

Institute of Aerospace Medicine

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Technology transfer from space to agriculture: Manure treatment for more efficient crop production

The C.R.O.P.® process (Combined Regenerative Organic food Production) was originally designed for use in lunar and Mars habitats. By processing the astronauts' urine into a fertilizer solution, a directly connected greenhouse can be operated, thus closing the nutrient cycle.

Yet the technology can also be used in agriculture on Earth. C.R.O.P.® enables liquid farm manure such as cattle slurry or fermentation products from biogas plants to be processed into a higher-quality fertilizer. This enables a resource and environmentally friendly agriculture to supply a growing world population with food in the future. Together with DLR Technology Marketing, a technology transfer is carried out and a product is to be developed from the C.R.O.P.® technology.