed it. Then we built the bio-digester and started using the water from the five fountainheads on the farm for the house, kitchen, bathroom and landscaping”. Water, sun, biomass and micro-organisms are used in a friendly and sustainable way to generate energy in different ways. The energy balance is absolutely positive since less is consu-

med than what is produced. The Zarates obtained at a gift price a turbine from a rural village that decided to connect to the conventional electricity grid, abandoning its Pelton-type micro-turbine that had previously served to produce electricity. The brothers are part of a mutual aid group, a minga, made up of 9 families from Lejanias. All helped to build an intake in the main stream of the farm, placing and burying a 6-inch diameter thick pipe that carries water over 540 linear meters from the intake to the small hydroelectric power station near the house. Jose recalls: “The pipeline cost 8 million pesos (approximately \$ 2,700) and I divided the sum by the number of pounds of coffee to be sold. For me, each person who acquired and tasted our coffee was sponsoring our goal of achieving energy self-sufficiency”. The water drops 130 meters in height difference and more than nine liters of water per second turn the turbine. Through a generator the mechanical energy is converted into electrical energy, producing 9 kilowatts. Two alternators supply 110 and 12 volt electricity. The coffee toaster and other machinery for the transformation of coffee work like all the lighting and other



artifacts on the farm based on the mini-hydroelectric, an electrical bill is not known in AulaViva Tropical. In the design of the system collaborated Juan Domingo, expert peasant in renewable energies of La Cosmopolitana. The carbon footprint of the farm is almost zero, with the exception of the access transport of cars with combustion engines.

Vivo's coffee and the market

Javier Escalante is part of the mutual aid group of Lejanias and collaborates in the transformation and quality of coffee. "Our coffee brand is Vivo's Coffee, but more than a brand it's a message", explains Javier. "Coffee, as well as fruit wine, are products of our vision and lifestyle in the countryside, seeking to dignify, highlight and empower rural families." The pound of coffee, wholly organic, is sold at 13 thousand pesos (approximately \$ 4.5). Coffee of the same quality in the national market costs double, such as Juan Valdez's coffee. "The purpose for opting for an affordable price is to be able to sell all production in the threshold of friends and allies," explains Javier. Orders from friends, restaurants, bio-stores exceeds production. "This system is good, no matter where you see it from, the economic, the environmental or the social point of view," concludes Javier. In AulaViva Tropical, the conventional market is not sought, with none of its products. First goes food security, feeling and living well and then the market, the closer the better. Jose explains: "With the farm we do not change the world, but it is a concrete step, an alternative life in the countryside, in order to be happy". Juan Pablo complements: "We do not leave a different world but different people who change the world; it is a promotion of the human being". The brothers do not pretend to live in an encapsulated form nor do they have resistance to the market. Wherever possible, they choose to process raw materials and add value. An example is the fruit, oranges and tangerines, instead of putting the fruit on sale, it is processed

to sell fruit wine. “When I walk through the fruit trees, instead of the fruits I see bottles of wine hanging on the branches” Jose confesses to give an explanation about the phrase “one of the secrets of success lies in developing the ability to see what for others is invisible. “Sales obey more to the principles of a collaborative economy where the interest of selling locally and at affordable prices for the neighbors prevails or also doing barter. This principle also has validity in the farm around the workforce. There are no workers, but collaborators, sharing the benefits generated in a mutual way. “I find the collaborative approach even in my dreams”, shares Jose.

Sharing dreams

During three days, more than thirty people gather at the farm to share a living classroom; More than a workshop where one expert speaker follows another, the methodology of a Living Classroom focuses its attention on the experiences and doubts of each participant. The group of this Living Classroom are women and men, most of them belonging to groups of min-gas (mutual aid groups) from different areas of the Colombian Orinoquia highlands: from Lejanias, Puerto Lopez, Puerto Gaitan, San Juanito, El

Castillo, Cubarral and Puerto Rico. There are also people from urban initiatives in Villavicencio, such as conscious consumption, farmer markets and several collaborators of La Cosmopolitana. Everyone has brought some of their products, including chocolate, guava jam, brown sugar, coffee, wine, cakes and others. The collective is very recursive and everyone shares their talent, knowledge and experience. You feel the collaborative spirit in the group. Moments of debate about the less risky insertion to markets, presentation of experiences around the extraction of vegetable oils, local typical songs about the empowered peasant and practical exercises to produce soap or organic deodorant besides the exploration route in the farm makes the program very entertaining. After three days everyone returns with a backpack full of inspiration and new ideas for their empowerment and practice abundance. AulaViva Tropical is a place that makes energy flow.





Messages to the future

Changing the vision, discovering the abundance of resources and possibilities instead of focusing the thought on the monetary shortage is the key to shape the dreams of each one's life plan.

Understanding Jose's words »Engineer (or expert) is not the one who has studied, but who uses his ingenuity to live ... the challenge is to change the fixed mental model«: conventional solutions are often mirages that distance us from abundance.

The collaborative model knows no limits or barriers when it is united with the empowerment and audacity of the people.

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Almanac of the Future

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