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Exchange visit sparks enthusiastic responses!

# Turkish farmers learn about ways to combat desertification

Turkish farmers from the Eskişehir study site travel to the Karapınar study site to compare results of field trials



Google Earth location of DESIRE study sites in Turkey

Sixteen farmers and their families from around **Eskişehir** went to visit **Karapınar**. In the 1960s **Karapınar** was famous for cereals, but wind erosion resulted in a sandy wasteland. Since then agriculture has used groundwater for irrigation, but groundwater levels are now very low.

Workshops were held to talk about ways to **reduce erosion** by the wind and **save water**. Farmers chose to plant **wind-break plants** with **fences**, on earth terraces.

Subsidies are already supporting **drip irrigation** to save water, so the farmers chose to test **no-ploughing, mulching**, and leaving land **fallow**. These methods keep a vegetation cover over the soil and reduce erosion.

The Turkish government has recently formed a **Directorate General to Combat Desertification**, under the Ministry of Forests & Water. The aim is to put strategic plans in place, to make policy recommendations, to raise the level of public awareness, and to prepare and implement integrated projects to mitigate desertification and erosion.



The visitors see how the strong winds blow sand over the bedrock

## The visit to Karapınar

The farmers and their families were collected from **Eskişehir** on July 3, 2011, and driven to **Karapınar**. First they went to **Konya**, a town near **Karapınar**, and met an agriculture engineer **Selman Koyuncu**. Everyone visited the complex and museum of **Mevlana**, **Aladdin** and **Tavusbaba** mosques, and the **Akyokuş** and **Aydinçavuş** hills. The guests passed the night in the guesthouse of **Selcuk University**.



*Female farmers, old and young, learn about the study site*

The next morning the visitors were taken to the **Karapınar** site, which, like the area around **Eskişehir**, is a desertification hotspot. **Dr. Faruk Ocakoglu**, **Dr. Mehmet Zengin**, a local farmer, **Mehmet Gumussoy** and local TEMA representative **Musa Ceyhan** met the group there. Then they travelled on to **Apak Yayla** where the DESIRE trial field has taken place. Here ways to tackle wind erosion and water stress were explained and discussed.

After lunch, the group went to a very famous sinkhole plateau to the north of **Karapınar** and two volcanic lakes. The night of July 4 was spent in **Karapınar**.



*Dr Mehmet Zengin explains the results of experiments*

On Tuesday July 5 the farmer group visited **Ürgüp** and **Göreme**, the **Ihlara** valley and some local museums and historical sites. After a long journey, the group returned home, reaching **Eskişehir** at 05:00am on July 6!



*The farmers explore the sand dunes where fruit trees now grow*

## What the farmers said.....

**Burhan Göneş** (38) was impressed by the changes, from desert to new opportunities for agriculture.

*"It seems that the measures were too late to be taken in the past. It is quite difficult to imagine these places as desert in the 1960s. There has been excessive use of groundwater. In addition, the sinkholes we visited were also very different and strange. They are so steep-sided and deep. Unbelievable."*

**Bahattin Yenipınar** (37) realised that the effects of wind erosion and the decreased groundwater level must be taken seriously.

*"Relics of cane curtains used to stop wind erosion are incredibly effective. A massive effort must be made to halt the mistakes of the 1960s. Wind erosion in this region is like a sleeping monster that may wake up if unsustainable agricultural practices are used. I am surprised with the very rapid decrease of groundwater level, up to 30 m in 20 years. It shows clearly how excessive groundwater pumping has been."*



*Burhan Göneş inspects the quality of wheat seedlings*



*Bahattin Yenipınar tastes sour cherries*



*In the museum, looking at photographs of the area in the 1960s*



*The farmers examine the DESIRE project fields*

**Emine Yenipinar** (13) liked the “fairy chimneys”

*“Sinkhole formation and appearance is very impressive. I have told all my friends all about my experiences since my return home”*

**Halil Basturk** (55) sees how to transform the desert

*“It is surprising to see the once barren land so green now, irrigated with groundwater. This shows the success of man-made technologies, but also exploitation of the natural environment.”*



An impressive sinkhole, with “fairy chimneys” carved by water in the soft rock



The farmers examine the beginnings of a new sinkhole

## Lessons learned

The views of farmers are very important. In Karapinar the farmers from Eskişehir have seen that wheat can be grown successfully with no-tillage, and fruit trees flourish in mulched orchards.

For crops that need irrigation, combinations of drip and sprinkler irrigation use less water. Plants and fences that act as wind-breaks are very effective at stopping erosion. All these measures will improve productivity and also improve the lives of farmers.

Back in Eskişehir the farmers have learned that their own wheat fields should always be ploughed perpendicular to a slope, not parallel to the slope, to avoid soil erosion and the formation of gullies.

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