



## ■ INNOVATION

# SUSTAINABLE SOLUTIONS TO GENERATE LESS PLASTIC WASTE ON FARMS

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**R**eynvas, part of the Armando Alvarez group, markets BioTutor®, a compostable horticultural twine. It has been put to the test at the Aury station<sup>1</sup>. Here is some initial feedback.

Available in black or cream, this string is made from bio-compostable biopolymers and is certified 'OK Industrial Compost' in accordance with standard EN 13432. Industrial composting is the quickest and most effective way of managing end-of-life. Twine degrades thanks to microbial activity at temperatures >50°C. After degradation, only CO<sub>2</sub>, water molecules and a little biomass will remain.

### ■ A RELIABLE ALTERNATIVE

This twine is designed to last for one agricultural season. Due to its formulation and certification, the current ambient climatic conditions (temperature, humidity, UV) do not allow the biodegradation process to be initiated in the short term. This security for the farmer means that BioTutor® can be used in a wide range of crops under cover (tomatoes, cucumbers, peppers, etc.) or in the open (hops). With breaking strengths ranging from 26 to 36 kg, BioTutor® offers users greater mechanical strength than cotton or cellulose twines.

BioTutor® is certainly more expensive for the farmer to purchase: around 2 to 3 times more than polypropylene (PP) twine with equivalent titration. However, the costs of managing, removing and treating the product at the end of its life are much lower with a compostable product. Most cucumber and tomato crops grown under glass are removed at the end of the cycle by rolling up the plants. With PP twine, the green waste bales also contain the polypropylene twine and/or clips and are therefore considered to be industrial

waste. Combined with biodegradable clips and compostable twine, crop residues are processed directly in a composting centre (on site or off site). This reduces the price differential, while making waste management simpler. European subsidies, via operational funds, also exist for producers.

### ■ EVER SIMPLER

For farmers using staking systems, the twine can be incorporated into 'spools/rollers'. A Biotutor® 700m/kg twine with a breaking strength of 26 kg was incorporated into the Reyroll® system and used in 2024 at the Aury station in Brittany on tomato crops.

Stéphane RUEL, experimentation technician at the station, gave us his initial impressions: *"When it came to setting up, the work time was slightly less than when using a conventional hook, thanks in particular to the string unwinding system. On the other hand, some of them (but only one hook) came off the wire after installation. When the plants were lowered, users generally liked the Reyroll system."*

For 2025, the system will be used again by the station to confirm the ease of use of the Reyroll compared with the hook.

<sup>1</sup> Experimental station supported by the Brittany Chamber of Agriculture in Western France (see *Plasticulture Magazine* n° 143).