

ECLA EUROPEAN CLASSIFICATION

A01B SOIL WORKING IN AGRICULTURE OR FORESTRY; PARTS, DETAILS, OR ACCESSORIES OF AGRICULTURAL MACHINES OR IMPLEMENTS, IN GENERAL (making or covering furrows or holes for sowing, planting, or manuring [A01C5/00](#); soil working for engineering purposes [E01](#), [E02](#), [E21](#); [N: measuring areas for agricultural purposes [G01B](#)])

[N: **WARNING**

- The following IPC groups are not used in the internal ECLA classification system. Subject matter covered by these groups is classified in the following ECLA groups:

[A01B69/04](#) covered by [A01B69/00F1](#)
[A01B69/06](#) covered by [A01B69/00E2](#)
[A01B69/08](#) covered by [A01B69/00E3](#)

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A01B1/00 Hand tools (edge trimmers for lawns [A01G3/06](#); [N: machines for working soil [A01B35/00](#); making hand tools [B21D](#)])

- A01B1/02 . Spades; Shovels [N: hand-operated dredgers [E02F3/02](#)]
- A01B1/02B . . [N: Collapsible; extensible; combinations with other tools]
- A01B1/02F . . [N: Foot protectors attached to the blade] [N0004]
- A01B1/02H . . [N: with auxiliary handles for facilitating lifting] [N0004]
- A01B1/02S . . [N: with ground abutment shoes or earth anchors for facilitating lifting][N0403]
- A01B1/04 . . with teeth

- A01B1/06 . Hoes; Hand cultivators [N: rakes [A01D7/00](#); forks [A01D9/00](#); picks B25D]
- A01B1/06P . . [N: powered] [N0004]
- A01B1/08 . . with a single blade
- A01B1/10 . . with two or more blades
- A01B1/12 . . with blades provided with teeth
- A01B1/14 . . with teeth only

- A01B1/16 . Tools for uprooting weeds [C9409]
- A01B1/16B . . [N: adapted for extracting a substantially cylindrical plug out of the earth] [N9504]
- A01B1/18 . . Tong-like tools [C9409]

- A01B1/20 . Combinations of different kinds of hand tools

- A01B1/22 . Attaching the blades or the like to handles (handles for tools, or their attachment, in general [B25G](#)); Interchangeable or adjustable blades
- A01B1/22A . . [N: Adjustable blades] [N0303]
- A01B1/22A2 . . . [N: around a substantially horizontal axis][N0410]
- A01B1/22B . . [N: Interchangeable blades] [N0311]

- A01B1/24 . for treating meadows or lawns
- A01B1/24A . . [N: for aerating][N0408]
- A01B1/24B . . [N: for cutting sods or turves][N0408]

Guide heading: **Ploughs**

A01B3/00 **Ploughs with fixed plough-shares**

- A01B3/02 . Man-driven ploughs
- A01B3/04 . Animal-drawn ploughs
- A01B3/06 . . without alternating possibility, i.e. incapable of making an adjacent furrow on return journey, [N: i.e. conventional ploughing]
- A01B3/08 . . . Swing ploughs
- A01B3/10 . . . Trussed-beam ploughs; Single-wheel ploughs
- A01B3/12 . . . Two-wheel beam ploughs
- A01B3/14 . . . Frame ploughs
- A01B3/16 . . Alternating ploughs, i.e. capable of making an adjacent furrow on return journey
- A01B3/18 . . . Turn-wrest ploughs
- A01B3/20 . . . Balance ploughs
- A01B3/22 . . . with parallel plough units used alternately
- A01B3/24 . Tractor-drawn ploughs ([A01B3/04](#) takes precedence)
- A01B3/26 . . without alternating possibility
- A01B3/28 . . Alternating ploughs
- A01B3/30 . . . Turn-wrest ploughs
- A01B3/32 . . . Balance ploughs
- A01B3/34 . . . with parallel plough units used alternately
- A01B3/36 . Ploughs mounted on tractors
- A01B3/38 . . without alternating possibility
- A01B3/40 . . Alternating ploughs
- A01B3/42 . . . Turn-wrest ploughs
- A01B3/421 with a headstock frame made in one piece
- A01B3/421B [N: the headstock being provided with two or more hydraulic cylinders] [N9409]
- A01B3/426 with a headstock frame made of two or more parts
- A01B3/44 . . . with parallel plough units used alternately
- A01B3/46 . Ploughs supported partly by tractor and partly by their own wheels
- A01B3/46A . . [N: Alternating ploughs with frame rotating about a vertical axis]
- A01B3/46B . . [N: Alternating ploughs with frame rotating about a horizontal axis, e.g. turn-wrest ploughs]
- A01B3/46B2 . . . [N: the frame comprising an articulated beam] [N9611]

- A01B3/46D . . [N: the plough wheels being actively driven] [N9611]
- A01B3/50 . Self-propelled ploughs
- A01B3/52 . . with three or more wheels, or endless tracks
- A01B3/54 . . . without alternating possibility
- A01B3/56 . . . Alternating ploughs; [N: Balance ploughs]
- A01B3/58 . . with two wheels
- A01B3/60 . . . Alternating ploughs
- A01B3/62 Balance ploughs
- A01B3/64 . Cable ploughs; Indicating or signalling devices for cable plough systems [N: (vehicles towed by cable [B60D](#))]
- A01B3/66 . . with motor-driven winding apparatus mounted on the plough
- A01B3/68 . . Cable systems with one or two engines; [N: e.g. electrically-driven or with diesel generating set]
- A01B3/70 . . . Systems with one engine for working uphill
- A01B3/72 . . Means for anchoring the cables
- A01B3/74 . Use of electric power for propelling ploughs [N: for rotary cultivators or the like (electric current collectors [B60L5/00](#))]
- A01B5/00** **Ploughs with rolling non-driven tools, e.g. discs (with rotary driven tools [A01B9/00](#))**
- A01B5/02 . drawn by animals
- A01B5/04 . drawn by tractors
- A01B5/06 . . without alternating possibility, [N: e.g. with rotary counters provided with scrapers]
- A01B5/08 . . Alternating ploughs
- A01B5/10 . mounted or partly-mounted on tractors
- A01B5/12 . . without alternating possibility
- A01B5/14 . . Alternating ploughs
- A01B5/16 . Self-propelled disc or like ploughs
- A01B7/00** **Disc-like soil-working implements usable either as ploughs or as harrows, or the like**
- A01B9/00** **Ploughs with rotary driven tools (tilling implements with rotary driven tools [A01B33/00](#))**
- A01B9/00A . [N: with tools on horizontal shaft transverse to direction of travel]
- A01B9/00B . [N: with tools on horizontal shaft parallel to direction of travel]
- A01B11/00** **Ploughs with oscillating, digging or piercing tools [N: driven or not]**
- A01B13/00** **Ploughs or like machines for special purposes (for drainage [E02B11/02](#)); [N: Ditch**

diggers, trench ploughs, forestry ploughs, ploughs for land or marsh reclamation (machines for aerating meadows [A01B45/02](#); making furrows [A01C5/00](#); dredging machines in general [E02F](#))]

- A01B13/02 . for making or working ridges, e.g. with symmetrically arranged mouldboards, [N: e.g. ridging plough]
- A01B13/02R . . [N: with passively driven rotating disc-like elements for forming the ridge][N0308]
- A01B13/04 . for working in vineyards, orchards, or the like
- A01B13/06 . . Arrangements for preventing damage to the vines, or the like, [N: e.g. hydraulic (machines specially adapted for working in vineyards [A01B39/16](#))]
- A01B13/08 . for working subsoil
- A01B13/10 . . Special implements for lifting subsoil layers
- A01B13/12 . . . Means for distributing the layers on the surface
- A01B13/14 . for working soil in two or more layers
- A01B13/16 . Machines for combating erosion, e.g. basin-diggers, furrow-dammers
- A01B15/00 Elements, tools, or details of ploughs**
- A01B15/02 . Plough blades; Fixing the blades
- A01B15/02S . . [N: specially adapted for working subsoil] [N9906]
- A01B15/04 . . Shares [N: (making ploughshares by rolling [B21H](#))]
- A01B15/06 . . . Interchangeable or adjustable shares
- A01B15/08 . . Mouldboards
- A01B15/10 . . . Interchangeable or adjustable mouldboards
- A01B15/12 . Beams; Handles (handles for tools or their attachment in general [B25G](#))
- A01B15/12A . . [N: Articulated beams] [N9906]
- A01B15/14 . Frames (means or arrangements to facilitate transportation [A01B73/00](#))
- A01B15/14U . . [N: the plough blades being connected to the plough beam for unisono adjustment of the furrow width] [N9711]
- A01B15/16 . Discs (bearings therefor [A01B71/04](#)); Scrapers for cleaning discs; Sharpening attachments (sharpening in general [B24](#))
- A01B15/18 . Coulters
- A01B15/20 . Special adjusting means for tools of ploughs drawn by, or mounted on tractors working on hillsides or slopes
- A01B17/00 Ploughs with special additional arrangements, e.g. means for putting manure under the soil, clod-crushers ([A01B49/00](#) takes precedence); [N: Means for breaking the subsoil]**

- A01B17/00B . [N: Means for putting manure, debris, straw or the like under the soil (to plough-in weeds [A01B39/18](#))] [C9409]
- A01B17/00D . [N: Clod-crushers]
- A01B17/00D1 . . [N: with driven tools] [N9409]
- A01B17/00D1A . . . [N: rotating about a vertical or steeply inclined axis] [N9409]

Guide heading: **Harrows**

A01B19/00 **Harrows with non-rotating tools** [N: (harrows for working in vineyards [A01B39/16](#))]

- A01B19/02 . with tools rigidly or elastically attached to a tool-frame
- A01B19/04 . . with two or more tool-frames
- A01B19/06 . . with tools or tool-frames moved to-and-fro mechanically
- A01B19/08 . with link network supporting tooth-like tools
- A01B19/10 . Lifting or cleaning apparatus

A01B21/00 **Harrows with rotary non-driven tools** (tilling implements with rotary driven tools [A01B33/00](#))

- A01B21/02 . with tooth-like tools
- A01B21/04 . . on horizontally-arranged axles
- A01B21/06 . . on vertically-arranged axles
- A01B21/08 . with disc-like tools
- A01B21/08B . . [N: of the type comprising four individual disk groups each pivotally connected at fixed locations to a substantially rigid frame] [N9911]
- A01B21/08M . . [N: of the type in which the disc-like tools are individually mounted] [N0201]

A01B23/00 **Elements, tools, or details of harrows**

- A01B23/02 . Teeth; Fixing the teeth
- A01B23/04 . Frames (means or arrangements to facilitate transportation [A01B73/00](#)); Drawing-arrangements
- A01B23/04N . . [N: specially adapted for harrows with non-rotating tools][N0308]
- A01B23/04R . . [N: Specially adapted for harrows with rotating tools] [N0308]
- A01B23/06 . Discs ([A01B15/16](#) takes precedence; bearings therefor [A01B71/04](#)); Scrapers for cleaning discs; Sharpening attachments; [N: Lubrication of bearings] (sharpening in general B24)

A01B25/00 **Harrows with special additional arrangements, e.g. means for distributing fertilisers; Harrows for special purposes** ([A01B39/00](#) takes precedence; [N: fertiliser distributors [A01C15/00](#)])

Guide heading: Other machines for working soil**A01B27/00 Clod-crushers**

A01B27/00R . [N: comprising roller-type tools moving on the ground][N0403]

A01B29/00 Rollers [N: (rollers for roads [E01C](#))]

A01B29/02 . with smooth surface

A01B29/04 . with non-smooth surface formed of rotatably-mounted rings or discs or with projections or ribs on the roller body; Land packers

A01B29/04B . . [N: of "Cambridge"-type, i.e. the soil-pressing rings being stacked on a shaft]

A01B29/04B2 . . . [N: Tire-packers]

A01B29/04D . . [N: the soil-pressing body being a drum]

A01B29/04F . . [N: the soil-pressing body being a helical coil]

A01B29/04H . . [N: Bar cage rollers] [N9611]

A01B29/06 . with special additional arrangements

A01B31/00 Drags [N: graders for field cultivators (graders in general [E02F](#))]**A01B33/00 Tilling implements with rotary driven tools, [N: e.g. in combination with fertiliser distributors or seeders, with grubbing chains, with sloping axles, with driven discs]**

A01B33/02 . with tools on horizontal shaft transverse to direction of travel

A01B33/02B . . [N: with rigid tools]

A01B33/02B2 . . . [N: with helicoidal tools]

A01B33/02B4 . . . [N: with disk-like tools]

A01B33/02C . . [N: with spring tools, i.e. resiliently- or flexibly-attached rigid tools]

A01B33/02D . . [N: Operator supported tools, e.g. using a harness for supporting the tool or power unit][C0401]

A01B33/02W . . [N: of the walk-behind type (walk-type tractors [B62D51/04](#))][N0401]

A01B33/04 . with tools on horizontal shaft parallel to direction of travel

A01B33/06 . with tools on vertical or steeply-inclined shaft

A01B33/06B . . [N: comprising a plurality of rotors carried by an elongate, substantially closed transmission casing, transversely connectable to a tractor] [N9906]

A01B33/08 . Tools; Details, e.g. adaptations of transmissions or gearings

A01B33/08B . . [N: Transmissions; Gearings; Power distribution]

A01B33/08B2 . . . [N: specially adapted for tools on a vertical shaft][N0408]

A01B33/08D . . [N: Lifting devices; Depth regulation devices; Mountings]

- A01B33/10 . . Structural or functional features of the tools; [N: Theoretical aspects of the cutting action]
- A01B33/10H . . . [N: the rotating shaft being oriented horizontally] [N0012]
- A01B33/10V . . . [N: the rotating shaft being oriented vertically or steeply inclined] [N0012]
- A01B33/12 . . Arrangement of the tools; Screening of the tools
- A01B33/12V . . . [N: screening of tools rotating about a vertical shaft] [N9906]
- A01B33/14 . . Attaching the tools to the rotating shaft, e.g. resiliently [N: or flexibly] -attached tools
- A01B33/14H . . . [N: the rotating shaft being oriented horizontally] [N9701]
- A01B33/14H2 [N: with spring tools or resiliently-attached rigid tools] [N9701]
- A01B33/14V [N: the rotating shaft being oriented vertically or steeply inclined] [N9701]
- A01B33/14V2 [N: with spring tools or resiliently-attached rigid tools] [N9701]
- A01B33/16 . with special additional arrangements ([A01B49/00](#) takes precedence; for sowing or fertilising [A01B49/06](#))

A01B35/00 **Other machines for working soil** [N: not specially adapted for working soil on which crops are growing] ([A01B37/00](#), [A01B39/00](#), [A01B77/00](#) take precedence; [N: hand tools [A01B1/00](#)])

- A01B35/02 . with non-rotating tools
- A01B35/04 . . drawn by animal or tractor [N: or man-power]
- A01B35/06 . . . with spring tools [N: or with resiliently- or flexibly-attached rigid tools]
- A01B35/08 . . . with rigid tools
- A01B35/10 . . mounted on tractors
- A01B35/12 . . . with spring tools [N: or with resiliently-or flexibly-attached rigid tools]
- A01B35/14 . . . with rigid tools
- A01B35/16 . with rotating or circulating non-propelled tools
- A01B35/18 . with both rotating and non-rotating tools
- A01B35/20 . Tools; Details
- A01B35/22 . . non-rotating tools; [N: Resilient or flexible mounting of rigid tools]
- A01B35/22E . . . [N: the tools being adapted to allow the chisel point to be easily fitted or removed from the shank] [N0303]
- A01B35/24 . . . Spring tools
- A01B35/26 . . . Rigid tools
- A01B35/28 . . Rotating tools; Mounting rotating tools
- A01B35/30 . . Undercarriages ([A01B23/04](#) takes precedence)
- A01B35/32 . with special additional arrangements

A01B37/00 **Devices for loosening soil compacted by wheels or the like**

A01B39/00 **Other machines specially adapted for working soil on which crops are growing**

- A01B39/02 . with non-rotating tools
- A01B39/04 . . drawn by animal or tractor
- A01B39/06 . . Self-propelled machines

- A01B39/08 . with rotating tools [N: such as weeding machines]
- A01B39/08D . . [N: the rotating tools being actively driven] [N0109]

- A01B39/10 . with oscillating tools [N: driven or not]

- A01B39/12 . for special purposes, [N: e.g. for special culture]
- A01B39/14 . . for working ridges, [N: e.g. for rows of plants and/or furrows]
- A01B39/16 . . for working in vineyards, orchards, or the like; [N: Arrangements for preventing damage to vines (ploughs adapted for working in vineyards [A01B13/06](#))]
- A01B39/16D . . . [N: comprising rotating tools][N0404]
- A01B39/16D2 [N: actively driven][N0404]
- A01B39/18 . . for weeding [C9409]
- A01B39/19 . . . Rod weeders, i.e. weeder with rotary rods propelled beneath the soil surface

- A01B39/20 . Tools; Details
- A01B39/22 . . Tools; Mounting tools
- A01B39/24 . . Undercarriages ([A01B23/04](#) takes precedence)
- A01B39/26 . . Arrangements for protecting plants, [N: e.g. fenders]

- A01B39/28 . with special additional arrangements ([A01B49/00](#) takes precedence)

- A01B41/00 Thinning machines**

- A01B41/02 . with oscillating tools
- A01B41/04 . with rotating tools
- A01B41/06 . with electric, e.g. photo-electric control of thinning operations

- A01B43/00 Gatherers for removing stones, undesirable roots of the like from the soil, e.g. tractor-drawn rakes [N: for harvesting root crops A01D]**

- A01B43/00A . [N: Windrower-type machines] [N9409]

- A01B45/00 Machines for treating meadows or lawns, [N: e.g. for sports grounds]**

- A01B45/02 . for aerating
- A01B45/02P . . [N: Perforators comprising spiking tools actively driven in a reciprocating movement through a crankshaft or eccentric mechanism] [N9710]
- A01B45/02S . . [N: Scarifiers comprising a knife reel actively driven around a substantially horizontal shaft] [N9710]
- A01B45/04 . for cutting sods or turves [N: machines for lifting and treating soil [A01B77/00](#)]

- A01B45/04S . . [N: the machine being adapted for stacking sods or sod rolls][N0312]
- A01B47/00** **Soil-working with electric potential applied between tools and soil**
- A01B49/00** **Combined machines (auxiliary devices attached to machines of a different kind, e.g. harrows attached to ploughs, see the relevant groups for the machines)**
- A01B49/02 . with two or more soil-working tools of different kind
- A01B49/02A . . [N: at least one tool being actively driven]
- A01B49/02A2 . . . [N: about a substantially vertical axis]
- A01B49/02R . . [N: with a rotating, soil working support element, e.g. a roller][N0311]
- A01B49/04 . Combinations of soil-working tools with non-soil-working tools, e.g. planting tools [N: seeding machines [A01C7/00](#); harvesters combined with soil-working implements [A01D43/12](#)]
- A01B49/06 . . for sowing or fertilising
- A01B49/06D . . . [N: the soil-working tools being actively driven] [N9709]
- Guide heading:** **Parts, details or accessories of agricultural machines or implements, in general** ([seat constructions A47C](#); [wheels B60B](#); [shelters for drivers B60J](#); [seats specially adapted for vehicles B60N2/00](#); [wheel scrapers B60S1/68](#))
- A01B51/00** **Undercarriages specially adapted for mounting-on various kinds of agricultural tools or apparatus** ([general vehicle aspects, see the relevant subclass of class B60 or B62](#))
- A01B51/02 . propelled by a motor
- A01B51/02A . . [N: of the Gantry-type]
- A01B51/02M . . [N: of the automotive vehicle type, e.g. including driver accomodation ([A01B51/02A takes precedence](#))] [N0308]
- A01B51/04 . drawn by animal or tractor
- A01B51/04A . . [N: drawn by animals][N0408]
- A01B59/00** **Devices specially adapted for connection between animals or tractors and agricultural machines or implements** ([A01B63/00 takes precedence](#); [vehicle connections in general B60D](#); [draught assemblies for animal drawn vehicles, in general B62C5/00](#))
- A01B59/00E . [N: Details, component parts] [N9704]
- A01B59/00E2 . . [N: Length-adjustable links] [N9704]
- A01B59/00E4 . . [N: Latched hooks] [N9704]
- A01B59/00E6 . . [N: Link connectors with spherical surfaces] [N9704]
- A01B59/02 . for animal-drawn machines
- A01B59/04 . for machines pulled or pushed by a tractor

- A01B59/041 . . preventing or limiting side-play of implements ([preventing overstrain A01B61/00](#))
- A01B59/041B . . . [N: by hydraulic or pneumatic means acting on the lower draft links] [N9906]
- A01B59/042 . . having pulling means arranged on the rear part of the tractor
- A01B59/043 . . . supported at three points, e.g. by quick-release couplings ([A01B59/06 takes precedence](#))
- A01B59/044 . . having pulling means arranged on the middle part of the tractor
- A01B59/046 . . having pulling or pushing means arranged on the side of the tractor
- A01B59/048 . . having pulling or pushing means arranged on the front part of the tractor

- A01B59/06 . for machines mounted on tractors
- A01B59/06B . . [N: specially adapted for enabling connection or disconnection controlled from the driver's seat (not used, see subgroups)] [N9701]
- A01B59/06B2 . . . [N: the connection comprising a rigid interface frame on the tractor] [N9701] [C9704]
- A01B59/06B4 . . . [N: the connection comprising longitudinally oriented tang-and-sheath elements] [N9701]
- A01B59/06F . . [N: for connection to the front of the tractor][N0310]
- A01B59/06P . . [N: for ploughs or like implements ([A01B59/06B and subgroups take precedence](#))] [N9704]
- A01B59/06T . . [N: of the type comprising at least two lower arms and one upper arm generally arranged in a triangle (e.g. [three-point hitches](#))] [N0310]
- A01B59/06T2 . . . [N: the lower arms being lifted or lowered by power actuator means internally incorporated in the tractor][N0310]
- A01B59/06T4 . . . [N: the lower arms being lifted or lowered by power actuator means provided externally on the tractor][N0310]
- A01B59/06W . . [N: with means for weighing the implement] [N9704]

- A01B61/00** **Devices for, or parts of, agricultural machines or implements for preventing overstrain (preventing overstrain in vehicle connections, in general B60D; preventing overstrain in couplings per se F16D)**

- A01B61/02 . of the coupling devices between tractor and machine
- A01B61/02D . . [N: the driving connections][N0310]

- A01B61/04 . of the connection between tools and carrier beam or frame
- A01B61/04B . . [N: with shearing devices]
- A01B61/04D . . [N: the connection enabling a yielding pivoting movement around a substantially horizontal and transverse axis] [N9504]
- A01B61/04D2 . . . [N: the device including an energy accumulator for restoring the tool to its working position] [N9504]
- A01B61/04D2B [N: the connection or the energy accumulator being active in two opposite directions, e.g. for reversible plows] [N9504]

- A01B63/00** **Lifting or adjusting devices or arrangements for agricultural machines or implements (lifting mechanisms for the cutter-bar of a mower [A01D34/24](#); adjusting devices for the cutter-bar of a mower [A01D34/28](#); constructional features of lifting devices per se [B66F](#))**

- A01B63/00B . [N: Devices for adjusting or regulating the position of tools or wheels ([preventing](#)

overstrain [A01B61/00](#); regulating working depth of implements mounted on tractors [A01B3/111](#); wheels adjustable relatively to the frame for drawn implements [A01B3/16](#); tools or tool holders adjustable relatively to the frame for drawn implements [A01B63/24](#)][C0312]

[N: **WARNING**

Documents of group [A01B63/00B](#) and subgroups are in the process of being reorganised to groups [A01B63/111](#), [A01B63/16](#), [A01B63/24](#) [C0312]

- A01B63/00B2 . . [N: Lateral adjustment of tools][N0312]
- A01B63/00B4 . . [N: Lateral adjustment of wheels][N0312]
- A01B63/00B6 . . [N: Vertical adjustment of tools ([A01B63/10](#) takes precedence)][N0312]

- A01B63/02 . for implements mounted on tractors
- A01B63/02L . . [N: Lateral adjustment of their tools] [N0411]
- A01B63/02M . . [N: Lateral adjustment of their wheels] [N0411]
- A01B63/04 . . Hand devices; Hand devices with mechanical accumulators, e.g. springs
- A01B63/04W . . . [N: for vertically adjusting wheels or similar rotary supporting elements] [N0411]
- A01B63/06 . . operated mechanically by tractor motor
- A01B63/08 . . operated by the movement of the tractor
- A01B63/10 . . operated by hydraulic or pneumatic means
- A01B63/10A . . . [N: the hydraulic or pneumatic means structurally belonging to the tractor][N0403]
- A01B63/10A2 [N: and being located inside the tractor body][N0403]
- A01B63/102 . . . characterised by the location of the mounting on the tractor, e.g. on the rear part
- A01B63/104 on the middle part, i.e. between front and rear wheels
- A01B63/106 on the side
- A01B63/108 on the front part
- A01B63/11 . . . for controlling weight transfer between implements and tractor wheels
- A01B63/111 . . . regulating working depth of implements
- A01B63/111D [N: using a non-tactile ground distance measurement, e.g. using reflection of waves][N0410]
- A01B63/111G [N: using a mechanical ground contact sensor][N0308]
- A01B63/111H [N: using a hitch position sensor][N0308]
- A01B63/112 to control draught load, i.e. tractive force
- A01B63/114 to achieve a constant working depth
- A01B63/114B [N: for controlling weight transfer between implements and tractor wheels]
- A01B63/118 . . . Mounting implements on power-lift linkages ([A01B59/043](#) takes precedence; preventing or limiting side-play of implements [A01B59/041](#); preventing overstrain [A01B61/00](#))

- A01B63/12 . . operated by an electric motor

- A01B63/14 . for implements drawn by animals or tractors
- A01B63/14B . . [N: for controlling weight transfer between implements and tractor wheels]
- A01B63/16 . . with wheels adjustable relatively to the frame
- A01B63/16L . . . [N: laterally adjustable] [N0411]

- A01B63/16M . . . [N: manually adjustable] [N0411]
- A01B63/18 . . . with clutch between Z-type axle and wheel
- A01B63/20 . . . with gear and rack
- A01B63/22 . . . operated by hydraulic or pneumatic means
- A01B63/24 . . . Tools or tool-holders adjustable relatively to the frame
- A01B63/24L . . . [N: laterally adjustable] [N0411]
- A01B63/26 . . . by man-power
- A01B63/28 . . . operated by the machine or implement
- A01B63/30 . . . operated by motor power through a mechanical transmission
- A01B63/32 . . . operated by hydraulic or pneumatic means [N: without automatic control]

- A01B67/00** **Devices for controlling the tractor motor by resistance of tools (preventing overstrain [A01B61/00](#))**

- A01B69/00** **Steering of agricultural machines or implements; Guiding agricultural machines or implements on a desired track (vehicle course control in general [G05D1/02](#))**

- [N: **Note**
In this group it is obligatory to classify subject-matter in the first appropriate place. It is however allowed to apply multiple classification where considered useful for search]

- A01B69/00B . . [N: Steering by means of optical assistance, e.g. television cameras (steering devices for road marking vehicles [E01C23/16B](#))]
- A01B69/00C . . [N: Steering or guiding on a substantially circular or spiral path] [N0201]
- A01B69/00E . . [N: Steering or guiding of machines or implements pushed or pulled by or mounted on agricultural vehicles such as tractors, e.g. by lateral shifting of the towing connection] [N0201]
- A01B69/00E1 . . . [N: automatic] [N0201]
- A01B69/00E2 . . . [N: by an additional operator] [N0201]
- A01B69/00E3 . . . [N: derived from the steering of the tractor] [N0201]
- A01B69/00F . . [N: Steering or guiding of agricultural vehicles, e.g. steering of the tractor to keep the plough in the furrow] [N0201]
- A01B69/00F1 . . . [N: automatic] [N0201]
- A01B69/02 . . Ridge-marking or like devices; Checkrow wires; Accessories therefor
- A01B69/02C . . . [N: Ridge marking by deposition of a chemical substance, e.g. foam, on the surface of the soil][N0310]
- A01B69/02R . . . [N: adapted to cut and form a ridge or forrow in the soil surface, e.g. with a disc][N0310]
- A01B69/02W . . . [N: Checkrow wires][N0310]
- A01B69/02W2 [N: the wire being located above the ground][N0310]

- A01B71/00** **Construction or arrangement of setting or adjusting mechanisms, of implement or tool drive or of power take-off; Means for protecting parts against dust, or the like; Adapting machine elements to or for agricultural purposes [N: (adjusting**

mechanisms in general [G05G](#)]

- A01B71/02 . Setting or adjusting mechanisms
- A01B71/04 . Bearings of rotating parts, e.g. for soil-working discs ([N: discs [A01B15/16](#), [A01B23/06](#)]; bearings in general [F16C](#)) [[C9409](#)]
- A01B71/06 . Special adaptations of coupling means between power take-off and transmission shaft to the implement or machine ([couplings for transmitting rotation F16D](#))
- A01B71/06B . . [N: for enabling transmission coupling and connection between tractor and implements to be controlled from the driver's seat] [[N9409](#)]
- A01B71/06D . . [N: for enabling pitch, roll or yaw movements of trailed implements or machines] [[N9710](#)]
- A01B71/08 . Means for protecting against dust, or the like, or for cleaning agricultural implements ([A01B15/16](#), [A01B19/10](#) and [A01B23/06](#) take precedence; screening of rotary driven tilling tools [A01B33/12](#); screening of rotary parts in general [F16P1/00](#))
- A01B73/00** **Means or arrangements to facilitate transportation of agricultural machines or implements, e.g. folding frames to reduce overall width** (arrangements of lifting devices for soil working implements [A01B63/00](#); [N: carriers for harvesters or mowers [A01D75/00C](#); arrangements or carriers for haymakers [A01D78/10B](#), [A01D80/00C](#)]; vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects [B60P](#); motor vehicles, trailers [B62D](#))[[C0402](#)]
- A01B73/00B . [N: for endwise transportation, i.e. the direction of transport being substantially perpendicular to the direction of agricultural operation ([A01B73/02](#) takes precedence)] [[N9702](#)]
- A01B73/02 . Folding frames
- A01B73/04 . . foldable about a horizontal axis
- A01B73/04D . . . [N: specially adapted for actively driven implements] [[N9710](#)]
- A01B73/04L . . . [N: the axis being oriented in a longitudinal direction [A01B73/04D](#) takes precedence] [[N0409](#)]
- A01B73/04L2 [N: each folding frame part being foldable in itself] [[N0409](#)]
- A01B73/04T . . . [N: the axis being oriented in transverse direction [A01B73/04D](#) takes precedence] [[N0409](#)]
- A01B73/06 . . foldable about a vertical axis
- A01B73/06B . . . [N: of the type comprising four vertical folding axes each disposed at a substantially fixed location of a supporting frame] [[N9911](#)]
- A01B73/06F . . . [N: to a position essentially forward of the axis, in relation to the direction of travel] [[N0303](#)]
- A01B73/06R . . . [N: to a position essentially rearward of the axis, in relation to the direction of travel] [[N0303](#)]
- A01B75/00** **Carriers for supporting persons when working in the field, e.g. while thinning beet**
- A01B76/00** **Parts, details or accessories of agricultural machines or implements, not provided for in groups A01B51/00 to A01B75/00** [[N0509](#)] [[C0703](#)]

- A01B77/00** **Machines for lifting and treating soil** (biocides, pest repellants or attractants, plant growth regulators [A01N25/00](#) to [A01N65/00](#); fertilisers [C05](#); soil-conditioning or soil-stabilising materials [C09K17/00](#))
- A01B79/00** **Methods for working soil (essentially requiring the use of particular machines, see the relevant groups for the machines)**
- [A01B79/00P](#) . [\[N: Precision agriculture\] \[N9705\]](#)
- [A01B79/02](#) . combined with other agricultural processing, e.g. fertilising, planting