

1) Family number: 74783015 (US2019183033A)

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Title: SYSTEM FOR INFUSING A GAS OR LIQUIDS INTO THE ROOTS OF A PLANT

Abstract: The present application relates to agriculture productions system that allows for the controlled release of beneficial agents into a plant root mass, and more particularly it is beneficial for agriculture production where control of infusion of micro-nutrient, infusion macronutrient, root temperature control agents, nutrients and/or elements are applied to the root root zone of a plant.

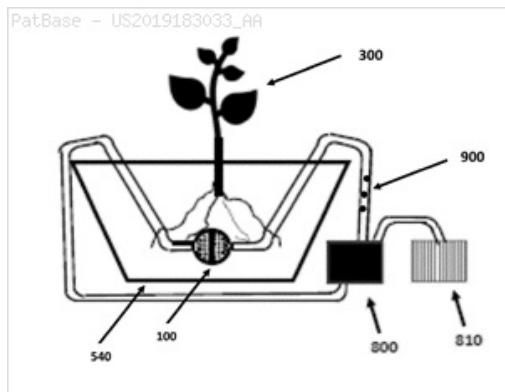
Classifications:

International (IPC 8-9): A01B79/00 A01B79/02

A01G31/02 (Advanced/Invention)

CPC: A01G29/00 A01B79/005 A01B79/02 A01G31/02

US: 1/1



Family:

Publication number	Publication date	Application number	Application date
US2019183033 AA	20190620	US20180169260	20181024

Priority:

US20170599725P 20171217 US20180636354P 20180228 US20180169260 20181024

Probable Assignee: GLAUDE TIMOTHY

Assignee(s): (std): GLAUDE TIMOTHY ; PROULX NICOLE MARIE

Inventor(s): (std): PROULX NICOLE MARIE ; GLAUDE TIMOTHY

2) Family number: 55976069 (US2015237812A)

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Title: ENVIRONMENT CONTROLLED STRUCTURED GREEN HOUSES FOR COST EFFECTIVE FOOD PRODUCTION

Abstract: The present invention relates to the environment controlled multibay structured greenhouses provisioning modules Z1 to Z7 and plurality of sensors. Z1 provisioning compressor, tanks T1, T2, Ta, capture manifold, release manifold, Z2 provisioning cost effective material earth tube heat exchanger for very cost effective heating of premises in cold/freezing cold locations, drastically reducing crude (fossil fuel) demand, Z3 maintains greenhouse relative humidity defined precise set point, Z4 generates geo-thermal energy, Z5 ameliorates global warming by abhorning greenhouse carbon dioxide release into atmospheres, Z6 uses activated fertilizers, nutrients solutions reducing input cost, ~50 percent drip dozing, ~75 percent foliar dozing, Z7 offers greenhouse roof and sides' polyethylene film fixed and automated roll on/off thermal screen cum shading curtains 0-100 percent convertible and cost effective means or methods eliminating gutters, increasing light energy into greenhouse, Z7 Z3, and Z5 offer best integrated pest management obviating toxic crop protection agents' use

Classifications:

International (IPC 8-9): A01G9/14 A01G9/18 A01G9/20 A01G9/22

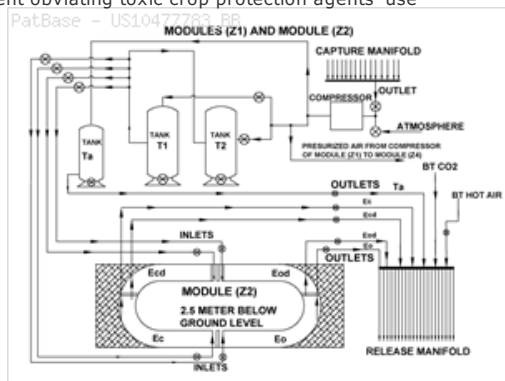
A01G9/24 F24F11/02 F24F5/00 (Advanced/Invention);

F16M (Subclass/Invention)

CPC: A01G9/24 A01G9/246 Y02A40/268 A01G9/14 A01G9/227

A01G9/247 A01G9/18

US: 47/17



Family:

Publication number	Publication date	Application number	Application date
AU2012389238 AA	20150430	AU20120389238	20121219
AU2012389238 BB	20170504	AU20120389238	20121219
BR112015005037 A2	20170425	BR20151105037	20121219
CA2883489 AA	20150227	CA20122883489	20121219
CA2883489 C	20190122	CA20122883489	20121219

CN104703463 A	20150610	CN201280075681	20121219
CN104703463 B	20170222	CN201280075681	20121219
EA034406 B1	20200205	EA20150090409	20121219
EA201590409 A1	20150630	EA20150090409	20121219
EP2892320 A1	20150715	EP20120821317	20121219
EP2892320 B1	20190123	EP20120821317	20121219
IN02779DE2012 A	20150724	IN2012DE02779	20120906
JP2015529078 T2	20151005	JP20150530552T	20121219
KR101917789 B1	20181113	KR20157008573	20121219
KR20150092088 A	20150812	KR20157008573	20121219
NZ706656 A	20161028	NZ20120706656	20121219
US2015237812 AA	20150827	US20120426501	20121219
US10477783 BB	20191119	US20120426501	20121219
WO14037958 A1	20140313	WO2012IN00830	20121219
ZA201501343 A	20160127	ZA20150001343	20150227

Priority:

IN2012DE02779 20120906 WO2012IN00830 20121219

Probable Assignee: GUPTA SAT

Assignee(s): (std): GUPTA SAT ; GUPTA SAT PARKASH ; S P GUPTA ; SAT PARKASH GUPTA

Assignee(s): SP GUPTA

Inventor(s): (std): GUPTA SAT PARKASH ; S P GUPTA ; SAT PARKASH GUPTA

Inventor(s): SP GUPTA

Agent(s): HENRY HUGHES IP LTD; WYNNES PATENT AND TRADE MARK ATTORNEYS; WYNNES PATENT AND TRADE MARK ATTORNEYS PTY LTD; RICHES MCKENZIE AND HERBERT LLP; AIRD AND MCBURNEY LP; CHAILLOT GENEVIEVE; SACH GREG ROBERT; DOBRUSIN LAW FIRM PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 69101133 (US2018092311A)

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Title: SUBSURFACE IRRIGATION SYSTEMS AND METHODS

Abstract: A subsurface irrigation system is provided that includes a plurality of subsurface irrigation sleeves defining an area that has a first side and a second side. At least one of the first side and the second side is configured to be hydrophilic. The plurality of subsurface irrigation sleeves each include a tunnel. Tubing connects a first sleeve of the plurality of subsurface irrigation sleeves to a second sleeve of the plurality of subsurface irrigation sleeves. The tubing is configured to pass through the tunnels of the plurality of irrigation sleeves. An emitter is disposed on the tubing within the tunnel, the emitter emitting fluid to the area of the plurality of subsurface irrigation sleeves.

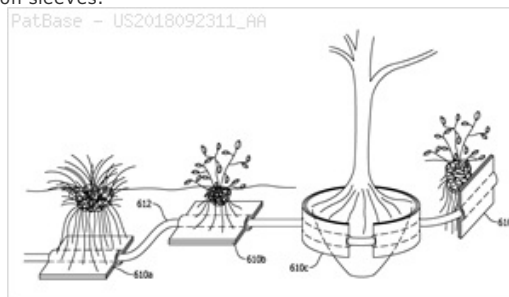
Classifications:

International (IPC 8-9): A01G25/06 A01G25/16 A01G29/00

B32B27/36 B32B5/02 E01C13/00 (Advanced/Invention)

CPC: A01G25/06 A01G25/167 A01G29/00

US: 1/1 405/43



Family:

Publication number	Publication date	Application number	Application date
AU2017337080 AA	20190516	AU20170337080	20170929
CL2019000876 A1	20190906	CL20190000876	20190401
EP3518652 A1	20190807	EP20170857580	20170929
IN201917014733 A	20190712	IN201917014733	20190411
US2018092311 AA	20180405	US20160283061	20160930
US10091956 BB	20181009	US20160283061	20160930
WO18064618 A1	20180405	WO2017US54582	20170929

Priority:

US20160283061 20160930 WO2017US54582 20170929

Probable Assignee: GIETL JUTTA

Assignee(s): (std): GIETL JUTTA ; GIETL JUTTA M ; PUTZE ADELHEID

Inventor(s): (std): PUTZE ADELHEID ; GIETL JUTTA M

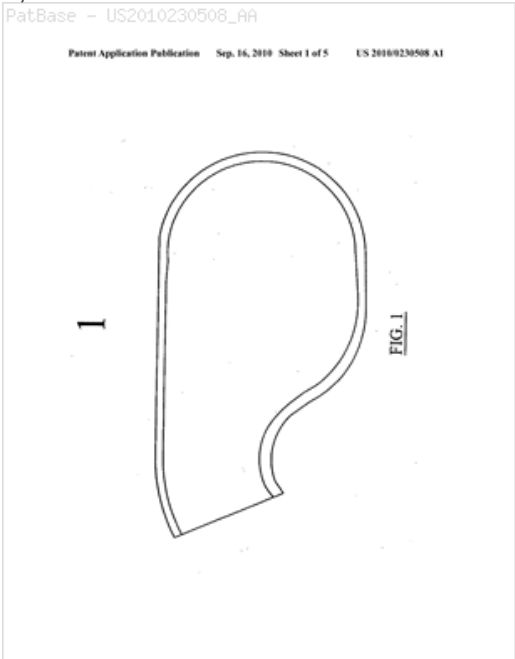
Agent(s): BAXTER PATENT ATTORNEYS PTY LTD; SARGENT AND KRAHN; MOORE MICHAEL RICHARD; WEIDE AND MILLER LTD; PRINCE BRIAN G

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: GOD DEVICE GENRES CADRES

Abstract: Globose-conduit (GC) conforming embodiments Universe of quintessential, core, natural disposition mass energy highest conserving (QCNDMEHC) forces completely matched complete complements compact composite Sets. 'Fluids functions' conforming least mass compositions at highest elevations least GC height least length continuous compact composite, fluid free-surfaces composite least rotations, fluids quanta forms least height perimeters most conserve mass energy. Buried GC QCNDMEHC thermal aqueducts transfer their mass-energy heat portion into subsoil, combat 'global warming', the Earth's crust surface cooling, sea levels rising and submicroscopic, subatomic to cosmos mass systems heat energy forced electro-thermodynamics electromagnetics perimeters buoyancy/density, evaporation and suction. Universal stratifications, gradations (SG) processes 'global warming', energy crises and water masses depletions which imperil the Earth's survival, fluids MEHC, QCMEHC and QCNDMEHC combat; the God device said Earth's fluids 'functions', said perimeters' mass energy highest conserving said cadres genres ardently enforce.

Classifications:
International (IPC 8-9): A01G15/00 (Advanced/Invention);
A01G15/00 (Core/Invention)
CPC: A01G15/00
European: A01G15/00
US: 239/14.1



Family:

Publication number	Publication date	Application number	Application date
US2010230508 AA	20100916	US20090453444	20090512

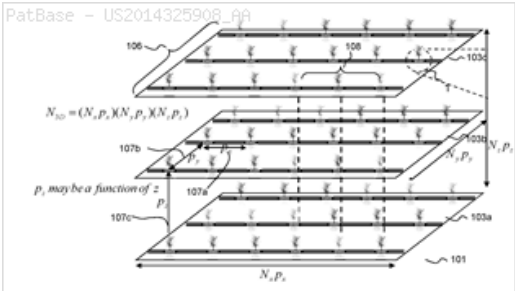
Priority:
US20070809132 20070531 US20080153032 20080513 US20080153036 20080513
US20090453444 20090512

Probable Assignee: PETROVICH SVETOZAR B
Assignee(s): (std): PETROVICH SVETOZAR B
Inventor(s): (std): PETROVICH SVETOZAR B
Agent(s): SVETOZAR B PETROVICH

Title: HIGH DENSITY THREE DIMENSIONAL MULTI-LAYER FARMING

Abstract: In order to achieve food and energy security, while at the same time eliminating the "food vs. biofuel" conflict, a transformational three dimensional multilayer farming, MLF, is presented. This exploits the third dimension. This goal is realizable by the disclosed means and methods to increase the 3D plant productivity, 3D yield, ton/m3/year, using ultra-compact ultra high density vertical structures. Each layer in the MLF system comprises at least one string of SanSSoil Growth Elements, SGEs, each designed to carry out multiple functions essential to sustain plant growth, and constructed in a manner to integrate these functions at low-cost. The networked strings of SGEs in each layer provide near self-sufficiency for growth, and in an integrated MLF system, achieve maximum vertical compactness and highest growth density. The multi-functions of each integrally made SGE include: germination, growth sustenance, localized delivery of nutrients, environment sensing, and localized delivery of illumination.

Classifications:
International (IPC 8-9): A01G1/00 A01G3/00 A01G31/00 A01G31/02
A01G31/06 G05D27/02 (Advanced/Invention)
CPC: A01G31/02 A01G31/06 Y02P60/216 G05D27/02 A01C1/02
A01G31/00 Y02P60/12 A01G22/00
US: 47/62A 47/62N 47/62R 700/90



Family:

Publication number	Publication date	Application number	Application date
US2014325908 AA	20141106	US20130887334	20130505
US2014325909 AA	20141106	US20130887336	20130505

US2014325910 AA	20141106	US20130887337	20130505
US2014330406 AA	20141106	US20130887333	20130505
US9606553 BB	20170328	US20130887333	20130505
WO14182600 A1	20141113	WO2014US36754	20140505

Priority:

US20130887333 20130505 US20130887334 20130505 US20130887336 20130505
US20130887337 20130505

Probable Assignee: FARIS SADEG M

Assignee(s): (std): FARIS SADEG M

Inventor(s): (std): FARIS SADEG M

Agent(s): ABELMAN FRAYNE AND SCHWAB; CRISPINO RALPH J

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 1428219 (US4437263A)

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Title: SYSTEM FOR HEAT STORAGE PARTICULARLY FOR USING IN AGRICULTURE

Abstract: There is provided a system for the underground storage of heat for the gradual and controlled release of same for use in agriculture, comprising a plurality of heat conduits located at predetermined depths below the surface of the soil, and means for circulating heated water through said conduits. Preferred are two-layer systems and three-layer systems of such conduits.

Classifications:

International (ipc 8-9): A01G9/24 (Advanced/Invention);

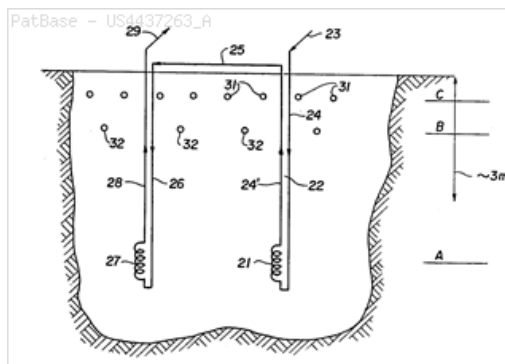
A01G9/24 (Core/Invention)

International (ipc 1-7): A01G13/06 A01G9/24 F24H7/00 F24J3/02

CPC: Y02P60/124 A01G9/243 Y02A40/266

European: A01G9/24C

US: 47/1.01R 47/19 47/1R 47/2 47/58 47/58.1R 47/88



Family:

Publication number	Publication date	Application number	Application date
AU198174907 A1	19820311	AU19810074907	19810903
AU547847 B2	19851107	AU19810074907	19810903
IL60969 A0	19801130	IL19800060969	19800904
IL60969 A1	19880229	IL19800060969	19800904
US4437263 A	19840320	US19810297363	19810828

Priority:

IL19800060969 19800904

Probable Assignee: YEDA RES AND DEV

Assignee(s): (std): YEDA RES AND DEV

Assignee(s): YEDA RESEARCH AND DEVELOPMENT CO LTD ; YEDA RESEARCH AND DEVELOPMENT COMPANY LTD

Inventor(s): (std): NIR AHARON ; AMIEL ABRAHAM JOSEPH ; KRANT JONATHAN MICHAEL ; AMIEL ABRAHAM J ; KRANT JONATHAN M

Inventor(s): ABRAHAM JOSEPH AMIEL ; AHARON NIR ; JONATHAN MICHAEL KRANT

Agent(s): FB RICE; FB RICE PTY LTD

7) Family number: 55312293 (US2015191748A)

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Title: PROCESS FOR TREATING ORGANIC MATERIALS

Abstract: The present invention provides a process for the treatment of sewage sludge with enzymes, which process comprises treating a sewage sludge resulting from the treatment of municipal or industrial waste water with a composition comprising a fermentation supernatant product from a *Saccharomyces cerevisiae* culture and a non-ionic surfactant, wherein said fermentation supernatant product is free of active enzymes, at conditions suitable for generating said active enzymes from said sewage sludge in situ.

Classifications:

International (ipc 8-9): A01G25/00 A01G7/06 A01N A01N25/10 A01N25/30 A01N37/44 A01N61/00 A01N63/00 A01N63/02 A01N63/04 A01P21/00 A01P3/00 A01P7/00 B01F17/38 B01F17/40 B01F17/42 B08B9/027 B09B3/00 B09B5/00 C02F C02F1/50 C02F11/02 C02F11/04 C02F11/14 C02F3/02 C02F3/12 C02F3/28 C02F3/34 C07C C07C39/00 C07C49/242 C07D303/32 C07K C07K14/395 C08G C08G79/02 C08G79/04 C08K7/02 C08L1/02 C11D C11D1/66 C12N C12N1/16 C12N1/18 C12N9/00 C12P1/00 C12P1/02 C12P3/00 C12P5/02 D21C3/00 D21C3/22 D21C5/00 D21C5/02 D21H11/12 D21H11/14 D21H17/20 D21H21/24 D21H21/36 (Advanced/Invention);

A01N37/44 C02F101/32 C02F103/00 C02F11/04 C02F3/28 C12N1/16
C12P5/02 (Advanced/Non-invention);
C02F C07C (Subclass/Invention)
International (IPC 1-7): A01N63/00 A01N63/02 C07K14/395
C08G79/02 C11D1/66 C12N1/18
CPC: A01N25/30 A01N2300/00 C02F3/34 C02F2303/06 A01N25/10
B08B9/027 D21C5/005 D21C5/025 D21H17/005 D21H21/24
D21H21/36 Y02W30/648 A01N63/10 A01N63/30 C02F3/02 C02F3/28
C02F3/342 C02F3/347 C02F11/04 C02F2101/32 C02F2103/007
C02F2301/106 C02F2303/02 C02F2303/10 C02F2305/04 Y02E50/343
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US: 1/1 162/77 210/610 252/180 424/115 424/76.6 435/167
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PatBase - W017035100_A1

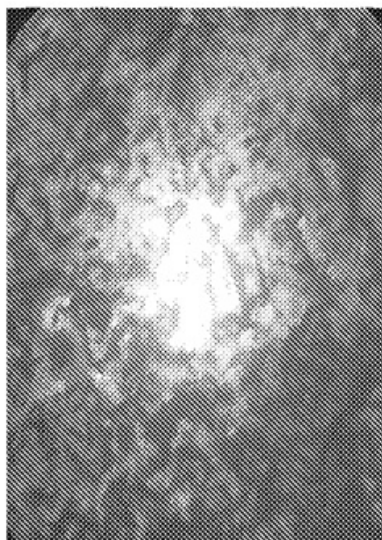


FIG. 1A

Family:

Publication number	Publication date	Application number	Application date
AU2013267982 AA	20141218	AU20130267982	20130524
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AU2016311181 AA	20180308	AU20160311181	20160822
AU2016311181 BB	20181101	AU20160311181	20160822
AU2016311181 CA	20190502	AU20160311181	20160822
AU2016311182 AA	20180308	AU20160311182	20160822
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IN201847009646 A	20180323	IN201847009646	20180316
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Priority:

US20120689077P	20120529	EP20130796699	20130524	EP20190160826	20130524
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Probable Assignee: NEOZYME INT INC

Assignee(s): (std): DALE PARKER ; DALE PARKER DAVID ; NEOZYME INTERNATIONAL INC ; NEOZYME INT INC ; PARKER DALE ; PARKER DAVID DALE

Assignee(s): NEOZYME INT INC COSTA MESA ; NEOZYME INTERNATIONAL INC ; NEOZAJM INTERNESHNL INK

Inventor(s): (std): DALE PARKER DAVID ; DALE PARKER ; PARKER DAVID DALE ; PARKER DALE ; DAVID DALE PARKER

Inventor(s): DEJL PARKER ; DEJL PARKER DEVID

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; JORGE GARAY PEREZ; JOSE ANDRES RINCON USCATEGUI; JORGE CHAVARRO ARISTIZABAL; SCHLICH GEORGE; BOYNTON JULIETTE ALICE; IZQUIERDO BLANCO MARIA ALICIA; CHINA PATENT AGENT HK LTD; CHINA PATENT AGENT HONG KONG LTD; ACHMAD FATCHY; YURIDICHESKAYA GORODISSKI I PARTNER Y OOO FA; HANDE MUMCUOGLU; PETER D; ONE3 IP MANAGEMENT PC; DEAN G; ULTIMATEDGE IP LAW GROUP PC; STATHAKIS DEAN G; BARAN ROBERT J; STATHAKIS DEAN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

8) Family number: 34574412 (US2002041892A)

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Title: METHOD AND APPARATUS FOR PROVIDING LONG TERM PROTECTION FROM INTRUSION BY INSECTS AND OTHER COLD BLOODED ANIMALS

Abstract: Controlled release devices are shaped and placed in locations through which insects and/or other cold blooded animals generally enter an area or a structure sought to be protected. The controlled release devices include a polymeric matrix and a pesticide contained in the matrix. The pesticide is gradually released out of the matrix to the surface of the device. The pesticide on the surface of the device kills the intruding insects or other cold blooded animals that come in contact with the pesticide. In addition, if the device is in contact with a permeable structure or object, the pesticide released onto the surface of the device is absorbed by such permeable structure or object to provide a barrier to entry by the insects and/or other cold blooded animals.

Classifications:

International (IPC 8-9): A01N25/10 A01N25/32 A01N25/34 A01N27/00 A01N31/12 A01N33/18 A01N41/06 A01N47/12 A01N53/00 A01N53/02 A01N53/06 A01N53/08 A01N57/16 A61K47/48 C07C46/00 C08J3/20 C08J3/22 G10D9/06 (Advanced/Invention); A01N25/10 A01N25/34 A61K47/48 C08J3/20 (Advanced/Non-invention); A01N25/32 A01N25/34 A01N27/00 A01N31/00 A01N33/00 A01N41/00 A01N47/10 A01N53/00 A01N57/00 G10D9/00 (Core/Invention)

International (IPC 1-7): A01G13/00 A01N25/00 A01N25/10 A01N25/18 A01N25/32 A01N25/34 A01N33/06 A01N33/18 A01N37/12 A01N37/34 A01N47/40 A01N53/02 A01N53/06 A01N57/02 A01N57/16 A61K47/48 B09B5/00 C07C49/68 C08J3/20 C08J3/22 G10D9/06

CPC: C07C46/00 Y10S424/11 Y10S514/919 Y10S514/953 Y10S514/964 Y10S47/10 Y10S424/08 C08J3/22 A01N27/00 A01N31/12 A01N47/12 A01N33/18 A01N53/00 A01N57/16 Y10T442/2525 A01N41/06 A01N25/34

European: A01N25/34 A01N27/00 A01N31/12 A01N33/18

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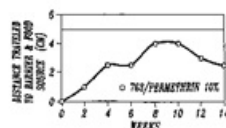
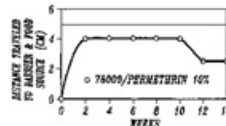
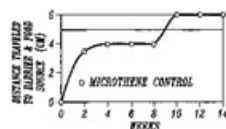
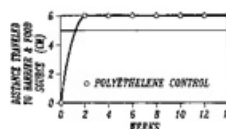
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PatBase - WO9807318_A2

WO 9807318

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Family:

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AT242963 E	20030715	AT19970936499T	19970813
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IL128292 A0	19991130	IL19970128292	19970813
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MY115549 A	20030731	MY19970003780	19970818
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NZ517126 A	20031031	NZ20000517126	20000728
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US5116414 A	19920526	US19830555113	19831123
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US6099850 A	20000808	US19950482151	19950607
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US6572872 BB	20030603	US20010967442	20010928
US6852328 BA	20050208	US19960771467	19961220
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Priority:

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US20010967442 20010928		

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Title: HYBRID TRIGENERATION SYSTEM BASED MICROGRID COMBINED COOLING, HEAT AND POWER PROVIDING HEATING, COOLING, ELECTRICAL GENERATION AND ENERGY STORAGE USING AN INTEGRATED AUTOMATION SYSTEM FOR MONITOR, ANALYSIS AND CONTROL

Abstract: Provided is a consumer to industrial scale energy trigeneration process based microgrid combined cooling, heat and power. The present invention includes conversion, processing, extraction and/or storage systems for electrical, chemical and thermal energy. The invention provides a quintessential renewable energy ecosystem incorporating vital energy generation, thermal heating and cooling processes with integrated components installed to encompass a distributed renewable energy generation, energy storage and integrated automation system. The automation system of the invention provides the ability to view, monitor, analyze, control and interact with system components.

Classifications:

International (IPC 8-9): A01G31/02 A01G7/04 B29C45/17 C04B7/36 C10B53/00 C10B57/00 C10B57/10 C12M1/00 C12M1/34 C12M1/36 C12P7/06 C12P7/10 C21C5/52 C21D1/32 C22C33/08 C25C3/06 D01F9/12 D01F9/32 F01K F01K13/00 F01K13/02 F01K23/10 F01K25/00 F01K25/10 F01K27/02 F01K3/00 F01K3/02 F01K3/12 F02C F02C1/05 F02G1/043 F02G1/044 F02G1/053 F02G1/055 F02G1/057 F02G5/02 F03D7/04 F03D9/18 F03G F03G4/00 F03G6/00 F03G6/06 F03G7/00 F03G7/04 F03G7/10 F22B F22B1/00 F24J2/00 F24J2/07 F24J2/12 F24J2/14 F24J2/18 F24J2/52 F24J2/54 F24J3/00 F24S23/71 F25B15/00 F25B27/00 F25B27/02 F25B9/14 F28D F28D20/00 H01M8/00 H01M8/04 H01M8/0662 H02J3/28 H02J3/38 H02K H02K7/18 H02S10/10 H02S40/22 H05B37/02 (Advanced/Invention); F02G1/043 F24J2/46 (Advanced/Non-invention); F01K F02C F03G F22B F28D H02K (Subclass/Invention)

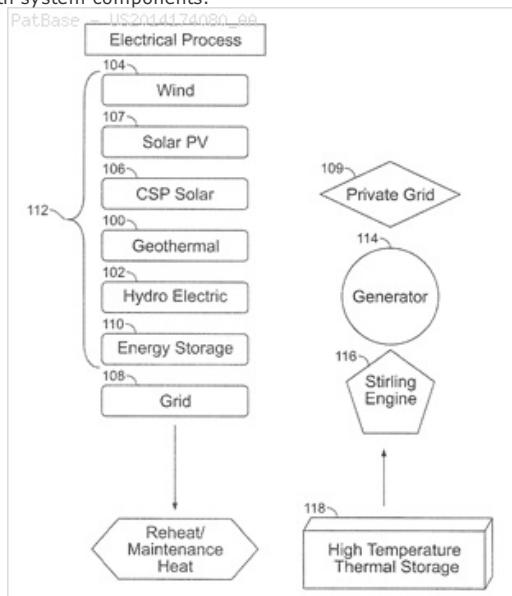
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US: 1/1 126/694 220/592.2 315/297 47/58.1LS 47/62R 60/516 60/517 60/641.1 60/641.15 60/698 62/331

Family:

Publication number	Publication date	Application number	Application date
AU2015203118 AA	20150709	AU20150203118	20150611
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BR112015011248 A2	20171219	BR20151111248	20131115
CA2891435 AA	20151211	CA20152891435	20150514
CA2930794 AA	20160513	CA20132930794	20131115
CA2973565 AA	20170711	CA20142973565	20140501
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CN105257425 A	20160120	CN201510589238	20150611
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EP2955372 A2	20151216	EP20150275151	20150610
EP2955372 A3	20160629	EP20150275151	20150610
HK1218148 A1	20170203	HK20160106103	20160530
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Priority:

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Probable Assignee: FRIESTH KEVIN LEE

Assignee(s): (std): FRIESTH KEVIN ; FRIESTH KEVIN LEE ; KEVIN LEE FRIESTH

Inventor(s): (std): FRIESTH KEVIN ; KEVIN LEE FRIESTH ; FRIESTH KEVIN LEE

Agent(s): SPRUSON AND FERGUSON; BORDEN LADNER GERVAIS LLP; POTTER CLARKSON LLP; WENPING AND CO; HIROE AND ASSOCIATES PATENT PROFESSIONAL CORP; BRIAN J; JESSICA L; BRICK GENTRY PC; LAURENZO BRIAN J; MIKKILINENI SRIKANT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 77824668 (WO20039268A1)

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Title: DOMESTIC AGRICULTURAL MACHINERY WITH THE ABILITY TO GEOPONICS, HYDROPONICS, AND AEROPONICS, EQUIPPED WITH ULTRAVIOLET RAY DISINFECTANT SYSTEM AND RECYCLING WATER SYSTEM

Abstract: Domestic Agricultural Machinery with ability to Geoponic, Hydroponic, and Aeroponic, equipped with an ultraviolet disinfectant system and a recycling water system is a specialized machine for the cultivation of agricultural crops in residential areas, as well as is appropriate for all kinds of agricultural cultivations with low capital due to controlled ultraviolet and ozone gas technology and recycling waste liquids and water system and artificial intelligence; and we can observe a closed water cycle in the system, which will dramatically reduce water consumption during cultivation and production so that 98 percent of used water is entirely spent on the production and cultivation of crops, and the waste water section is very negligible.

Classifications:

International (IPC 8-9): A01G31/02 A01G9/14

A01G9/24 (Advanced/Invention)

CPC: A01G9/14 A01G9/24 A01G31/02

PatBase - WO20039268_A1



fig. 1

Family:

Publication number	Publication date	Application number	Application date
WO20039268 A1	20200227	WO2019IB52844	20190406

Priority:

WO2019IB52844 20190406

Probable Assignee: KHORSHIDI ISMAEEL

Assignee(s): (std): KHORSHIDI ISMAEEL

Inventor(s): (std): KHORSHIDI ISMAEEL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 58177696 (US2015020239A)

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Title: SEED-ORIGIN ENDOPHYTE POPULATIONS, COMPOSITIONS, AND METHODS OF USE

Abstract: This application relates to methods and materials for providing a benefit to a seed or seedling of an agricultural plant (e.g., an agricultural grass plant), or the agricultural plant derived from the seed or seedling. For example, this application provides purified bacterial populations that include novel seed-origin bacterial endophytes, and synthetic combinations of seeds and/or seedlings (e.g., cereal seeds and/or seedlings) with heterologous seed-derived bacterial endophytes.

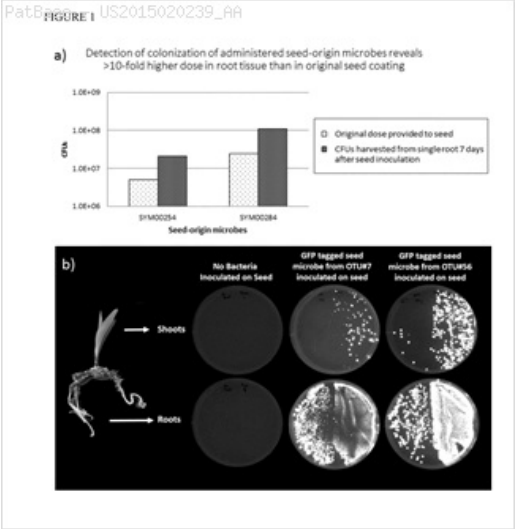
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International (ipc 8-9): A01C A01C1/00 A01C1/06 A01G1/00 A01G22/40 A01G7/00 A01G7/06 A01H A01H1/04 A01H15/00 A01H17/00 A01H3/00 A01H5/00 A01H5/10 A01H6/46 A01N A01N25/00 A01N25/26 A01N37/46 A01N63/00 A01N63/02 A01N63/04 A01N63/20 A01N65/00 A01N65/42 A01P21/00 A1N63/02 A1N63/04 C05F11/08 C12N C12N1/04 C12N1/14 C12N1/20 C12N15/00 C12N15/82 C12N5/04 C12Q1/00 C12Q1/68 C40B30/06 G01N33/00 G01N33/50 G06F11/20 G06F15/16 G06F16/90 H04L12/751 H04L12/803 H04L29/14 (Advanced/Invention); A01C1/00 C12N1/14 C12N1/20 (Advanced/Non-invention); A01C A01H A01N G01N (Subclass/Invention)

International (ipc 1-7): A01C1/06 C12N1/20 C12N15/00

CPC: A01N25/00 G01N33/0098 A01H5/00 C12N1/20 A01N63/10 A01H17/00 A01N63/30 A01C1/00 A01N63/00 A01C1/06 G01N33/5097 C05F11/08 A01N37/46 Y02W30/47 A01N63/02

US: 1/1 426/615 426/635 435/252.1 435/254.1 504/100 504/101 504/117 71/11 71/6 71/7 800/298 800/300 800/300.1 800/301 800/312 800/314 800/317.1 800/317.4 800/320 800/320.1 800/320.2 800/320.3



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

12) Family number: 60590979 (US2017013790A)

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Title: HEAT DELIVERY SYSTEM AND METHOD

Abstract: A heat delivery system for agricultural applications, the system including: piping including alternate heat insulated segments and heat transferring segments, the piping being configured with a fluid flow path extending through the alternating heat insulated segments and heat transferring segments; and a fluid propelling arrangement configured for motivating flow of heat accommodating fluid within the fluid flow path.

Classifications:

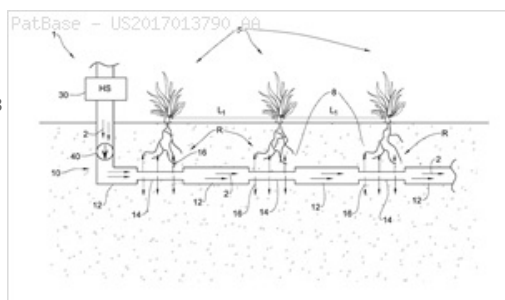
International (IPC 8-9): A01B79/00 A01G13/02 A01G25/02

A01G29/00 A01G9/24 A01K1/015 A01K63/06

F24H1/00 (Advanced/Invention)

CPC: A01G9/245 A01K1/0158 A01K63/065 F24D2200/11 Y02A40/268 Y02B10/40 A01B79/00 A01G25/023 A01G29/00

US: 1/1 119/448



Family:

Publication number	Publication date	Application number	Application date
AU2015246007 AA	20161020	AU20150246007	20150402
AU2015246007 AA	20151015	AU20150246007	20150402
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EP3128830 A1	20170215	EP20150776976	20150402
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MX2016013215 A1	20170503	MX20160013215	20150402
US2017013790 AA	20170119	US20150301236	20150402
WO15155763 A1	20151015	WO2015150359	20150402

Priority:

US20140977304P 20140409

US20150301236 20150402

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Probable Assignee: ROOTS SUSTAINABLE AGRICULTURAL TECHNOLOGIES LTD

Assignee(s): (std): ROOTS SUSTAINABLE AGRICULTURAL TECH LTD ; ROOTS SUSTAINABLE AGRICULTURAL TECHNOLOGIES LTD

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Agent(s): ADAMS PLUCK; LAVOIX; LITVAK DIMA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW