A01C PLANTING; SOWING; FERTILISING (combined with general working of soil A01B 49/04; parts, details or accessories of agricultural machines or implements, in general A01B 51/00 - A01B 75/00; {apparatus for spreading sand or salt E01C; sowing and fertilising with aircraft B64D 1/16 - B64D 1/20})

**WARNING**

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Apparatus, or methods of use thereof, for testing or treating seed, roots, or the like, prior to sowing or planting (chemicals therefor A01N 25/00 - A01N 65/00 {irradiation in general B01J 19/08})

1/005 . . . [Potato seed cutters]

1/02 . . . Germinating apparatus: Determining germination capacity of seeds or the like (germinating in preparation of malt C12C 1/027)

1/025 . . . {Testing seeds for determining their viability or germination capacity}

1/04 . . . Arranging seeds on carriers, e.g. on tapes, on cords {Carrier compositions}

1/042 . . . {Tapes, bands or cords}

1/044 . . . {Sheets, multiple sheets or mats}

1/046 . . . {Carrier compositions}

2001/048 . . . {Machines}

1/06 . . . Coating or dressing seed {encapsulated embryos or artificial seeds A01H 4/006; seed coating compositions C09D}

1/08 . . . Immunising seed

3/00 Treating manure; Manuring {ploughs with additional arrangements for putting manure under the soil A01B 17/002}; dung forks A01D 9/00; {treatment of waste water, sewage or sludge C02F}; organic fertilisers from waste or refuse C05F)

3/02 . . . Storage places for manure, e.g. cisterns for liquid manure; Installations for fermenting manure (sewage structures E03F 5/00; silos, bunkers E04H 7/22)

3/021 . . . {for composted manure}

3/023 . . . {Digesters}

3/025 . . . {with heat recuperation means}

3/026 . . . {with mixing or agitating devices}

3/028 . . . {Covers, roofs or other structures for covering manure storage places (production of methane C02F 11/04; coverings for swimming or splash baths or pools E04H 4/10)}

3/04 . . . Manure loaders {loaders in general B65G}

3/06 . . . Manure distributors, e.g. dung distributors

3/063 . . . {Side-spreaders}

3/066 . . . {Spreading by using worm or screw conveyors}

3/08 . . . for manure already laying on the soil

5/00 Making or covering furrows or holes for sowing, planting or manuring

5/02 . . . Hand tools for making holes for sowing, planting or manuring {transplanting devices for trees A01G 23/02}

5/04 . . . Machines for making or covering holes for sowing or planting

5/045 . . . {with piercing buckets (devices for laying-out or removing protective coverings for plants A01G 13/02)}

5/06 . . . Machines for making or covering drills or furrows for sowing or planting {seeders depositing seeds in rows A01C 7/08}; ploughs for making ridges A01B 13/02; {lifting devices for agricultural machines A01B 63/00})

5/062 . . . {Devices for making drills or furrows}

5/064 . . . {with rotating tools}

5/066 . . . {Devices for covering drills or furrows}

5/068 . . . . . {Furrow packing devices, e.g. press wheels}

5/08 . . . Machines for both manuring and sowing or both manuring and planting

7/00 Sowing {with centrifugal wheels A01C 17/00}; arrangements for driving working parts A01C 19/00)

7/002 . . . {Dibble seeders}

7/004 . . . {using liquid seeding techniques}

7/006 . . . {Minimum till seeding}

7/008 . . . {Sod or grassland seeding (A01C 7/08 takes precedence)}

7/02 . . . Hand sowing implements {fertiliser distributors for hand use A01C 15/02; tools for cultivation A01G 20/30, A01G 20/40})

7/04 . . . Single-grain seeders with or without suction devices {regulation A01C 7/10; for quantities of seed A01C 7/18})

7/042 . . . {using pneumatic means}

7/044 . . . {Pneumatic seed wheels}

7/046 . . . . . {with perforated seeding discs}

7/048 . . . . . {Seed tape planters}
7/06  .  Seeders combined with fertilising apparatus
{ (conducting and depositing seed A01C 7/20; apparatus for two kinds of fertiliser A01C 15/00); combinations with soil working tools A01B 49/04)

7/08  .  Broadcast seeders; Seeders depositing seeds in rows
{ (machines for making furrows A01C 5/06; combination of seed machines with other soil-working tools A01B 49/06; foldable apparatus A01B 73/00)

7/081 . .  [Seeders depositing seeds in rows using pneumatic means]

7/082 . .  [Ducts, distribution pipes or details thereof for pneumatic seeders (non-pneumatic seed pipes A01C 7/06)]

7/084 . .  [Pneumatic distribution heads for seeders]

7/085 . .  [Broadcast seeders]

7/087 . .  [Trampling]

7/088 . .  [Sectional seeding]

7/10 . .  Devices for adjusting the seed-box
{ (Regulation of machines for depositing quantities at intervals)

7/102 . .  [Regulating or controlling the seed rate]

7/105 . .  [Seed sensors]

7/107 . .  [Calibration of the seed rate]

7/12 . .  Seeders with feeding wheels

7/121 . .  [for sowing seeds of different sizes]

7/122 . .  . [using more than one feeding wheel; using double-run feeding wheels]

7/123 . .  [Housings for feed rollers or wheels]

7/124 . .  . [with top delivery of the seeds]

7/125 . .  [with bottom delivery of the seeds]

7/126 . .  [Stubbed rollers or wheels]

7/127 . .  [Cell rollers, wheels, discs or belts]

7/128 . .  [Cell discs]

7/14 . .  Seeders with spoon or bucket wheels

7/16 . .  Seeders with other distributing devices, e.g. brushes, discs, screws, slides
{ (with distributing slots A01C 15/06; with slides A01C 15/124; with chains A01C 15/18)

7/163 . .  [Gravity distributors]

7/166 . .  [Centrifugal distributors (pneumatic distributors A01C 15/04)]

7/18 . .  Machines for depositing quantities of seed at intervals
{ (dibble seeders A01C 7/002; single-grain seeders A01C 7/04; regulation A01C 7/102; ridge marking A01B 69/02)

7/185 . .  [Foot valves]

7/20 . .  Parts of seeders for conducting and depositing seed
{ (combined with fertilising apparatus A01C 7/06)

7/201 . .  [Mounting of the seeder tools]

7/203 . .  . [comprising depth regulation means]

7/205 . .  [comprising pressure regulation means]

7/206 . .  [Seed pipes]

7/208 . .  [Chassis; Coupling means to a tractor or the like; Lifting means; Side markers (hoppers for seeders or spreaders A01C 15/06)]

9/00  Potato planters
{ (planting by hand A01C 7/02); combinations with soil working tools A01B 49/04)

9/02  . with conveyor belts

9/04  . with bucket wheels

9/06  . with piercing or grasping devices

9/08  . with other distributing devices, e.g. flaps, screws, horizontal turning plates
{ (with bucket wheels A01C 9/04)

11/00  Transplanting machines
{ (hand sowing A01C 7/02); carriers for supporting persons A01B 75/00; transplanting devices for trees A01G 23/02)

11/003 . .  . { for aquatic plants; for planting underwater, e.g. rice)

11/006 . .  . { Other parts or details or planting machines}

11/02 . .  . for seedlings

11/025 . .  . { Transplanting machines using seedling trays; Devices for removing the seedlings from the trays)

11/04 . .  for deeper setting or shifting of plants

13/00  Machines or apparatus for consolidating soil around plants

14/00  Methods or apparatus for planting not provided for in other groups of this subclass

15/00  Fertiliser distributors (A01C 7/006 takes precedence;
{ (combined with seeders A01C 7/006); arrangements for driving working parts A01C 19/00; (harrows with special additional arrangements A01B 19/00); sand, gravel or salt spreaders for roads E01C 19/20)

15/001 . .  . { with slowly turning wheels}

15/002 . .  . { with oscillating distributing spouts}

15/003 . .  . { Bulk fertiliser or grain handling in the field or on the farm}

15/005 . .  . { Undercarriages, tanks, hoppers, stirrers specially adapted for seeders or fertiliser distributors}

15/006 . .  . { Hoppers}

15/007 . .  . { with agitators in the hopper]

15/008 . .  . { Aprons; Deflecting plates; Band-spreading attachments]

15/02 . .  . for hand use
{ (hand sowing A01C 7/02)]

15/04 . .  using blowers

15/06 . .  . with distributing slots
{ (i.e. for dosing, e.g. adjustable openings]

15/08 . .  . with pushers or stirrers in the slots

15/10 . .  . with reciprocating pushers or stirrers in front of the slots (with endless chains A01C 15/18)

15/12 . .  . with movable parts of the receptacle

15/122 . .  . { with moving floor parts (with endless chains A01C 15/18)

15/124 . .  . { with adjustable shutters or slits]

15/126 . .  . { with pushers or stirrers in the slits]

15/128 . .  . { with pushers or stirrers in front of the slits
{ (with endless chains A01C 15/18)

15/14 . .  . with means for lifting out the fertiliser
{ (feeding wheels, cell wheels, discs A01C 7/12; bucket wheels A01C 7/14)]

15/16 . .  . with means for putting out the fertiliser, e.g. by a roller

15/18 . .  . with endless chains
{ (i.e. side transporting elements, e.g. auger or screw conveyors, swash plates]
Fertilisers or seeders with centrifugal wheels
((hand-used implements A01C 7/02, A01C 15/02; fertiliser distributors A01C 15/00; mechanical throwing machines for articles or solid bulk materials, in general B65G 31/00; sand, gravel or salt spreaders E01C 19/20);
fertiliser distributors A01C 15/00; mechanical throwing machines for articles or solid bulk materials, in general B65G 31/00; sand, gravel or salt spreaders E01C 19/20))

17/001 [Centrifugal throwing devices with a vertical axis]
17/003 [Centrifugal throwing devices with a horizontal axis]
17/005 [Driving mechanisms for the throwing devices]
17/006 [Regulating or dosing devices]
17/008 [Devices controlling the quantity or the distribution pattern]

Arrangements for driving working parts of fertilisers or seeders {([A01C 17/005 takes precedence])}

19/02 by a motor
19/04 by a ground-engaging wheel
19/045 [the drive coupling being controlled by lifting or lowering of the seeding tools]

Methods of fertilizing, {sowing or planting}
(fertilisers C05; soil-conditioning or soil-stabilising materials C09K 17/00)

21/002 [Apparatus for sowing fertiliser; Fertiliser drill]
21/005 [Following a specific plan, e.g. pattern (precision agriculture in general A01B 79/005; steering or guiding agricultural machines or implements A01B 69/00)]
21/007 [Determining fertilization requirements]

Distributing devices specially adapted for liquid manure or other fertilising liquid, including ammonia, e.g. transport tanks, sprinkling wagons
(watering fields in general A01G 25/00; spraying or applying liquids or other fluent materials in general B05)

23/001 [Sludge spreaders, e.g. liquid manure spreaders]
23/002 [provided with auxiliary arrangements, e.g. pumps, agitators, cutters]
23/003 [Distributing devices, e.g. for rotating, throwing]
23/005 [Nozzles, valves, splash plates]
23/006 [Distribution of liquid fertilisers by gravity flow (distribution of liquid ammonia in or on the soil A01C 23/024; under pressure A01C 23/04)]
23/007 [Metering or regulating systems]
23/008 [Tanks, chassis or related parts]
23/02 [Special arrangements for delivering the liquid directly into the soil]
23/021 [Sludge injectors, i.e. liquid manure injectors]
23/022 [Continuous injection tools (devices for making drill or furrows A01C 5/066)]
23/023 [for liquid or gas fertilisers]
23/024 [for ammonia]
23/025 [Continuous injection tools]
23/026 [Localised non-continuous injection tools, e.g. pal injectors, spike wheels]
23/027 [Other methods for delivering fertiliser into the soil (sowing granular fertiliser A01C 21/002; subirrigation A01G 25/06)]
23/028 [Contactless injection into the soil]
23/04 [Distributing under pressure; Distributing mud; Adaptation of watering systems for fertilising-liquids]