Claims

1. A process for growing a plant employing fogponics comprising:
providing a storage tank (1) and a chamber (5) for the plant, the storage tank (1) being connected to the chamber (5) by a colloid entry passage to allow a colloid to enter the chamber (5) and a colloid exit passage to allow the same colloid to exit the chamber (5), the storage tank (1) being adapted to contain a water solution (2) of plant nutrients;
at least one high frequency head (3) adapted to generate a cold fog of the water solution (2), installed at a level lower and/or equal to the level of the water solution (2);
a blower (4) located in one of the passages;
at least one other frequency source in the form of a wave shooting source (7) located in one of the passages adapted to reduce the particle size of the cold fog to form a colloid;
their arrangement being such that they form a closed system wherein a cold fog or colloid, once generated can circulate around the system; the process of colloid generation including two steps:
Step A: involving firing a first frequency wave from the or each high frequency head (3) in the water solution (2) in the storage tank (1) whereby the or each high frequency head (3) will transmit a high frequency spectrum to the water solution (2) which is higher than the frequency of sound to generate a cold fog solution of microparticles of different sizes containing the plant nutrients; and
Step B: involving firing a second frequency wave from the wave shooting source (7) which will transmit a higher frequency than that in step A which will be able to convert the cold fog particles into a colloid of particles in the diameter range of 1 to 100 nanometres, the second frequency wave of step B being in the frequency range of 1.2 to 2 megahertz, the blower (4) being able to circulate the colloid around the closed system, when in operation.

2. The process in accordance with claim 1, wherein step B continues until nanoparticles are formed.

3. The process in accordance with claim 1 or claim 2, wherein the chamber is an apertured tube, the or each aperture being ‘closed’ when it is occupied by the root of the plant that surrounds the edge defining the aperture, the closed chamber being a tube or hollow or channel enabling the colloid to adopt multiple pathways as it passes through the chamber, and wherein the wall of the chamber is made of materials that have good heat transfer properties or are well insulated, the arrangement of the tube and the aperture being such that the root of the plant will be able to hang or float within the tube.

4. The process in accordance with any one of claims 1-3, wherein the steps to prepare the water solution (2) are as follows:
let water and the plant nutrients mix to become the water solution (2) and pour the water solution (2) into the storage tank (1), and wherein the colloid has the characteristics of a liquid aerosol.

5. The process in accordance with any one of claims 1-4, wherein the plant nutrients are any one or a mixture of at least two of the following: nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), sulfur (S), manganese (Mn), copper (Cu), chlorine (Cl), iron (Fe), boron (B), zinc (Zn), molybdenum (Mo), carbon (C), hydrogen (H) or oxygen (O).

6. The process in accordance with any one of claims 1-5, wherein the blower incorporates waterproof blades.

7. The process in accordance with any one of claims 1-6, wherein a further blower (4) or a further wave shooting source (7) or both are located within the storage tank (1) enabling not only the colloid generated to be the subject of process step B, but the water solution (2) of plant nutrients.

8. The process in accordance with any one of claims 1-7, wherein step B incorporates the use of at least two wave shooting sources (7) installed in series in the passage prior to the chamber (5).

9. The process in accordance with any one of claims 1-8, wherein when the plant is a fungi, the wall is also being provided with a niche for the stem and cap of the fungi to hang or float within the tube, the mycelium area being outside the niche.