## CPC  COOPERATIVE PATENT CLASSIFICATION

### A  HUMAN NECESSITIES

#### AGRICULTURE

##### A01  AGRICULTURE; FORESTRY; ANIMAL HUSBANDRY; HUNTING; TRAPPING; FISHING

#### 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 A01C 5/00; soil working for engineering purposes E01, E02, E21; {measuring areas for agricultural purposes G01B})

### WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

<table>
<thead>
<tr>
<th>IPC Group</th>
<th>CPC Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01B 69/04</td>
<td>covered by A01B 69/008</td>
</tr>
<tr>
<td>A01B 69/06</td>
<td>covered by A01B 69/005</td>
</tr>
<tr>
<td>A01B 69/08</td>
<td>covered by A01B 69/006</td>
</tr>
</tbody>
</table>

2. 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.

### Hand tools

#### 1/00  Hand tools (edge trimmers for lawns A01G 3/06; machines for working soil A01B 35/00; making hand tools B21D)

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/02</td>
<td>Spades; Shovels { (hand-operated dredgers E02F 3/02) }</td>
</tr>
<tr>
<td>1/022</td>
<td>{ Collapsible; extensible; combinations with other tools }</td>
</tr>
<tr>
<td>1/024</td>
<td>{ Foot protectors attached to the blade }</td>
</tr>
<tr>
<td>1/026</td>
<td>{ with auxiliary handles for facilitating lifting }</td>
</tr>
<tr>
<td>1/028</td>
<td>{ with ground abutment shoes or earth anchors for facilitating lifting }</td>
</tr>
<tr>
<td>1/04</td>
<td>with teeth</td>
</tr>
<tr>
<td>1/06</td>
<td>Hoes; Hand cultivators { (rakes A01D 7/00; forks A01D 9/00; picks B25D) }</td>
</tr>
<tr>
<td>1/065</td>
<td>{ powered }</td>
</tr>
<tr>
<td>1/08</td>
<td>with a single blade</td>
</tr>
<tr>
<td>1/10</td>
<td>with two or more blades</td>
</tr>
<tr>
<td>1/12</td>
<td>with blades provided with teeth</td>
</tr>
<tr>
<td>1/14</td>
<td>with teeth only</td>
</tr>
<tr>
<td>1/16</td>
<td>Tools for uprooting weeds</td>
</tr>
<tr>
<td>1/165</td>
<td>{ adapted for extracting a substantially cylindrical plug out of the earth }</td>
</tr>
<tr>
<td>1/18</td>
<td>Tong-like tools</td>
</tr>
<tr>
<td>1/20</td>
<td>Combinations of different kinds of hand tools</td>
</tr>
<tr>
<td>1/22</td>
<td>Attaching the blades or the like to handles (handles for tools, or their attachment, in general B25G); Interchangeable or adjustable blades</td>
</tr>
<tr>
<td>1/222</td>
<td>{ Adjustable blades }</td>
</tr>
<tr>
<td>1/225</td>
<td>{ around a substantially horizontal axis }</td>
</tr>
<tr>
<td>1/227</td>
<td>{ Interchangeable blades }</td>
</tr>
<tr>
<td>1/24</td>
<td>for treating meadows or lawns</td>
</tr>
<tr>
<td>1/243</td>
<td>{ for aerating }</td>
</tr>
<tr>
<td>1/246</td>
<td>{ for cutting sods or turves }</td>
</tr>
</tbody>
</table>

### Ploughs

#### 3/00  Ploughs with fixed plough-shares

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/02</td>
<td>Man-driven ploughs</td>
</tr>
<tr>
<td>3/04</td>
<td>Animal-drawn ploughs</td>
</tr>
<tr>
<td>3/06</td>
<td>without alternating possibility, i.e. incapable of making an adjacent furrow on return journey { i.e. conventional ploughing }</td>
</tr>
<tr>
<td>3/08</td>
<td>Swing ploughs</td>
</tr>
<tr>
<td>3/10</td>
<td>Trussed-beam ploughs; Single-wheel ploughs</td>
</tr>
<tr>
<td>3/12</td>
<td>Two-wheel beam ploughs</td>
</tr>
<tr>
<td>3/14</td>
<td>Frame ploughs</td>
</tr>
<tr>
<td>3/16</td>
<td>Alternating ploughs, i.e. capable of making an adjacent furrow on return journey</td>
</tr>
<tr>
<td>3/18</td>
<td>Turn-wrest ploughs</td>
</tr>
<tr>
<td>3/20</td>
<td>Balance ploughs</td>
</tr>
<tr>
<td>3/22</td>
<td>with parallel plough units used alternately</td>
</tr>
<tr>
<td>3/24</td>
<td>Tractor-drawn ploughs (A01B 3/04 takes precedence)</td>
</tr>
<tr>
<td>3/26</td>
<td>without alternating possibility</td>
</tr>
<tr>
<td>3/28</td>
<td>Alternating ploughs</td>
</tr>
<tr>
<td>3/30</td>
<td>Turn-wrest ploughs</td>
</tr>
<tr>
<td>3/32</td>
<td>Balance ploughs</td>
</tr>
<tr>
<td>3/34</td>
<td>with parallel plough units used alternately</td>
</tr>
<tr>
<td>3/36</td>
<td>Ploughs mounted on tractors</td>
</tr>
<tr>
<td>3/38</td>
<td>without alternating possibility</td>
</tr>
<tr>
<td>3/40</td>
<td>Alternating ploughs</td>
</tr>
<tr>
<td>3/42</td>
<td>Turn-wrest ploughs</td>
</tr>
<tr>
<td>3/421</td>
<td>with a headstock frame made in one piece</td>
</tr>
<tr>
<td>3/4215</td>
<td>{ the headstock being provided with two or more hydraulic cylinders }</td>
</tr>
<tr>
<td>3/426</td>
<td>with a headstock frame made of two or more parts</td>
</tr>
<tr>
<td>3/44</td>
<td>with parallel plough units used alternately</td>
</tr>
<tr>
<td>3/46</td>
<td>Ploughs supported partly by tractor and partly by their own wheels</td>
</tr>
</tbody>
</table>
Ploughs

15/00 Elements, tools, or details of ploughs
15/02 . Plough blades; Fixing the blades
15/025 . (specially adapted for working subsoil)
15/04 . Shares (making ploughshares by rolling B21H)
15/06 . Interchangeable or adjustable shares
15/08 . Mouldboards
15/10 . Interchangeable or adjustable mouldboards
15/12 . Beams; Handles (handles for tools or their attachment in general B25G)
15/125 . (Articulated beams)
15/14 . Frames (means or arrangements to facilitate transportation A01B 73/00)
15/145 . (the plough blades being connected to the plough beam for unisono adjustment of the furrow width)
15/16 . Discs (bearings therefore A01B 71/04); Scrapers for cleaning discs; Sharpening attachments (sharpening in general B24)
15/18 . Coulters
15/20 . Special adjusting means for tools of ploughs drawn by, or mounted on tractors working on hillsides or slopes

17/00 Ploughs with special additional arrangements, e.g. means for putting manure under the soil, clod-crushers (A01B 49/00 takes precedence); (Means for breaking the subsoil)
17/002 . (Means for putting manure, debris, straw or the like under the soil (to plough-in weeds A01B 39/18))
17/004 . (Clod-crushers)
17/006 . (with driven tools)
17/008 . (rotating about a vertical or steeply inclined axis)

Harrrows

19/00 Harrrows with non-rotating tools (harrrows for working in vineyards A01B 39/16)
19/02 . with tools rigidly or elastically attached to a tool-frame
19/04 . with two or more tool-frames
19/06 . with tools or tool-frames moved to-and-fro mechanically
19/08 . with link network supporting tooth-like tools
19/10 . Lifting or cleaning apparatus

21/00 Harrrows with rotary non-driven tools (tilting implements with rotary driven tools A01B 33/00)
21/02 . with tooth-like tools
21/04 . on horizontally-arranged axes
21/06 . on vertically-arranged axes
21/08 . with disc-like tools
21/083 . (of the type comprising four individual disk groups each pivotally connected at fixed locations to a substantially rigid frame)
21/086 . (of the type in which the disc-like tools are individually mounted)

23/00 Elements, tools, or details of harrrows
Harrows

23/02 . Teeth; Fixing the teeth
23/04 . Frames (means or arrangements to facilitate transportation A01B 73/00); Drawing-arrangements
23/043 . [Specially adapted for harrows with non-rotating tools]
23/046 . [Specially adapted for harrows with rotating tools]
23/06 . Discs (A01B 15/16 takes precedence; bearings therefor A01B 71/04); Scrapers for cleaning discs; Sharpening attachments; [Lubrication of bearings] (sharpening in general B24)

25/00 Harrows with special additional arrangements, e.g. means for distributing fertilisers; Harrows for special purposes (A01B 39/00 takes precedence; fertiliser distributors A01C 15/00))

Other machines for working soil

27/00 Clod-crushers
27/005 . [comprising roller-type tools moving on the ground)
29/00 Rollers [(rollers for roads E01C)]
29/02 . with smooth surface
29/04 . with non-smooth surface formed of rotatably-mounted rings or discs or with projections or ribs on the roller body; Land packers
29/041 . [of “Cambridge”-type, i.e. the soil-pressing rings being stacked on a shaft]
29/043 . [Tire-packers]
29/045 . [the soil-pressing body being a drum]
29/046 . [the soil-pressing body being a helical coil]
29/048 . [Bar cage rollers]
29/06 . with special additional arrangements

31/00 Drags (graders for field cultivators (graders in general E02D))

33/00 Tilling implements with rotary driven tools [, e.g. in combination with fertiliser distributors or seeders, with grubbing chains, with sloping axles, with driven discs]
33/02 . with tools on horizontal shaft transverse to direction of travel
33/021 . [with rigid tools]
33/022 . [with helicoidal tools]
33/024 . [with disk-like tools]
33/025 . [with spring tools, i.e. resiliently- or flexibly-attached rigid tools]
33/027 . [Operator supported tools, e.g. using a harness for supporting the tool or power unit]
33/028 . [of the walk-behind type (walk-type tractors B62D 51/04)]
33/04 . with tools on horizontal shaft parallel to direction of travel
33/06 . with tools on vertical or steeply-inclined shaft
33/065 . [comprising a plurality of rotors carried by an elongate, substantially closed transmission casing, transversely connectable to a tractor]
33/08 . Tools; Details, e.g. adaptations of transmissions or gearings
33/082 . [Transmissions; Gearings; Power distribution]
33/085 . [specially adapted for tools on a vertical shaft]
33/087 . [Lifting devices; Depth regulation devices; Mountings]

33/10 . Structural or functional features of the tools {; Theoretical aspects of the cutting action}
33/103 . . [the rotating shaft being oriented horizontally]
33/106 . . [the rotating shaft being oriented vertically or steeply inclined]
33/12 . . Arrangement of the tools; Screening of the tools
33/125 . . [screening of tools rotating about a vertical shaft]
33/14 . . Attaching the tools to the rotating shaft, e.g. resiliently {or flexibly]-attached tools
33/142 . . . [the rotating shaft being oriented horizontally]
33/144 . . . . [with spring tools or resiliently-attached rigid tools]
33/146 . . . . [the rotating shaft being oriented vertically or steeply inclined]
33/148 . . . . . [with spring tools or resiliently-attached rigid tools]
33/16 . with special additional arrangements (A01B 49/00 takes precedence; for sowing or fertilising A01B 49/06)

35/00 Other machines for working soil (not specially adapted for working soil on which crops are growing) (A01B 37/00, A01B 39/00, A01B 77/00 take precedence; hand tools A01B 1/00))
35/02 . with non-rotating tools
35/04 . . drawn by animal or tractor {or man-power}
35/06 . . . with spring tools {or with resiliently- or flexibly-attached rigid tools}
35/08 . . . with rigid tools
35/10 . . mounted on tractors
35/12 . . . with spring tools {or with resiliently-or flexibly-attached rigid tools}
35/14 . . . with rigid tools
35/16 . . with rotating or circulating non-propelled tools
35/18 . . with both rotating and non-rotating tools
35/20 . Tools; Details
35/22 . . Non-rotating tools; [Resilient or flexible mounting of rigid tools]
35/225 . . . [the tools being adapted to allow the chisel point to be easily fitted or removed from the shank]
35/24 . . . Spring tools
35/26 . . . Rigid tools
35/28 . . . Rotating tools; Mounting rotating tools
35/30 . . . Undercarriages (A01B 23/04 takes precedence)
35/32 . . with special additional arrangements

37/00 Devices for loosening soil compacted by wheels or the like

39/00 Other machines specially adapted for working soil on which crops are growing
39/02 . with non-rotating tools
39/04 . . drawn by animal or tractor
39/06 . . Self-propelled machines
39/08 . . with rotating tools {such as weeding machines}
39/085 . . . [the rotating tools being actively driven]
39/10 . . with oscillating tools {driven or not}
39/12 . . for special purposes {e.g. for special culture}
39/14 . . for working ridges {e.g. for rows of plants and/ or furrows}

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Other machines for working soil

49/00 Machines for treating meadows or lawns, e.g. for sports grounds
49/02 for aerating
49/023 [Perforators comprising spiking tools actively driven in a reciprocating movement through a crankshaft or eccentric mechanism]
49/026 [Scarifiers comprising a knife reel actively driven around a substantially horizontal shaft]

47/00 Soil-working with electric potential applied between tools and soil
49/00 Combined machines (auxiliary devices attached to machines of a different kind, e.g. harrows attached to ploughs, see the relevant groups for the machines)
49/02 with two or more soil-working tools of different kind
49/022 [at least one tool being actively driven]
49/025 [about a substantially vertical axis]
49/027 [with a rotating, soil working support element, e.g. a roller]
49/04 Combinations of soil-working tools with non-soil-working tools, e.g. planting tools {seeding machines A01C 7/00; harvesters combined with soil-working implements A01D 43/12}
49/06 for sowing or fertilising
49/065 [the soil-working tools being actively driven]

Parts, details or accessories of agricultural machines or implements, in general (seal constructions A47C; wheels B60B; shelters for drivers B60I; seats specially adapted for vehicles B60N 2/00; wheel scrapers B60S 1/68)

51/00 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)
51/02 propelled by a motor
51/023 [of the Gantry-type]
51/026 [of the automotive vehicle type, e.g. including driver accommodation (A01B 51/023 takes precedence)]
51/04 drawn by animal or tractor
51/045 [drawn by animals]

59/00 Devices specially adapted for connection between animals or tractors and agricultural machines or implements (A01B 63/00 takes precedence; vehicle connections in general B60D; draught assemblies for animal drawn vehicles, in general B62C 5/00)
59/002 [Details, component parts]
59/004 [Length-adjustable links]
59/006 [Latched hooks]
59/008 [Link connectors with spherical surfaces]
59/002 for animal-drawn machines
59/004 for machines pulled or pushed by a tractor
59/0041 preventing or limiting side-play of implements (preventing overstrain A01B 61/00)
59/00415 [by hydraulic or pneumatic means acting on the lower draft links]
59/0042 having pulling means arranged on the rear part of the tractor
59/0043 supported at three points, e.g. by quick-release couplings (A01B 59/006 takes precedence)
59/0044 having pulling means arranged on the middle part of the tractor
59/0046 having pulling or pushing means arranged on the side of the tractor
59/0048 having pulling or pushing means arranged on the front part of the tractor
59/006 for machines mounted on tractors
59/0061 [specially adapted for enabling connection or disconnection controlled from the driver’s seat (not used, see subgroups)]
59/0062 [the connection comprising a rigid interface frame on the tractor]
59/0063 [the connection comprising longitudinally oriented tang-and-sheath elements]
59/0064 [for connection to the front of the tractor]
59/0065 [for ploughs or like implements (A01B 59/061 and subgroups take precedence)]
59/0066 [of the type comprising at least two lower arms and one upper arm generally arranged in a triangle (e.g. three-point hitches)]
59/0067 [the lower arms being lifted or lowered by power actuator means internally incorporated in the tractor]
59/0068 [the lower arms being lifted or lowered by power actuator means provided externally on the tractor]
59/0069 [with means for weighing the implement]

61/00 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)
61/02 of the coupling devices between tractor and machine
61/025 [the driving connections]
61/025 of the connection between tools and carrier beam or frame
61/042 [with shearing devices]
61/044 [the connection enabling a yielding pivotal movement around a substantially horizontal and transverse axis]
Parts, details or accessories of agricultural machines or implements, in general

63/00 Lifting or adjusting devices or arrangements for agricultural machines or implements

(lifting mechanisms for the cutter-bar of a mower A01D 34/24; adjusting devices for the cutter-bar of a mower A01D 34/28; constructional features of lifting devices per se B66F)

63/002 . . . { Devices for adjusting or regulating the position of tools or wheels (preventing overstrain A01B 61/00; wheels adjustable relatively to the frame for drawn implements A01B 3/16; tools or tool holders adjustable relatively to the frame for drawn implements A01B 63/24) }

63/004 . . . [Lateral adjustment of tools]
63/006 . . . [Lateral adjustment of wheels]
63/008 . . . {Vertical adjustment of tools (A01B 63/10 takes precedence) }
63/02 . . . for implements mounted on tractors
63/023 . . . [Lateral adjustment of their tools]
63/026 . . . [Lateral adjustment of their wheels]
63/04 . . . Hand devices; Hand devices with mechanical accumulators, e.g. springs
63/045 . . . {for vertically adjusting wheels or similar rotary supporting elements }
63/06 . . . operated mechanically by tractor motor
63/08 . . . operated by the movement of the tractor
63/10 . . . operated by hydraulic or pneumatic means
63/1006 . . . [the hydraulic or pneumatic means structurally belonging to the tractor]
63/1013 . . . [and being located inside the tractor body]
63/102 . . . characterised by the location of the mounting on the tractor, e.g. on the rear part
63/104 . . . . . . on the middle part, i.e. between front and rear wheels
63/106 . . . . . . on the side
63/108 . . . . . . on the front part
63/11 . . . . . . for controlling weight transfer between implements and tractor wheels
63/111 . . . . . . regulating working depth of implements
63/1112 . . . . . . [using a non-tactile ground distance measurement, e.g. using reflection of waves]
63/1115 . . . . . . [using a mechanical ground contact sensor]
63/1117 . . . . . . [using a hitch position sensor]
63/112 . . . . . . to control draught load, i.e. tractive force
63/114 . . . . . . to achieve a constant working depth
63/1145 . . . . . . [for controlling weight transfer between implements and tractor wheels]
63/118 . . . . . . Mounting implements on power-lift linkages (A01B 59/043 takes precedence; preventing or limiting side-play of implements A01B 59/041; preventing overstrain A01B 61/00)
63/12 . . . . . . operated by an electric motor
63/14 . . . . . . for implements drawn by animals or tractors
63/145 . . . . . . {for controlling weight transfer between implements and tractor wheels}
63/16 . . . . . . with wheels adjustable relatively to the frame
63/163 . . . . . . [laterally adjustable]
63/166 . . . . . . {manually adjustable}
63/18 . . . . . . with clutch between Z-type axle and wheel
63/20 . . . . . . with gear and rack
63/22 . . . . . . operated by hydraulic or pneumatic means
63/24 . . . . . . Tools or tool-holders adjustable relatively to the frame
63/245 . . . . . . [laterally adjustable]
63/26 . . . . . . by man-power
63/28 . . . . . . operated by the machine or implement
63/30 . . . . . . operated by motor power through a mechanical transmission
63/32 . . . . . . operated by hydraulic or pneumatic means [without automatic control]

67/00 Devices for controlling the tractor motor by resistance of tools (preventing overstrain A01B 61/00)

69/00 Steering of agricultural machines or implements; Guiding agricultural machines or implements on a desired track (vehicle course control in general G05D 1/02)

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

69/001 . . . [ Steering by means of optical assistance, e.g. television cameras (steering devices for road marking vehicles E01C 23/163)]
69/002 . . . [ Steering or guiding on a substantially circular or spiral path ]
69/003 . . . [ 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]
69/004 . . . [ automatic ]
69/005 . . . [ by an additional operator ]
69/006 . . . [ derived from the steering of the tractor ]
69/007 . . . [ Steering or guiding of agricultural vehicles, e.g. steering of the tractor to keep the plough in the furrow ]
69/008 . . . [ automatic ]
69/02 . . . Ridge-marking or like devices; Checkrow wires; Accessories therefor
69/022 . . . [Ridge marking by deposition of a chemical substance, e.g. foam, on the surface of the soil]
69/024 . . . [adapted to cut and form a ridge or furrow in the soil surface, e.g. with a disc]
69/026 . . . [ Checkrow wires ]
69/028 . . . [the wire being located above the ground]

71/00 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 (adjusting mechanisms in general G05G)

71/02 . . . Setting or adjusting mechanisms
71/04 . . . Bearings of rotating parts, e.g. for soil-working discs (discs A01B 15/16, A01B 23/06; bearings in general F16C)
71/06 . . . Special adaptations of coupling means between power take-off and transmission shaft to the implement or machine (couplings for transmitting rotation F16D)
71/063 . .  {for enabling transmission coupling and connection between tractor and implements to be controlled from the driver's seat}

71/066 . .  {for enabling pitch, roll or yaw movements of trailed implements or machines}

71/08 . Means for protecting against dust, or the like, or for cleaning agricultural implements (A01B 15/16, A01B 19/10 and A01B 23/06 take precedence; screening of rotary driven tilling tools A01B 33/12; screening of rotary parts in general F16P 1/00)

73/00 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 A01B 63/00; carriers for harvesters or mowers A01D 75/002; arrangements or carriers for haymakers A01D 78/1007, A01D 80/005; ) vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects B60P; motor vehicles, trailers B62D)

73/005 . {for endwise transportation, i.e. the direction of transport being substantially perpendicular to the direction of agricultural operation (A01B 73/02 takes precedence)}

73/02 . Folding frames

73/04 . . foldable about a horizontal axis

73/042 . . . {specially adapted for actively driven implements}

73/044 . . . {the axis being oriented in a longitudinal direction (A01B 73/042 takes precedence)}

73/046 . . . . {each folding frame part being foldable in itself}

73/048 . . . . {the axis being oriented in transverse direction (A01B 73/042 takes precedence)}

73/06 . . foldable about a vertical axis

73/062 . . . {of the type comprising four vertical folding axes each disposed at a substantially fixed location of a supporting frame}

73/065 . . . . {to a position essentially forward of the axis, in relation to the direction of travel}

73/067 . . . . {to a position essentially rearward of the axis, in relation to the direction of travel}

75/00 Carriers for supporting persons when working in the field, e.g. while thinning beet

76/00 Parts, details or accessories of agricultural machines or implements, not provided for in groups A01B 51/00 - A01B 75/00

77/00 Machines for lifting and treating soil (biocides, pest repellants or attractants, plant growth regulators A01N 25/00 - A01N 65/00; fertilisers C05; soil-conditioning or soil-stabilising materials C09K 17/00)

79/00 Methods for working soil (essentially requiring the use of particular machines, see the relevant groups for the machines)

79/0005 . {Precision agriculture}

79/002 . combined with other agricultural processing, e.g. fertilising, planting