



Uzbekistan
Catalyzing Transformational Development

Visit: www.jdainternational.org
E-mail: info@jdainternational.org

Aquaponics

JDA's Aquaponics project aims to come alongside local entrepreneurs and "jump start" businesses in the ecologically and economically devastated Karakalpakstan region of Uzbekistan. Aquaponics uses local resources in an ecologically sound way to produce goods for local markets and export. The products will be fish and vegetables providing villagers with a year round source of income.

Aquaponics is the combining of aquaculture and hydroponics for mutual benefit. Through normal metabolic processes, the fish in the system excrete nutrient-rich waste and carbon dioxide into the water on which the plants flourish. As the plants utilize the nutrients and carbon dioxide, they purify the water for recirculation back to the fish. This allows relatively small amounts of water to be used extensively and efficiently.

Our pilot project is currently operating in Nukus, the capital of Karakalpakstan region. It has demonstrated the feasibility of aquaponics technology using locally obtained materials. JDA will then introduce the technology to communities in the rural Takhtakupir region of Karakalpakstan (northeast of Nukus) where the unemployment rate is estimated to be 70%. This is a result of the loss of fishing related industries due to the shrinking of the Aral sea and consequential high salinity content which has killed most of the fish.



Phase I was a small, 100 fish (400 liter), demonstration aquaponics system in a south facing room with large window to let in sunlight. All materials for the system were acquired in Uzbekistan. The technology was effectively demonstrated in this phase.

the former government, the USSR. In this region, hundreds of wells were drilled into this aquifer and left flowing by natural pressure out of the ground. Most of them have been abandoned and are no longer being maintained. The water is wasted as it flows unchecked to the surface creating local swamps and unfavorably altering the soil and shallow groundwater chemistry. The wells all provide warm water at various temperatures, and are currently only being used by locals for clothes washing and bathing. JDA has already received permission from the local government to help the locals utilize the wells for agricultural production.



The main resource in the Takhtakupir region that would lend itself to use by local entrepreneurs for aquaponics businesses is an artesian aquifer that has already been tapped at great expense by



Phase II is underway and consists of two small-scale greenhouses housing aquaponics systems and an attached room with intensive fish farming tanks. One greenhouse is being constructed in Nukus and one will be constructed in Takhtakupir region at the site of a warm, artesian well.

Here again, local materials will be used to demonstrate that such systems can be replicated for income generating businesses among the rural population.

Replacing Opium Poppies in Afghanistan

JDA has been awarded funding to study and develop systems for increased productivity and profitability of wheat-based crops. The study will be jointly carried out with Aga Khan Foundation (AKF), Cornell University, International Maize and Wheat Improvement (CIMMYT) and Balkh Savings and Credit Union (BSCU). JDA will focus on soy bean production in northern Afghanistan. The duration of the project is two years.

Our national staff is becoming familiar with soy bean varieties like, Santee, Dillon, Hutcheson and Musen as they determine the best type of seed for planting in their soil.



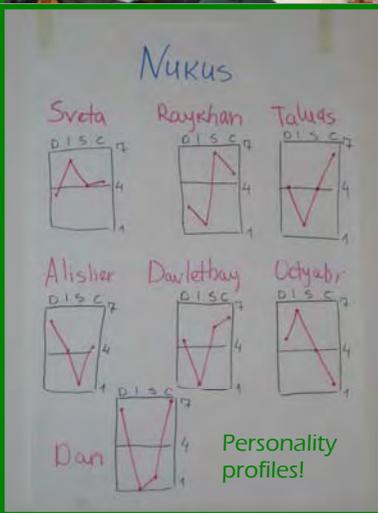
Opium Poppies

JDA Staff Development



Our staff had the privilege of developing their skills with a professional trainer using the DiSC profile. For five days in March at a retreat center in the mountains, we explored our personal behavioral profiles, learned strategies for creating positive relationships and approaches to managing others.

This was the second time JDA has offered this training and it continues to be a practical tool that our staff can apply. It was a valuable time in team building and will serve to increase our effectiveness as agents for development in the rural communities of Central Asia.



Bob Hedlund, the founder and CEO of JDA challenged the staff to examine their world view and to recognize the cultural norms that may be hindering their personal development.

Our multi cultural staff found freedom in thinking outside their Central Asian value system and are excited about introducing and transferring new ideas into the communities where they work.



The families living in the rural communities of Uzbekistan and northern Afghanistan need your help in developing their capacity for education, jobs, clean water, and health. They need our assistance now, but not forever. You can help now, when they need it the most, by giving financially or by donating your time and skills.

Contact Us!

Joint Development Associates International, Inc.
2830 North Ave. Suite C5B #188
Grand Junction, Colorado 81501
T: (+1) 888 759 4071
F: (+1) 800 779 1703

Joint Development Associates International (UK) Ltd.
PO Box 47, Hitchin SG5 3ZU
Registered Charity No. 1095023; Company Registration No. 4560044
T: (+44) (0) 870 765 4930
F: (+44) (0) 870 133 6389