CLAIMS

[Claim 1]

A plant growing apparatus, comprising:

an enclosure having an interior, wherein the interior of the enclosure is configured to maintain an interior environment within the enclosure and the enclosure is sized to be situated in an apartment or home;

at least one light source;

a planting column having a cavity formed therethrough;

a drive motor coupled to a bottom portion of the planting column, wherein said drive motor is configured to rotate said planting column within the enclosure;

a conduit having a dispensing apparatus at least partially positioned within the planting column, the dispensing apparatus configured to dispense an aqueous solution throughout the cavity, wherein said planting column is configured to be rotatably movable relative to the dispensing apparatus;

a water source fluidly coupled to the conduit to selectively dispense the aqueous solution from the dispensing apparatus;

at least one sensor;

an irrigation system; and

a control system configured to be communicatively coupled to the irrigation system, sensor, light source, and drive motor;

wherein, the at least one light source, planting column, drive motor, conduit, sensor, and irrigation system are self-contained with the enclosure as part of the plant growing apparatus.

[Claim 2]

The apparatus of claim 1, wherein the enclosure comprises a top, a base, and at least one wall, wherein said wall has an internal surface.

[Claim 3]

The apparatus of claim 2, wherein the internal surface of the wall configured to reflect light emitted within the enclosure.

[Claim 4]

The apparatus of claim 1, wherein the planting column further comprises a plurality of sections removably coupled to one another to form the cavity, each section having at least one opening configured to receive a plant.

[Claim 5]

The apparatus of claim 1, wherein the light source includes at least one light emitting diode (LED).

[Claim 6]

The apparatus of claim 1, further wherein the water source includes a reservoir, wherein the reservoir is substantially separated from the interior of the enclosure by a bottom wall.

[Claim 7]

The apparatus of claim 1, wherein the water source, conduit, and irrigation system are fluidly coupleable to one another.

[Claim 8]

The apparatus of claim 1, wherein the dispensing apparatus is positioned through a top portion of the planting column.

[Claim 9]

The apparatus of claim 1, wherein the planting column rotates about the dispensing apparatus.

[Claim 10]

The apparatus of claim 1, wherein the irrigation system comprises a pump and a secondary fluid conduit configured to transport water from the water source to the conduit.

[Claim 11]

The apparatus of claim 1, wherein the enclosure is rectangular, having one or more openings to access the interior of the enclosure.

[Claim 12]

The apparatus of claim 1, further wherein the planting column further comprises a rotatable base.

[Claim 13]

The apparatus of claim 1, wherein the interior cavity of the planting column is arranged in a helical configuration.

[Claim 14]

The apparatus of claim 1, wherein the control system is configured to monitor and control temperature, humidity, and light color spectrum to manipulate plant growth within the enclosure.

[Claim 15]

The apparatus of claim 14, further comprising a drawer formed in the base of the plant growing apparatus to house a removeable water reservoir.

[Claim 16]

The apparatus of claim 5, wherein the LED provides a variable color spectrum that is selectable by the control system to manipulate plant growth.

[Claim 17]

A system of growing, monitoring, and purchasing plants for growing in a plant growing apparatus comprising:

providing a rotatable planting column formed of a plurality of sections removably coupled to one another to form a cavity;

assigning a plant pod having an individual species of plant an identifier;

classifying environmental variables that are associated with the identifier;

assigning a location code to the plant pod location within the plant growing apparatus, the location code being assigned to an opening of the rotatable planting column that provides access for at least a portion of the plant pod to the cavity;

implementing a control algorithm to determine optimal environmental conditions based on the environmental variables associated with the identifier and the location code;

averaging environmental variables identified by the control system for a combination of plant species and locations within the system positioned in separate openings of the rotatable planting column; and

regulating the environment to achieve one or more of the average environmental variable and the optimal environmental conditions;

wherein, regulating the environment includes distributing an aqueous solution with a dispensing apparatus throughout the cavity of the rotatable planting column.

[Claim 18]

An apparatus for growing plants, comprising:

a water source;

a growing column having an interior cavity and at least one opening configured to allow access to said interior cavity;

an enclosure surrounding the growing column and sized to be situated in an apartment or home; and

a pump fluidly connected to the water source; and

a single dispensing apparatus positioned through a top portion of the growing column and fluidly coupled to the pump to dispense an aqueous solution throughout the entire interior cavity wherein unused aqueous solution is directed through the cavity to a reservoir through gravity;

wherein, said pump is configured to provide water from the water source to the interior cavity through the single dispensing apparatus;

further wherein, the single dispensing apparatus is rotationally coupled to the top portion of the growing column to allow the growing column to rotate relative to the dispensing apparatus;

further wherein, the growing column, enclosure, pump, and single dispensing apparatus are self-contained or configured to be integrated into a kitchen as an appliance.

[Claim 19]

The apparatus of claim 18, further comprising a plant growing pod comprising a top rim and a bottom portion configured to fit within said opening, wherein said bottom portion is configured to extend at least partially into said interior cavity of the growing column.

[Claim 20]

The apparatus of claim 1, wherein the at least one light source is positioned at least partially along a corner of the interior of the enclosure.