



Asopos' carcinogens
arrive on vegetables



Greece's next wonder crop?

Horse ride through
an underworld



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Environment

High expectations for the super crop

Felling trees for the manufacture of paper may become a thing of the past if efforts to establish the cultivation of kenaf in Greece are successful

By Thrasy Petropoulos

IT IS related to cotton, okra and cannabis and could be the future of Greek farming.

Kenaf, a crop that has been cultivated in Africa for more than 4,000 years and boasts a string of potential end products (including, as it happens, string), will - if the experts' hopes and expectations are fulfilled - become a byword for sustainable farming in this country.

The American Farm School, in Thessaloniki, is experimenting with growing two hectares' worth of the crop, soon to be harvested and sold to the Macedonia Paper Mill. The mill, in turn, will put to the test the crop's reputation for producing a quality of paper that is higher than that derived from wood pulp, with the obvious benefit of not cutting down decades-old conifer trees.

Although the initiative is an important stride in determining the crop's suitability for use by farmers and manufacturers using existing machinery, the kenaf journey in Greece started some time ago.

The Centre for Renewable Energy



The American Farm School's experiment with kenaf, seen here three months after being planted, is the most ambitious yet in this country

Sources (CRES) and the National Agricultural Research Foundation (NARF), both based in Athens, have been experimenting with kenaf for the past 15 years.

Their success has been mixed, but the motivation behind their efforts is sound. From America to Japan, China and Malaysia, kenaf is grown for uses as diverse as animal bedding to making packing material and rope, as well as insulation for hi-fi and motor equipment. In Africa, its primary use has been for human and animal consumption.

Above all, however, there is hope that the crop can offer a credible alternative to using trees to produce wood pulp, as well as create pellets to be burned for energy production.

"We are not trying to reinvent the wheel," says the American Farm School's farm director, Athanasios Giamoustaris, referring to other organisations' attempts to investigate the potential development of kenaf in Greece. "What we are doing here is simulating the experience of the average farmer attempting to grow the crop and end up with a product that he will be able to sell."

He added that listing the many uses of the crop is all well and good but that

to export the end product to neighbouring countries, create a renewable energy source and help farmers find new crops and new sources of income."

First, though, the farm school staff needed to put into practice the theory that kenaf, as a crop that germinates at 32 degrees Celsius and grows between the equator and the 35th parallel, is ideally suited to Greece's climate. It has, for instance, recently been successfully cultivated for commercial use in Italy.

"We planted a series of cultivars that were imported from the US," said Giamoustaris. "And from the start, we encountered a series of problems, starting with customs. Instead of sowing in May, we sowed in late June. Since then we have been successful, although we will not know for sure until we harvest after the first frost."

However, the biggest potential problem faced by the farm school was not agriculture-related.

"Our major concern," said Giamoustaris, "was what reaction we would receive to the crop being a very close relative of the cannabis plant [its species classification is *Hibiscus cannabinus*]. If you see the leaves [of the two plants] next to each other, there is no way you can tell them apart, although the flowers are very different."

For the record, the kenaf has no narcotic qualities and (apparently) smoking its dried leaves has no other effect than causing a sore throat. That, however, did not stop Giamoustaris from worrying about possible future misunderstandings with law enforcers.

"We went to the police and the narcotics bureau before sowing and informed them of the crop's similarity to cannabis," he said. "We submitted a whole. The reaction was positive."

Raw potential

Of course, without a viable market, there would be no point in

cultivating the crop, whatever its potential. And in the Thessaloniki-based Macedonian Paper Mill, the American Farm School found a willing partner.

"We are a company that produces cardboard exclusively from recovery [recycled] paper. However, we are willing to investigate other options," said Dimitris Kouvalakidis, the head of quality and environmental management at the paper mill.

He added: "If kenaf proved to be viable, we would potentially look at diversifying. But this will be determined by many parameters. Farmers need to know that a market is guaranteed. The one certainty with kenaf is that we must not consider it only from its narrow viewpoint of paper production, but also from the many other potential uses that it has."

The potential gain for a paper mill by investing in a kenaf is not just in securing a sustainable raw material for its end product, but also producing higher grade paper than that currently offered elsewhere.

At a three-day consultation on the cultivation and commercial use of the crop at the American Farm School in mid-October, Thomas Rymza, president of Vision Paper Company, in Albuquerque, New Mexico, stressed the superior quality of kenaf-derived paper (which the company produces) to that made using traditional wood pulp.

According to experts, large-scale production of the fibres and pulp in the kenaf stalk (the parts of crop used in paper production) would cost as much as 20 percent less than the imported tree pulp currently used.

Additionally, once conditions for its successful cultivation in Greece (including local pest control) have been established, it is hoped that kenaf will require considerably less water to grow than cotton, something which - more than any other consideration - justifies the efforts involved.

Farm director Athanasios Giamoustaris (right), with US Consul General Hoyt Brian Yee, and American Farm School president Bill McGrew (centre)

