

# Growing the Next Big Thing in Agriculture



Photo: Rafi Babian

## Regional Development in Sedot Negev 2013-2014





# FEEDING THE WORLD 2013

ACCELERATING GLOBAL COLLABORATION ON FOOD SECURITY

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By 2050 the global population is expected to reach 9 billion people. In order to maintain that amount of people, food production needs to almost double itself while using fewer resources. The key to reaching that goal is Agri-tech innovation – technologies and methodologies that allow more food to be produced from less water, soil and fertilizers. These innovations come from a wide range of fields – energy, water, chemistry, mechanics, robotics, and more – all of which can push agricultural productions forward, under the right framework.

Already today, food and agriculture are the fastest growing markets in developing countries and are getting bigger in developed countries everyday. The world's global institutions (UN, OECD, etc.) have put this challenge at the top of their list – as was published in the Millenium development goals. Meanwhile, some of the world's biggest corporations (Nestle, Mars, DSM) have already understood the great potential in these fields and have begun promoting this industry intensely.

Israel can play a valuable role in this global challenge. Israel has vast experience in struggling to create agricultural prosperity despite scarce resources, and as necessity is the mother of invention it should not come as a surprise that Israel's agricultural R&D industry is one of the most innovative and productive in the world. This innovativeness has historically been led quietly by local innovators and entrepreneurs, but has recently become the "talk of the town" in Israel, with growing media coverage and investments. Recently government has approved a national plan to enhance agricultural R&D through the promotion of the agricultural rural extensions and connecting them to leading Agri-businesses.

Another great endorser of the agri-tech revolution is president Peres. He has chosen the topic of Israeli advanced agriculture as one of the leading subjects in the upcoming [president's conference](#) (June 18-20, 2013) – an annual conference held with the participation of world leaders and thinkers to promote topics that could create Israel's future.



## Agriculture in Sedot Negev - The Revival



Over the last couple of decades Sedot Negev has become a major region in Israeli agriculture as one of Israel's greatest producers of agricultural fresh products. But the road toward this title was not easy. Over the years, the rise of new industries and the dwindling of agriculture meant many agricultural businesses died away. This pushed the younger generation to look away from agriculture towards greener fields in search for alternative career options.

But it also meant that only the best and most innovative agri-entrepreneurs could survive and thrive. In order to do so they had to adopt, and often invent, new advanced technologies that would allow them to compete in the global market. A good example is Sedot Negev's Tomatech, a global leader specializing in tomato design and development. Tomatech designs the tomato seeds in labs in Israel so that they fit the needs of their markets – whether its pink tomatoes for china's growing middle class or lycopene tomatoes known as "chocolitas" for the western world's health addicts. In order to sell their tomatoes abroad, Tomatech also hires and trains local workers to grow the tomato seeds in the target countries. And Tomatech isn't the only one. Others develop new methods for growing radishes, implemented in Russia, innovative machinery for picking peppers for paprika, and so on.

On December 2011 these entrepreneurs received another boost - the Sedot Negev R&D Center, launched in its new home in Sedot Negev. The Sedot Negev R&D Center holds laboratories at the highest European standard (ranked in the top 5 for the last couple of years), and a growing and innovative research portfolio in the fields of advanced agriculture (including tech export to China). The R&D center keeps close contact with farmers and local communities and contributes to the educational, social and economic development of the region. It does so by conducting scientific research in fields of advanced agriculture, developing solutions for agricultural problems raised by local farmers at the same time.

These accomplishments were acknowledged by President Shimon Peres himself, who visited the region in February 2013. During the visit he was also presented with a new strain of tomatoes grown by a local developer – the *Peres tomatoes*.



## 2011-2012 - Launching a New Regional Vision



On December 2011, through the efforts and endorsement of the *Sedot Negev-Philadelphia Partnership office of the Jewish Agency*, Sedot Negev has launched **The 'Sedot-Negev Cluster for Science Education and Entrepreneurship'**. The cluster brings together the region's agricultural entrepreneurs, the researchers of the R&D Center, science teachers, and the municipal education department to create an educational continuum – from kindergarten to college – dedicated to practical hands-on STEM (Science-Technology-Engineering-Mathematics) education focused on the region's reviving agriculture.

A practical and innovative approach was adopted (often known as Problem Based Learning) in which the challenges that were investigated by the students were real life challenges presented by the local farmers. These included increasing the efficiency of olive oil manufacturing, applying biological pesticides, enhancing tomato and celery preservation, and more. This approach meant that 5-18 years old children were practicing scientific research and problem solving methods on the same issues that were troubling their parents and were coming back to them not just with an A+ in science but also with an improved toolkit for more effective farming.



After establishing programs to promote agriculture oriented STEM education for children 5-18, this year, we are looking towards enlarging the scope of the training continuum to include the next generation of agricultural entrepreneurs.

### The next generation of Agri-Entrepreneurs

This second generation to the founders of agriculture in the Negev, was raised supposedly on the region's agriculture. However, some of them have never received the proper training, tools and knowledge to move towards advanced agricultural production. Now is the opportunity to take entrepreneurs raised on 20th century agriculture and bring them to the 21st century.

The knowledge and tools they will receive will not be limited to agriculture, but will include English, introduction to global markets and marketing and other topics that will give these young entrepreneurs an edge. All the programs will involve hands-on training, custom made for participants' needs.

The first program is expected to begin by the end of 2013.



### Graduate trainees from developing countries

As most of the future agricultural produce will come from developing markets, the need for training pioneers of advanced agriculture from those countries is clear. The program will focus on college graduates with relevant majors from developing countries. The trainees will receive four days of practical training in the field and one day of theoretical education every week, over two semesters. The program will give them the opportunity to bring home valuable practical knowledge that will give them a head start.

This program is expected to begin by fall 2013 with the first 100 trainees arriving from Vietnam.



### Discharged Soldiers

Israel's "preferred jobs" scheme for discharged soldiers usually employs them in low income blue collar jobs. Here, they will get an opportunity to work in a growing field (literally) while receiving training and tools that could benefit them in the future. Similar to the international trainees' program, this program will include 4 days of work in the field and one day of theoretical training.

Beginning date for the program is still to be decided.

