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# Greening the desert to make sheep thrive

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BEERSHEBA. - Scientists at the Ben-Gurion University of the Negev here are trying to perfect a special diet that can be used to raise sheep in an arid climate. The diet, composed of plants that can be grown with brackish water, may help solve the problem of producing food in famine-stricken areas of the world.

"One solution to the problem of famine is raising animals for food," Prof. Reuven Yagil told *The Jerusalem Post*. Yagil, chairman of the Division of Basic Sciences at BGU's Faculty of Medicine and a consultant to the UN's Food and Agriculture Organization, specializes in rearing animals in arid zones.

For many years, Yagil focused on camels. But last year, he read an interim report on the fodder project of Dr. Dov Pasternak - head of the university's Boyko Institute - and decided to add his know-how to the programme.

Pasternak, currently on a sabbatical in the U.S., showed that salt bushes can be grown on sea water and then be fed to sheep. The problem was that the sheep could only tolerate about half a kilo of such fodder a day and needed supplements.

"Enormous interest was generated by the project at Canada's Guelph University, which set up a team of experts with me and flew to Egypt for two weeks last August," Yagil said.

Eighty per cent of the world's desert areas border the sea, Pasternak had explained, so the natural solution to the problem of famine seemed to be in finding ways of producing food with such salt water. Egypt, which also had dry areas along the sea, was interested, but wanted more substantial data.

"So Pasternak and I, along with the Canadians and my graduate student, planned a research project to see why the sheep didn't eat the

fodder - if they disliked the high salt content, for example," Yagil told *The Post*.

The team initially thought that the experiment would last only a short while, because all the experts agreed that the sheep could only tolerate half a kilo of salt bush a day. But six months later, the experts have been proven wrong.

Today, the sheep (20 in all, of the Awassi type common to the Negev) consume four kilos of this salty fodder a day. The control group of five sheep eats a kilo of hay a day.

The salt bush-fed sheep eat more and drink more, but also give off more and weigh about a fifth less than the control group.

"The question of whether animals can be grown on saltwater fodder can be answered with a "Yes", and the question of whether this can be used in famine-stricken areas can equally be answered in the affirmative," said Yagil. "The question yet



(Judah Passow)

to be resolved is how to increase the sheep's weight."

One solution is to grow mesquite trees nearby. This tree can be grown under the same conditions as the salt bush. It gives shade, it can be used

for firewood, and its pods are sweet.

"Each tree gives off some two tons of pods a year, pods which are very sweet and have a high protein content. The sheep fed on salt bush fodder love the pods," Yagil said.