Claims

1. Equipment for dispensing plant nutrition through the air, comprising:

a colloid source adapted to change a state of liquid nutrients into a colloid state of a suitable size between 3 to 7 microns before the nutrients in the colloid state float into one or more pots and stick to the roots of plants;

one or more spray nozzles adapted to change the liquid nutrients to a solution spray, the solution spray being shaped like water droplets and having a size of 7 microns or more, the one or more spray nozzles being adapted to spray droplets of liquid nutrients around, causing the droplets to attach to the roots of plants;

a solenoid valve operable to open and close an inlet of the liquid nutrients before the liquid nutrients enter the one or more spray nozzles; and

an automatic control system having a computer that send commands to turn on and off at intermittent intervals, based on working procedures depending on the type of plants cultivated.

2. The equipment of claim 1, wherein the colloid source is an ultrasonic frequency emitter which emits a frequency band between 1 to 6 MHz.

3. The equipment of any one of claims 1 or 2, further comprising a solution tank for receiving liquid nutrients.

4. The equipment of claim 3, wherein the solution tank is made of any material selected from the group comprising: polyvinyl chloride, polyethylene, polypropylene or stainless steel grade 316L.

5. The equipment of any preceding claims, further comprising a separation tank for receiving droplets of liquid nutrients and nutrients in the colloid state that do not stick to the roots of plants.

6. The equipment of claim 5, wherein the separation tank comprises one or more traps arranged to be tilted at an angle between 10 to 89 degrees with respect to a side wall of the separation tank for allowing nutrients in the colloid state to float on the trap and form a liquid that falls to a bottom of the separation tank.

7. The equipment of claim 6, wherein the separation tank is made of any material selected from the group comprising: polyvinyl chloride, polyethylene, polypropylene or stainless steel grade 316L.

8. The equipment of claim 1, wherein each of the one or more pots is shaped like a pipe, the pipe being adapted to receive the one or more spray nozzles which are installed periodically apart, and wherein each pot has a compartment for receiving the plants.

9. The equipment of claim 8, wherein the one or more pots are made of any material selected from the group comprising: polyvinyl chloride, polyethylene, polypropylene or stainless steel.

10. The equipment of claim 1, wherein each of the one or more pots comprises a container adapted to receive liquid nutrients, the container having a side wall and a bottom wall, wherein the side wall has at least three holes located at different heights with respect to the bottom wall.

11. The equipment of claim 10, wherein the first hole is located proximate the bottom wall and is adapted to transfer liquid from condensation, mist, and condensation of gases inside the container and which fall into the bottom of the container, into the separation tank via one or more pipes attached to the first hole.

12. The equipment of claim 11, wherein the second hole is located at a position higher than the first hole, away from the bottom wall, and is adapted to receive a pipe with one or more spray nozzles (12) installed therein.

13. The equipment of claim 12, wherein the third hole is adapted to receive a hose for bringing the nutrients in the colloid state to float along the pipe to enter the one or more pots until the gas density is constant.

14. The equipment of any of claim 10, wherein each pot further comprises a lid having one or more holes for allowing the roots of the plants to pass through, the lid being made of a hard material, textile or fabric.

15. The equipment of claim 14, wherein the hard material is selected from the group comprising: polyvinyl chloride, polyethylene, polypropylene, stainless steel grade 316L, stainless steel grade 304, stainless steel grade 308, softwood or hardwood.

16. The equipment of claim 14, wherein the textile is fiber, yarn, or a product made of fiber.

17. The equipment of claim 14, wherein the fabric is a flat sheet made from slurry, fibers and yarns using polymer forming materials.

18. Process for dispensing plant nutrition through the air, comprising the steps of:

(i) pumping liquid nutrients stored in a solution tank to a pipe;

(ii) sending signals from an automatic control system having a computer to open a solenoid valve, such that liquid nutrients flow into one or more pots through the pipe;

(iii) spraying the liquid nutrients with one or more spray nozzles that is adapted to change the liquid nutrients to a solution spray, the solution spray being shaped like water droplets, such that the droplets cling onto the roots of plants; and

(iv) sending liquid nutrients from the solution tank to a colloid source, the colloid source being adapted to change a state of liquid nutrients into a colloid state before the nutrients in the colloid state float into the one or more pots and stick to the roots of plants.

19. The process of claim 18, further comprising the steps of:

(i) sending commands to turn the solenoid valve on and off at intermittent intervals based on working procedures depending on the type of plants to be cultivated;

(ii) classifying the plants according to family and species and matching them with aeroponics timing according to periodic data; and

(iii) ordering a pump to operate to spray plant nutrients through the one or more spray nozzles for a predetermined period.

20. The process of claim 19, wherein the step of classifying the plants according to family and species and matching them with aeroponics timing according to periodic data will be looped to repeat if the data does not match.

21. The process of claim 19 or 20, wherein the step of ordering the pump to operate comprises the step of checking that a timing is correct before the pump is ordered to close, whereby the timing will be checked again for accuracy.

22. The process of claim 21, wherein if the timing is incorrect, the system will loop to a display of work situations and notifications.

23. The process of claim 18, further comprising the steps of:

(i) collecting liquid nutrients that do not cling onto the roots of plants at a bottom of the one or more pots; and

(ii) sending the liquid nutrients to a separation tank via a pipe attached to the bottom of the one or more pots.

24. The process of claim 23, further comprising the steps of:

(i) collecting the nutrients in colloid state that do not stick to the roots of plants at the bottom of the one or more pots; and

(ii) sending the nutrients in colloid state to the separation tank via a pipe attached to the bottom of the one or more pots.