

Shredding under palm trees

To the south of Israel lies the Negev desert, which at around 12,000km² constitutes about 60 percent of the country's land area, but which houses just less than ten percent of Israel's population. Apart from a few other agricultural products, date palms are pretty much the only thing that grow in this barren land. Due to this, the local people have developed a special taste for dates, and thus have taken gladly to the cultivation of this crop. However, the very tough and fibrous palm fronds are a problem, as they build up from being pruned while harvesting the fruits. As is so often the case in many domains, the question arises of what to do with this green waste, although in this case, it's not the usual sort.

Incineration of this particular waste product has long been banned in Israel and so doing so is punished with heavy fines. However, since there are only a few machines that can process this material, the palm fronds have often piled up and been left for years, before eventually just being burned in secret. Just two days after pruning, the tough plant becomes very dry due to the strong heat of the sun, making it difficult for any shredder to handle.

"It is a big challenge to shred this material. Several shredding machine manufacturers have already failed. Nevertheless, we wanted to prove to our customers that we can offer a suitable solution for this problem with the IMPAKTOR 250 evo," says Stefan Ehmann, distribution partner for the ARJES twin-shaft shredder in Israel for Carmel Recycling.

Especially in the summer months, outside temperatures can often reach over 45 degrees. This alone makes even the most powerful machines struggle, and that's not to mention the air's high dust content and the dry desert sand, which also pose a significant challenge for the IMPAKTOR 250 evo. Nevertheless, the compact twin-shaft shredder was able to prove its oft-underestimated capabilities and properly shred this extremely tough material. These shredded palm fronds, as well as some palm trunks, were then sent for composting at Israel's Tsofar facility. The plant operator thus saves on the cost of transport to a separate collection point, while at the same time getting high-quality natural fertilizer for their own palm cultivation.

"Only the asynchronous twin-shaft design, in combination with the powerful paddle shafts of the ARJES machine, has been able to withstand these challenges," stated Stefan Ehmann.

However, even after the IMPAKTOR 250 evo had already been used successfully for several months, the plant operator nevertheless was forced to admit something; "Even though the IMPAKTOR is able to meet the task of shredding the palm fronds, it is simply too small to handle the enormous quantities of crop waste we process here." This is something that Carmel Recycling team also had to take note of.

Fortunately, a solution is already on the horizon. The new ARJES intermediate class EKOMAXX 800, with its 235KW, 8-liter Volvo Penta diesel engine, larger receiving hopper, tilting hopper attachment, and 2-meter shredding shafts will manage noticeably greater throughput volume. The built-in reversible fan of the EKOMAXX 800 will also be an absolute game changer. This hydraulically adjustable and self-cleaning fan ensures optimum function in the engine compartment, guaranteeing a significantly longer service life. The extreme strains that made things difficult for the IMPAKTOR, from things such as temperatures above 45 degrees, as well as the fine dust and sand, are handled noticeably better by this piece of equipment.

Currently, Carmel Recycling and its customer in Tsofar are unfortunately having to be patient due to high demand. One thing is already clear, though; if the 'small' IMPAKTOR was able to crush this extremely tough material at moderate throughputs, the EKOMAXX will undoubtedly be able to do so with even greater efficiency. We are excitedly looking forward to hearing from Carmel Recycling about their results as soon as the ARJES intermediate twin-shaft shredder arrives in Israel.

Until then, all interested parties in Israel will have the chance to make personal acquaintance with our distribution partner. From November 2nd to 3rd, the 15th Agro Israel will take place at Ma'ayan Harod National Park. Come by and find Carmel Recycling at booth 112, where they'll tell you all about the complete ARJES machine portfolio and their wide range of possible applications. It'll definitely be worth the visit!

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Date palms are pretty much the only thing that will grow in the Negev desert



Will Carmel Recycling be able to tackle this tough and fibrous waste material with the IMPAKTOR?



Making full use of the ARJES IMPAKTOR 250 evo for shredding palm fronds



Temperatures above 45°C as well as fine dust and sand place heavy stress on the machine



Thanks to its asynchronous twin-shaft design and powerful paddle shafts, the IMPAKTOR 250 evo takes care of this challenge with ease