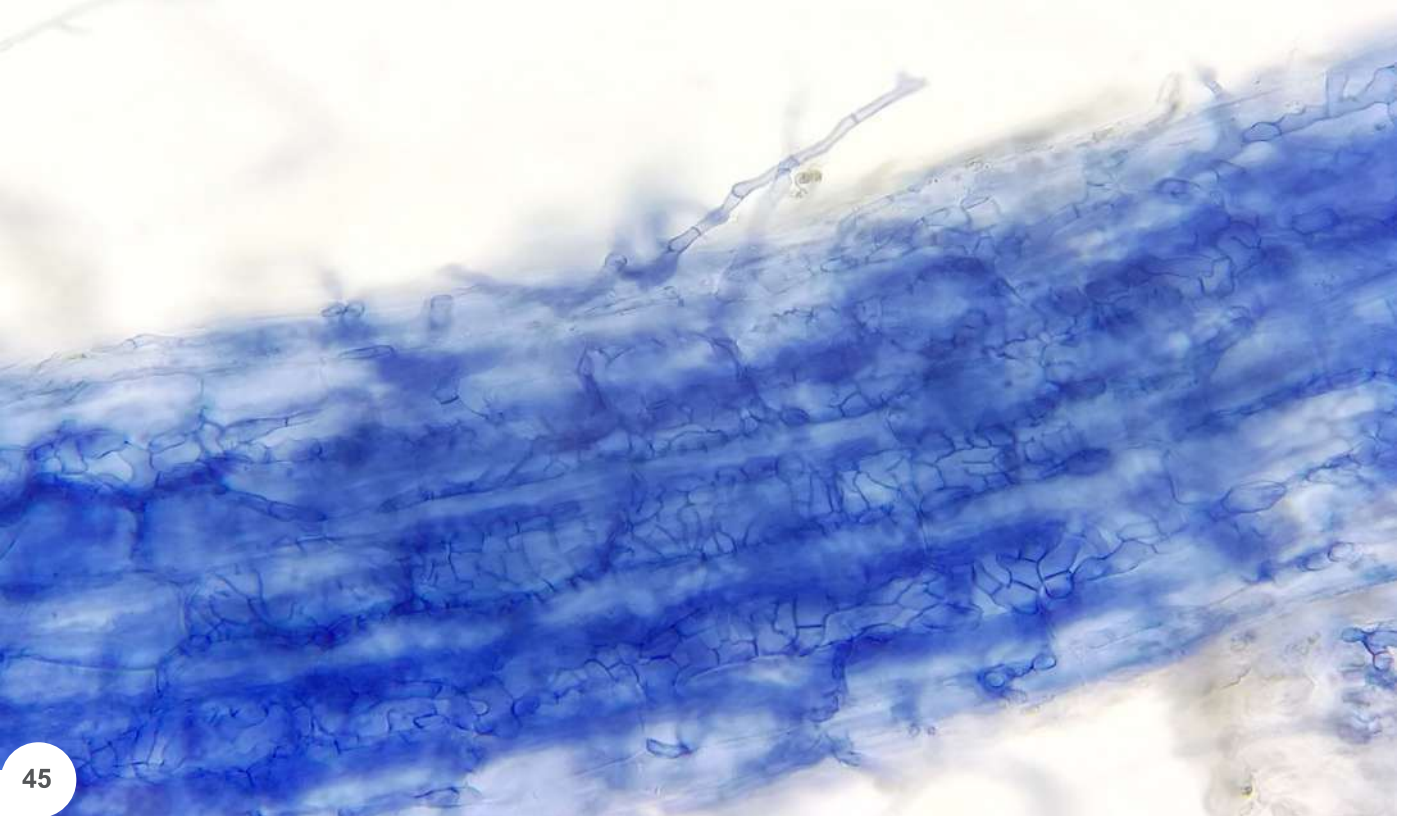


PRODUCING DESERT TRUFFLES

A LONG STORY WITH A HAPPY ENDING



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Desert truffles are subterranean mushrooms, a type of "fruit" produced by fungi after sexual reproduction, and as such desert truffles aren't available year-round. These are highly sought-after in the Mediterranean Basin, where they occur naturally. The growing interest in desert truffles — due to their nutraceutical (nutritional and medicinal) properties, high protein content (often used as a meat substitute in a vegetarian or vegan diet), and positive impact on the environment (enhancing plant growth and soil protection) — has caused a greater demand, leading to an increased interest in its large-scale production.

However, the fungi that produce truffles are mycorrhizal, which means they establish long-term relationships with plant species, and depend on them to survive. The plant also benefits from this relationship, receiving water, nutrients, and protection against pathogens. In summary, the plant nurtures the fungi, and the fungi allows the plant to thrive even in harsh environments.

In this context, to produce desert truffles, it is necessary to connect the Moroccan desert truffle fungus (*Terfezia arenaria*) with the roots of its host plant, the spotted rock-rose (*Tuberaria guttata*, Family *Cistaceae*). However, the spotted rock-rose is an annual plant (it completes its lifecycle in 12 months), and as such is not adequate when aiming to initiate continued production of these truffles, which requires the installation of these inoculated plants in field plantations.

Thus came the breakthrough question: why not inoculate a perennial (lives more than two years) shrub from the same plant family — *Cistaceae*? It was in this sense that the project **Micorrização de *Cistus* spp.**