



SPECIAL REPORT

Give and take ... trial and error

The close, hands-on relationship between humans and date palms continues to this day. At the plant nurseries on the Fourth Ring Road, Abu Hamza is selling the spathes of the male date palm, to be used in hand pollination. Abu Hamza is originally from Ahvaz, a town in Khuzestan province in southwest Iran that's a traditional date growing region. He stems from a long line of date palm cultivators and for the last 25 years has been offering his services and expertise to date palm owners in Kuwait.

ratios and relationships



Main picture: The flower bunches on our date palm after having been hand pollinated. Inset: The male date palm spathe after it has been opened and is ready to be used for pollination.

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Of all the plant species that have developed into an agricultural crop during the course of human history, perhaps none is so intimately connected with people as the date palm. Archaeological evidence points to date cultivation in the Arabian Peninsula from the Bronze Age. There are those who claim that had the productive relationship between people and date palms not existed, habitation and exploration of this hot, dry area would have been much more limited in ancient times.

As the source of a non-perishable super food, shade, and shelter, the date palm made life possible in the harshest conditions. People also discovered how to make a wide variety of products used for agricultural production and daily life from all parts of the tree.

Had the date palm merely been left to grow unattended, without human attention, the crops it produces would not be substantial. It was only through a long experimental process that people learned what actions to carry out in each season and in each stage of growth, so that productivity increased.

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owners in Kuwait. "When it comes to date palms, for everything there is a season," says Abu Hamza. "There is a time to fertilize, a time for irrigation, a time to trim and a time to pollinate. Now is the season for pollination."

Date palms are either male or female, with the male trees producing flowers with pollen and the female trees producing only flowers. Since the flowers have no scent the bees are not attracted to them and consequently play a very limited role in pollination, as is the case with other insects and the wind. If the male date palms do not grow in close proximity to the females, natural pollination is very limited. That's why Abu Hamza and a host of other date palm cultivators can be seen lined up outside the nurseries, selling male spathes for hand pollination.

The origins of hand pollination extend far back into the mists of time. According to an online article titled Ethnoecology of pollination and pollinators published in the *Revue d'ethnoecologie*, "the technique of hand pollination is documented through iconographic and textual sources, some of which date back to the third millennium B.C.E.... The Code of Hammurabi, the Babylonian law code of ancient Mesopotamia dating back to about 1754 B.C.E.... offers a consensual textual source for this practice, and we can ascertain that date palm pollination was practiced in Mesopotamia as early as the Old Babylonian Period, 20th to 19th centuries B.C.E."

Under natural growing conditions, palm trees in the wild would usually maintain an approximately equal number of male and female trees. Human cultivators adjusted this ratio when they learned that a single male palm can pollinate between forty to fifty female trees.

Mature male date palms can produce between five to ten spathes each year while adult female palms can have as many as twenty flower spathes annually. A Bahraini lady once told me that she grew up in a home with a garden filled with date palms. In spring, if spathes from male trees were plentiful, the children were given some of the blossoms to eat and it was always considered a special treat. Date palm blossoms and pollen are also used for traditional folk medicines among people in date growing regions.

The male spathe looks something like a long seed-

pod. Inside are many long, thin floral branches crowded together. In spring, when the male flowers reach their maturity, the spathes change color from green to a more brownish shade and then split open. This is the time to harvest them and use them for pollination.

Abu Hamza and other date palm cultivators at the nurseries offer their services for this job for a small fee. Since our house helpers have learned how to pollinate date palms, we buy a spathe from Abu Hamza for one dinar and take it home to do the pollination ourselves.

We only have one date palm and it wasn't planted intentionally. Some years ago someone passing by our house must have dropped a date stone in the corner of our front garden. It sprouted and grew and we now have a date palm about two meters high. Last summer it produced a generous crop of red dates, probably of the khanezi or khasab variety, which are among the more than 600 types of dates grown in the region. Out of these many different kinds, however, there are usually just a couple dozen varieties available in the local market.

Since our tree is not very tall it makes pollinating and later picking the dates an easy task, except for being very careful not to get poked in the eye by the long sharp palm fronds. To pollinate the female tree a few strands of male flowers with pollen are cut from a freshly opened spathe and are placed lengthwise between the strands of the female flowers. As they do this, working their way around the tree, the hands of our house helpers are soon covered in white sticky pollen dust. A long, thin strip of palm frond is used to gently tie up each branch of female flowers, securing the male flowers that have been placed in the middle.

Our date palm has ten flower spathes this year. Now that they have all been pollinated we just have to water the tree regularly. In summer, when the dates turn from green and in this case to red, we will tie some netting around them to protect them from the birds. When they have ripened we can enjoy nature's bounty, the result of a long and remarkably fruitful relationship between people and date palms.

editor's choice

