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Manna Insect Oy Ltd, Oulu, Finland

**MassChallenge Switzerland winner Manna Insect announces insect-tech solution, already rolled out to first customers in Africa, Asia and Europe**

**Finnish insect-tech startup Manna Insect solves biowaste and animal feed problems with a novel modular solution optimized for upcycling biowaste using insects in any weather condition anywhere in the world. Manna Insect has created an intelligent automated solution utilizing BSF (black soldier fly) to turn biowaste into clean, pathogen-free and nutritious animal feed and organic fertilizer in climatized growth containers that don't need any additional physical infrastructure (such as buildings, plumbing, running water, electricity even) and can thus be operated even in remote, rural locations or set up in a factory yard or supermarket parking lot.**

Manna Insect realized early on that in rural environments, especially remote locations and developing countries, people or even organizations may not have relevant infrastructure available for managing biowaste streams, and even more so to turn those biowaste streams into locally usable animal feed or income. The solution was to build a way to enable local food and feed production that would be operable in any weather conditions and with minimal infrastructure, without any formal training or education.

Manna's solution is turning second-hand sea containers into climatized growth environments (optimized for rearing BSF larvae) that are remotely controlled with Manna's technology that can easily be set up and requires minimal electricity or solar power to manage the whole process without any prior experience in rearing insects or understanding the technology that runs the process.

Manna Insect's CEO and founder Ykä Marjanen comments on the results so far; "Some of our clients have been rearing insects before in open air operations, and now that they have started using our growth container, they've sent us pictures and comments saying they've never seen anything like this, the larvae are bigger than they've ever seen. We're very happy and proud to be able to support individual farmers just as well as factories or local communities in getting their biowaste treatment and/or insect protein operations up and running." "We can honestly say that we can offer the easiest and fastest entry to growing insects for various purposes", Marjanen continues. Manna's growth containers have already been shipped and are operating in Africa, Asia and Europe with multiple new countries planned for the next few months alone.

Technical details: One Manna BSF growth container can upcycle 180 tons of biowaste a year, turning it into 25 tons of BSF larvae (insect protein) and c. 11 tons of frass (organic fertilizer). Compared to soy production this means 4.2 Ha of (rain) forest that doesn't need to be turned into soy fields or that can be used for farming other plants, 30 tons of water saved and on average 35 tons of soy and fish meal saved per year.

Manna Insect was founded in 2018 by a small group of scientists and serial entrepreneurs in Oulu, Finland. The company has been funded by private business angels from Finland and Norway, and VC funds, such as Gorilla Ventures and Kielo Growth from Finland, G-Force from Slovakia and Founders Factory in the UK. The company has been selected and attended several startup acceleration programs across Europe, incl. EIT Climate (EU), StartUp Sauna (Finland), Build-it (Latvia) and MassChallenge Switzerland, where Manna was selected as one of the winners amongst 1100+ entries.

**More information available at:**

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