Great projects that tamed the Negev

by Paolo Raimondi

Professor Chaim Forgacs, the director of the Applied Research Institute in the Negev desert, received *EIR*'s team of journalists at his office in Beersheba by quoting from the motto of his institute: "We must develop the Negev or it will envelop us." The achievements of the institute in conquering that desert and making it bloom show what could be done to develop the arid regions of the entire globe, provided adequate financing and brain-power were applied.

"We would know how to make a settlement in the Sahel," Forgacs stated. "We have techniques which could be used for the African desert, we can help to develop immediately the strategies to slow down the desertification of those regions."

The irrepressible optimism of these Israeli pioneers is revealed in Professor Forgacs's insistence that controlled thermonuclear fusion power is on the horizon. "We have enough oil, coal, and nuclear energy to reach a fusion-energy-based economy without the need to speak about such a crisis."

David Ben-Gurion, the founding father of the Israeli state, sought to make this the dominating spirit of the new country. "The future of Israel is in the Negev," he used to say. "Its development will become a reality through our pioneering spirit and the application of science."

Today, the visitor arriving in Beersheba, the capital of the Negev, the ancient town where the patriarch Abraham tended his flock, sees a beautiful city of more than 130,000 residents. Its population has doubled six times in the past 25 years.

Greening the desert to make it liveable for human beings has been a big challenge for the Israeli state, which Israel's citizens have met with great success. This success could today be multiplied many times over, if Israeli technology were integrated into a development plan for the Middle East and Africa. Yet ironically, in Israel itself, that progressive orientation is being jeopardized by the "post-industrial" policies increasingly luring Israel's economic policymakers.

In a recent interview with an Israeli journalist, the chief economist for the Wharton School at the University of Pennsylvania, Lawrence Klein, argued that for Israel to make a priority of "making the deserts bloom" would "not solve the economic problems of Israel. There's no money to be made in that." Klein insisted that Israel must "become integrated into the post-industrial society." Furthermore, he insisted, Israel should not borrow any more on the international capital markets for such kinds of programs.

The methods that have made Israel's desert habitable could be applied to other desert regions. Shown is the Midresha kibbutz in the Negev.

But if the next Israeli government to emerge following the July 23 national elections were to make the "spirit of Beersheba" the centerpiece of a renewed commitment to conquer the frontiers of the desert and the new outposts of city-building technology, as Ben-Gurion would have wished, then Klein's recommendations for destroying Israel's economy would be defeated. Should courageous policy-makers of the future integrate Israel into the international momentum led by several Ibero-American nations for creating a new monetary system based on bloc debtor nations' renegotiation of their debts, then the thorny problem of financing such ambitious programs could be resolved.

The achievements of Beersheba

Beersheba was created around the pioneer project of the Negev Insitute for Arid Zone Research in 1957 which planned the conquest of the Negev desert. In 1973 it became the Applied Research Institute affiliated to Ben Gurion University of the Negev. Prof. David Bergman, scientific adviser to Ben Gurion and a pioneer in organic chemistry in Israel, was the main organizer for the idea of a university in the Negev. Now this institute is one of the several departments of Ben Gurion University, which includes also an institute for natural science, for engineering sciences, health sciences, and social sciences. The university now has more than 5,000

students, and plans to double this number by the year 2000.

The Applied Research Institute counts about 200 staff members, including 80 research scientists engaged in studies and research on water desalination, mineral technology, brackish water irrigation, sea water irrigation and agricultural and biological research, among other fields.

The difficult realities of the desert have fostered a rigorous task-oriented approach at the institute. As director Forgacs explained, the institute's first concern was to look for a system of desalination, but realizing that it was not economical, because there were not sufficient financial means to sustain such a project, the institute had to look for a way to use salt water in agriculture. Experiments proved that such water was very good for cotton and tomato crops, among others.

Many researchers at the institute complain of the financial constraints under which they currently operate—due to the Israeli economic crisis and inflation—and which have hampered and disoriented the research policies significantly. Long-term planning of research activities has been sacrificed in favor of research lines which may yield quicker results in commercial terms. The institute is under pressure to pursue research on adapting to the desert instead of greening it.

Dr. Shoshana Arad, a biologist, showed us the kind of work the institute does in direct connection with the production areas. Her team of four researchers is presently investigating the problem of cell tissues in melons which collapse, for reasons not fully known, destroying the fruit and endangering production and exports. It seems that it is the lack of calcium which provokes the disintegration of the cell walls.

Dr. Arad is also working on algae, like the red algae which produces carrageenan, a medium for bacteria growth. This algae could serve as the basis of a new branch in agriculture and cultures in sea water. "This research will take on added impetus if and when the Mediterranean-Dead Sea canal is implemented," she added (see interview, page 25).

Professor Aliza Benzioni, a specialist in the research which led to the production of Jojoba, a plant whose seeds contain a special wax and oil with important pharmaceutical applications, described the research done to develop new plants capable of living in desert regions, or growing with only brackish water irrigation.

Professor Dov Sitton is studying the effects of plants for medical uses, like substances unique for chemotherapy against cancer, which could lead to new types of antibiotics in the future.

Dr. Yosef Mirzahi has discovered an inhibitor of ripening processes for fruits and vegetables which could vastly extend their shelf-life. For the time being, this line of research has found an application for the production of the tomato, which, when vine-ripened, has a shelf-life of over six weeks. Dr. Mirzahi is delving into the relationship between the ripening speed and the degree of salinity in the water.

What solution for the Palestinians?

by Paolo Raimondi

If the Israeli government that is voted into office on July 23 should decide to make a genuine overture to the moderate leadership of the Palestinians, it will find that there is a party there with which a rational settlement could be reached.

Contrary to the stereotyped perception of many Israelis and Americans, the Palestinians are not simply machine-gun-toting terrorists controlled by Moscow—although this is of course true of the wing of the PLO that is locked in battle against Yassir Arafat. Leading Palestinians with whom *EIR*'s correspondents met (at the insistence of Israeli friends) during our trip to Israel are representatives of a cultured elite—doctors, engineers, skilled professionals. Many were educated in Western schools, and look to the United States as their political model—a country that proved capable of integrating different cultures and language-groups into one nation, dedicated to the principle of human development.

For the government of Israel, there is not a moment to lose in abandoning the thuggery against the Palestinian population that has characterized the Likud coalition government, under the influence of Ariel Sharon. The danger to Israel itself from these policies is broadly recognized. In a recent interview with the Israeli weekly *Newsview*, Prof. Yehoshafat Harkabi, former chief of military intelligence, identified Jewish terrorism on the West Bank as the outcome of the government's own policy of creeping annexation of "Judea and Samaria." Declared Harkabi: "Any fool can see that if we annex these territories, with their Arab population, we will commit national suicide. It follows, therefore, that we must scare the Arabs away." Although Harkabi added that he did not agree with the solution of forcing the Palestinians into emigration, he had no alternative to propose, except that the issue should become the focus of debate during the election campaign.

The refusal of the present Israeli political leadership to go for a settlement of the Palestinian question is radicalizing the West Bank population dangerously, we were told. At the universities of Hebron, Bethlehem, and Gaza, only the communists and the Islamic fundamentalists within the Palestinian community are permitted by the Israeli authorities to organize politically. Moderates cannot act publicly, for fear of being arrested as "PLO sympathizers."