

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

MASCHIO GASPARDO S.P.A.,
Plaintiff / Counterdefendant,
v.
PRECISION PLANTING LLC,
Defendant / Counterclaimant.

Case No. 1:22-cv-1394-RGA-JLH

PRECISION PLANTING LLC'S INVALIDITY CONTENTIONS

Pursuant to the Court's Scheduling Order and Section 4(d) of the Court's Default Standard for Discovery, Including Discovery of Electronically Stored Information ("ESI"), Defendant, Precision Planting LLC ("Precision"), provides its Disclosure of Invalidity Contentions for claims 1–3, 8, and 10–12 (the "Asserted Claims") of U.S. Patent No. 8,770,121 (the "'121 Patent"), which have been asserted by Plaintiff, Maschio Gaspardo S.P.A. ("Maschio"), in its Disclosure of Asserted Claims and Preliminary Infringement Contentions (the "Maschio Infringement Contentions").¹

Precision provides these contentions before claim construction and before the close of discovery. Pursuant to the Federal Rules of Civil Procedure, the default rules for patent disclosures, and the Scheduling Order, Precision will modify, amend, retract, or supplement the contentions provided herein after additional evidence and information

¹ While Exhibit A to Maschio's Infringement Contentions list "Claims 1–4, 8, 10–16," only claims 1–3, 8, and 10–12 are listed and charted as being infringed. The assertion of only claims 1–3, 8, and 10–12 in Exhibit A to Maschio's Infringement Contentions is consistent with Exhibits B–D of Maschio's Infringement Contentions. Consequently, Precision understands only claims 1–3, 8, and 10–12 are alleged to be infringed.

becomes available or as otherwise appropriate, including without limitation after Maschio alters, amends, or otherwise purports to finalize its infringement contentions, after Maschio provides additional discovery, and after Precision pursues additional discovery.

I. Identification of Prior Art

The following prior art references anticipate or render obvious at least one Asserted Claim:

A. Patents and Patent Publications

Number	Country	Prior Art Date	Exhibit
4,664,290 ("Martin")	U.S. Patent	February 25, 1985	A
0140699 ("Webber")	E.P. Patent	October 31, 1983	B
0536543 ("Fiorido")	E.P. Patent	October 7, 1991	C
8,770,121 Applicant-Admitted Prior Art ("the '121 Patent")	U.S. Patent (Background)	Prior to November 12, 2010	D
2003/0183647 ("Ven Huizen")	U.S. Application	March 28, 2002	E
7,228,807 ("Ven Huizen")	U.S. Patent	June 12, 2007	F
7,735,438 ("Riewerts")	U.S. Patent	October 5, 2007	Discussed herein

References to Ven Huizen herein refer to either or both of the aforementioned Ven Huizen publication (2003/0183647) and patent (7,228,807).

B. Publications

Title	Publication Date	Author and Publisher	Exhibit
Amazone ED302 Precision Airplanter Operator's Manual ("Amazone Manual")	October, 2005	Amazonen-Werke H. Dreyer GmbH & Co. KG	G
Amazone ED 302 Einzelkorn-Samaschine Betriebsanleitung ("Betriebsanleitung")	October, 2005	Amazonen-Werke H. Dreyer GmbH & Co. KG	

Both the Amazone Manual and Betriebsanleitung are operating manuals for precision air planters offered for sale and sold by Amazone. The Amazone Manual and Betriebsanleitung contain the same disclosure. The Amazone Manual is an English translation of Betriebsanleitung, both of which are published by Amazone-Werke. Because the disclosure of the Amazone Manual and Betriebsanleitung are the same, all references in these invalidity contentions are made to the Amazone Manual with the understanding that Betriebsanleitung is equally applicable in the invalidity contentions.

Claim charts identifying where specifically in each alleged item of prior art each limitation of each Asserted Claim is found are attached as Exhibits A–G.

Citations to particular disclosures or portions of the identified prior art in the attached exhibits are exemplary, representative, and non-exhaustive. Notably, where an item of prior art has repeated disclosures of the same or similar structures or functionality, Precision provides exemplary and illustrative citation to such prior art setting forth where the prior art discloses the limitations of the Asserted Claims. Consequently, Precision's

selection of specific citations within the prior art does not preclude Precision from later citing to and relying upon different, alternative citations within the same item of prior art for the same or similar disclosure.

C. Applicant Admitted Prior Art

In addition to the foregoing separately identified prior art references, Precision identifies with this disclosure numerous instances of applicant admitted prior art. A chart identifying that admitted prior art is submitted with this disclosure as Exhibit D.

II. Statement Regarding Anticipation or Obviousness

Set forth below is a statement identifying whether each reference anticipates or renders obvious each asserted claim, including an explanation of why the art renders the claims obvious and identifying the combinations of prior art showing obviousness. For those references that Precision alleges anticipate any Asserted Claims, Precision reserves the right to assert those references render obvious the Asserted Claims if Maschio disputes the presence of any limitation therein. Indeed, Precision does not have the benefit of Maschio's contentions for why the foregoing references do not invalidate the Asserted Claims. Upon learning of Maschio's contentions, Precision reserves the right to amend these contentions to meet Maschio's arguments. Likewise, to the extent Maschio disputes the presence of a limitation in any of the prior art, Precision reserves the right to add other prior art to meet Maschio's arguments.

In general, the Asserted Claims of the '121 Patent are invalid because they merely claim old technology well known to those of ordinary skill in the art upon review of prior art disclosures and do not patentably contribute anything novel and non-obvious to the art

of agricultural seed meters for use in precision pneumatic seed drills. Notably, and as disclosed by at least the prior art cited herein, the prior art teaches each and every recited limitation of the Asserted Claims. Consequently, each and every Asserted Claim of the '121 Patent is invalid as anticipated and/or obvious.

All of the prior art cited herein is analogous to the claimed alleged invention of the '121 Patent. In particular, all of the prior art pertains to the same field of endeavor of pneumatic seed metering to dispense seeds in an agricultural field. In any event, all of the art is reasonably pertinent to the field of the claimed alleged inventions in that the prior art would have logically commended itself to the inventor's attention because the prior art discloses a variety of types of pneumatic seed meters or otherwise pertains or addresses the same types of problems encountered by the inventors of the '121 Patent. Consequently, all of the prior art is analogous for purposes of combining said art. Further, one of ordinary skill in the art would have a reasonable expectation of success in making any and all of the below combinations since (consistent with demand and knowledge in the art) the known structures simply perform their known functions in the same manner and making minor modifications to size, shape, and dimension is a matter of mere design choice and optimization obtaining known structure for its known function as recited in the claims and is routine to one of ordinary skill in the art.

'121 Patent Invalidity under 35 U.S.C. §§ 102 and 103

These invalidity contentions are based upon the apparent interpretation of the Asserted Claims by Maschio. While Precision does not agree with Maschio's incorrect interpretation and application of the terms of the Asserted Claims, Precision nevertheless

supplies these invalidity contentions and attached claim charts based upon Maschio's apparent interpretation and application of the claims. For instance, Maschio apparently asserts that Precision's accused products meet the "sowing disc which is rotated by a motor-driven transmission drive shaft at a controlled speed" limitation with a peripherally located shaft and gear arrangement located on what Maschio identifies as the "movable portion". (See, e.g., Maschio Infringement Contentions, Exhibit A, pp. 8, 14-17). Precision disagrees that this configuration satisfies the "sowing disc which is rotated by a motor-driven transmission drive shaft at a controlled speed" limitation but nevertheless identifies in the Amazone Manual claim charts the same arrangement. Thus, even if Maschio's incorrect interpretation of the "sowing disc which is rotated by a motor-driven transmission drive shaft at a controlled speed" limitation is adopted, the prior art nevertheless discloses that arrangement.

In any event, Precision's invalidity contentions in no way constitute a waiver or acquiescence to any apparent construction of any terms of the Asserted Claims. Likewise, Precision's invalidity contentions in no way constitute a waiver or acquiescence to Maschio's assertion that the Asserted Claims are infringed by any of Precision's products. Precision preserves any and all rights to seek appropriate construction of the terms of the Asserted Claims and dispute Maschio's assertion that the Asserted Claims are infringed by any of Precision's products.

Claims 1-3, 8, and 10-12 are anticipated by Ven Huizen, as shown in the claim charts provided in Exs. E and F.

Claims 1–3, 8, and 10–12 are anticipated by the **Amazone Manual**, as shown in the claim chart provided in Ex. G

Claims 1–3, 8, and 10–12 are further rendered obvious by **the Amazone Manual in view of Riewerts, Fiorido, Martin, Webber, and/or Ven Huizen**. To the extent Maschio contends that the requirement of a “motor driven” transmission drive shaft” of claims 1 and 10 of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that the shaft could be a motor-driven transmission drive shaft to achieve the claimed invention. That is, this claim element would have been obvious over the **Amazone Manual** in view of Riewerts, which recites “Conventional techniques for providing rotary power to turn individual seed meters on each row unit of a seeding machine include: a central ground drive transmitted through complex shafting systems; hydraulic motors to turn a complex shafting system which in turn fans out to drive each seed meter; or an electric motor on each row unit to provide the rotational drive to control and drive the corresponding seed meter.” (Riewerts, 1:52-58). Furthermore, rate control is discussed in Riewerts, which recites “Electric motor drives are costly but do offer individual rate control including single row drive disconnects.” (Riewerts, 1:63-65). This illustrates that whether ground driven or directly motor driven, any such motor-driven alternatives for rotating the seed disk would have thus been obvious at the time of the invention. That is, one of ordinary skill in the art would have reason to combine Riewerts with the **Amazone Manual** to choose one of a variety of well-known methods of driving the shaft and would have a reasonable expectation of success.

Even if Maschio contends that **the Amazone Manual** does not show that “the seed distribution element further comprises a thrust-bearing element of the sowing disc, which thrust-bearing element is supported rotatably in the movable portion in order to withstand at least some of the axial load produced by the disc on the seal,” as required by claim 1 this element is shown in each of Webber, Martin, and Fiorido, (*e.g.*, the handles depicted in Martin or Webber, or the driving disk 31 in Fiorido), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to the Amazone Manual to arrive at the recited claims could be made to achieve the claimed invention. By modifying the Amazone Manual with any of the identified structures of Webber, Martin, or Fiorido, one of ordinary skill would be substituting known structures and using them for the exact same function in the same way as disclosed in the prior art.

For example, Webber describes the problem of resistance encountered by the rotating seed disk 28 by the seal which bears against the opposite side of the seed disk 28 from the seed mass (Webber, p. 5, par. 3). This is the same problem addressed by the claimed “thrust-bearing element” in claims 1 and 10. Furthermore, Webber discloses that the seed distribution element comprises a thrust-bearing element of the sowing disc in the form of a handle 32 positioned in the movable portion which locks the seed disc 28 on the hub 22 and rotates with the hub (Webber, Fig. 3, p. 8, par. 2-3), which means that the handle 32 is supported rotatably in the movable portion. Due to the contact of the handle with the disc at least some of the axial load produced by the disc on the seal is withstood. As further support, Webber further recites: “The raised portion of the hub seats the disk in the hub in a relatively secure, close-fitting fashion so that the disk is capable of *bearing a*

substantial load when driven in response to rotation of the hub." (p. 2, par. 5 – p. 3, par. 1, emphasis added), and then explains that the raised portion of the hub extending through a slot in the sowing disc has the handle 32 thereon. (p. 3, par. 2). One of ordinary skill in the art would have reason to combine Webber with the Amazone Manual to solve the problem described in Webber (e.g., resistance from the seal against the seed disk) and would have a reasonable expectation of success.

Martin discloses a configuration similar to Webber, including a handle having the same configuration. That is, Martin discloses that the seed distribution element comprises a thrust-bearing element of the sowing disc in the form of a handle 24 positioned in the movable portion which locks the seed disc 28 on the hub 22 and rotates with the hub (5:16-21), which means that the handle 32 is supported rotatably in the movable portion. One of ordinary skill in the art would have reason to combine Martin with the Amazone Manual as another method of attachment of a seed disk and/or to solve the problem described in Webber (e.g., resistance from the seal against the seed disk) and would have a reasonable expectation of success.

Furthermore, Fiorido discloses the driving disk 31 that will receive thrust from the seed disk because of the vacuum force pulling the seed disk toward the driving disk 31. Par. 26.(Fiorido, 5:49-55, FIGS. 1-3). One of ordinary skill in the art would have reason to combine Fiorido with the Amazone Manual as another method of attachment of a seed disk and/or to solve the problem described in Webber (e.g., resistance from the seal against the seed disk) and would have a reasonable expectation of success.

Even if Maschio contends that **the Amazone Manual** does not show “A kit for the retrofitting of seed distribution elements,” as in independent claim 10 of the ’121 Patent, this element is shown in Ven Huizen (*e.g.*, “a kit for modifying the metering unit,” Ven Huizen ¶¶ 11 and 17; “a kit that includes an improved seed disk for insertion into the metering unit” Ven Huizen, 2:32-36), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to **the Amazone Manual** to arrive at the recited claims could be made to achieve the claimed invention. One of ordinary skill in the art would have reason to combine Ven Huizen with the Amazone Manual to solve the problem described in Ven Huizen (*e.g.*, modifying a metering unit) and would have a reasonable expectation of success.

Claims 1–3, 8, and 10–12 are anticipated by **Fiorido**, as shown in the claim chart provided in Ex. C.

Claims 1–3, 8, and 10–12 are rendered obvious by **Fiorido by itself**. To the extent Maschio contends that any limitations of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that minor changes to Fiorido’s shaft or the manner in which it is driven to arrive at the recited claims (such as, for instance, its sowing disc being rotated by a shaft that is “motor-driven”) could be made to achieve the claimed invention. For example, minor changes in the means for rotating a shaft are routine in the art of agricultural machinery. Indeed, the ’121 Patent identifies no criticality of the shaft being rotated by a motor-driven transmission, but merely recites that the shaft is “driven in rotation at predetermined adjustable speeds by a

transmission which is not shown.” Likewise, Fiorido discloses “a shaft 29 that may for instance be driven through a cog-wheel 30 to rotatably drive the disk 13.” (Fiorido ¶ 26.)

As noted in the claim chart (Ex. C), Fiorido discloses a fixed portion and a movable portion as recited in claims 1 and 10. However, to the extent that Maschio contends that any limitations of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that minor changes to Fiorido’s housing in regard to which half thereof is movable and which half is fixed could be made to achieve the claimed invention (e.g., the ’121 patent, claim 1: “a housing with a fixed portion and a portion which is movable relative to the fixed portion and can be closed against the fixed portion, a seed collection chamber being defined in the fixed portion, a pneumatic suction chamber being defined in the movable portion”). Specifically, even if Maschio contends that the seed collection chamber is in the movable portion and the pneumatic suction chamber is in the fixed portion in Fiorido (opposite to what is recited in claims 1 and 10 of the ’121 Patent), note that it would be obvious to make the seed collection chamber be in the fixed portion and the pneumatic suction chamber be in the movable portion based on the following statement in Fiorido: “Furthermore, the seed container 11 may be provided with a central opening 40 (Figures 1 and 2) to possibly introduce the support and driving elements for the disk 13 from the opposite side of 5 the device, as opposed to the arrangement shown in the accompanying drawing.” (Fiorido, col. 8:1–6.) This would make it obvious that either side could be removable (*i.e.*, “movable”) and either side could be fixed. One of ordinary skill in the art would have

reason to make either side fixed or either side movable based on this disclosure in Fiorido and would have a reasonable expectation of success.

Claims 1–3, 8, and 10–12 are further rendered obvious by **Fiorido in view of Riewerts, the Amazone Manual, Martin, Webber, and/or Ven Huizen**. To the extent Maschio contends that the requirement of a “motor driven” transmission drive shaft” of claims 1 and 10 of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that the shaft could be a motor-driven transmission drive shaft to achieve the claimed invention. That is, this claim element would have been obvious over the Fiorido in view of Riewerts, which recites “Conventional techniques for providing rotary power to turn individual seed meters on each row unit of a seeding machine include: a central ground drive transmitted through complex shafting systems; hydraulic motors to turn a complex shafting system which in turn fans out to drive each seed meter; or an electric motor on each row unit to provide the rotational drive to control and drive the corresponding seed meter.” (Riewerts, 1:52-58). Furthermore, rate control is discussed in Riewerts, which recites “Electric motor drives are costly but do offer individual rate control including single row drive disconnects.” (Riewerts, 1:63-65). This illustrates that whether ground driven or directly motor driven, any such motor-driven alternatives for rotating the seed disk would have thus been obvious at the time of the invention. One of ordinary skill in the art would have reason to combine Riewerts with Fiorido in order to drive rotation of the shaft using one of a variety of well-known methods disclosed in Riewerts and would have a reasonable expectation of success.

Furthermore, even if Maschio contends that **Fiorido** does not show that the driving disk 31 withstands “at least some of the axial load produced by the disc on the seal,” this element is shown in each of Martin and Webber (*e.g.*, the handles depicted in Martin or Webber), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to Fiorido to arrive at the recited claims could be made to achieve the claimed invention.

For example, Webber describes the problem of resistance encountered by the rotating seed disk 28 by the seal which bears against the opposite side of the seed disk 28 from the seed mass (Webber, p. 5, par. 3). This is the same problem addressed by the claimed “thrust-bearing element” in claims 1 and 10. Furthermore, Webber discloses that the seed distribution element comprises a thrust-bearing element of the sowing disc in the form of a handle 32 positioned in the movable portion which locks the seed disc 28 on the hub 22 and rotates with the hub (Webber, Fig. 3, p. 8, par. 2-3), which means that the handle 32 is supported rotatably in the movable portion. Due to the contact of the handle with the disc at least some of the axial load produced by the disc on the seal is withstood. It would be obvious to likewise use the driving disk 31 to be similarly load bearing, as both the handle 32 in Webber and the driving disk 31 in Fiorido are disclosed as joining the seed disk with its driving means for rotating the seed disk. One of ordinary skill in the art would have reason to combine Webber with Fiorido to solve the problem described in Webber (*e.g.*, resistance from the seal against the seed disk) and would have a reasonable expectation of success.

Martin discloses a configuration similar to Webber, including a handle having the same configuration. That is, Martin discloses that the seed distribution element comprises a thrust-bearing element of the sowing disc in the form of a handle 24 positioned in the movable portion which locks the seed disc 28 on the hub 22 and rotates with the hub (5:16-21), which means that the handle 24 is supported rotatably in the movable portion. Due to the contact of the handle with the disc at least some of the axial load produced by the disc on the seal is withstood. It would be obvious to likewise use the driving disk 31 to be similarly load bearing, as both the handle 24 in Martin and the driving disk 31 in Fiorido are disclosed as joining the seed disk with its driving means for rotating the seed disk. One of ordinary skill in the art would have reason to combine Martin with Fiorido as another method of attachment of a seed disk and/or to solve the problem described in Webber (e.g., resistance from the seal against the seed disk) and would have a reasonable expectation of success.

Even if Maschio contends that Fiorido does not show “A sowing element for precision seed drills comprising a frame on which a seed distribution element according to claim 1 is mounted,” as in Claim 8 of the ’121 Patent, this frame element is shown in Ven Huizen, which recites “...each row unit 30 has a frame 31 on which is mounted a first hopper 32 for retaining seed and a second hopper 34 for retaining a dry herbicide. Below the seed hopper 32 is a metering unit 36 and a chute, not shown, directs seed from the hopper 32 to the metering unit 36.” (Ven Huizen ¶43). This frame on which the seed distribution element is mounted is also depicted in FIGS. 1–3 of Ven Huizen.

Furthermore, even if Maschio contends that Fiorido does not show “A kit for the retrofitting of seed distribution elements,” as in independent claim 10 of the ’121 Patent, this element is shown in Ven Huizen (*e.g.*, “a kit for modifying the metering unit,” Ven Huizen ¶¶ 11, 17), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to Fiorido to arrive at the recited claims could be made to achieve the claimed invention. That is, one of ordinary skill in the art would have reason to combine Ven Huizen with Fiorido to solve the problem described in Ven Huizen (*e.g.*, modifying a metering unit) and would have a reasonable expectation of success.

Claims 1–3, 8, and 10–12 are anticipated by **Martin**, as shown in the claim chart provided in Ex. A.

Claims 1–3, 8, and 10–12 are rendered obvious by **Martin by itself**. To the extent Maschio contends that any limitations of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that minor changes to Martin’s shaft or the manner in which it is driven to arrive at the recited claims (such as, for instance, its sowing disc being rotated by a shaft that is “motor-driven”) could be made to achieve the claimed invention. For example, minor changes in the means for rotating a shaft are routine in the art of agricultural machinery. Indeed, the ’121 Patent identifies no criticality of the shaft being rotated by a motor-driven transmission, but merely recites that the shaft is “driven in rotation at predetermined adjustable speeds by a transmission which is not shown.” Likewise, Martin discloses “The seed disk 28 which is mounted on the hub 22 is rotatably driven by engagement of the lugs 24 and 26. The lugs 24 and 26 which are engaged by a rotating driving arrangement 104 shown in FIG. 3 are

coupled to a bearing 106 journaled within a bore 108 within the first half shell 14 on the housing 12 and having an outer race 110.” (Martin, col. 8:14–19.)

Claims 1–3, 8, and 10–12 are further rendered obvious by **Martin in view of Riewerts, Fiorido, the Amazone Manual, Webber, and/or Ven Huizen**. To the extent Maschio contends that the requirement of a “motor driven” transmission drive shaft” of claims 1 and 10 of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that the shaft could be a motor-driven transmission drive shaft to achieve the claimed invention. That is, this claim element would have been obvious over the Martin in view of Riewerts, which recites “Conventional techniques for providing rotary power to turn individual seed meters on each row unit of a seeding machine include: a central ground drive transmitted through complex shafting systems; hydraulic motors to turn a complex shafting system which in turn fans out to drive each seed meter; or an electric motor on each row unit to provide the rotational drive to control and drive the corresponding seed meter.” (Riewerts, 1:52-58). Furthermore, rate control is discussed in Riewerts, which recites “Electric motor drives are costly but do offer individual rate control including single row drive disconnects.” (Riewerts, 1:63-65). This illustrates that whether ground driven or directly motor driven, any such motor-driven alternatives for rotating the seed disk would have thus been obvious at the time of the invention. That is, one of ordinary skill in the art would have reason to combine Riewerts with Martin in order to drive rotation of the shaft using one of a variety of well-known methods disclosed in Riewerts and would have a reasonable expectation of success.

Even if Maschio contends that **Martin** does not show that the handle 32 withstands “at least some of the axial load produced by the disc on the seal,” this element is shown in Webber (*e.g.*, the handle 24 in Webber), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to Martin to arrive at the recited claims could be made to achieve the claimed invention.

For example, Webber describes the problem of resistance encountered by the rotating seed disk 28 by the seal which bears against the opposite side of the seed disk 28 from the seed mass (Webber, p. 5, par. 3). This is the same problem addressed by the claimed “thrust-bearing element” in claims 1 and 10. Furthermore, Webber discloses that the seed distribution element comprises a thrust-bearing element of the sowing disc in the form of a handle 32 positioned in the movable portion which locks the seed disk 28 on the hub 22 and rotates with the hub (Webber, Fig. 3, p. 8, par. 2-3), which means that the handle 32 is supported rotatably in the movable portion. Due to the contact of the handle with the disc at least some of the axial load produced by the disc on the seal is withstood. It would be obvious to likewise use the handle 32 to be similarly load bearing, as both the handle 32 in Webber and handle 24 in Martin are operable to join the seed disk with its driving means for rotating the seed disk. One of ordinary skill in the art would have reason to combine Webber with Martin to solve the problem described in Webber (*e.g.*, resistance from the seal against the seed disk) and would have a reasonable expectation of success.

To the extent Maschio contends that any limitations of the Asserted Claims of the '121 Patent are absent (*e.g.*, the thrust-bearing plate of claim 3), one of ordinary skill in the art would recognize at the time of the invention that minor changes to Martin to arrive at

the recited claims (such as, for instance, that the handle in Martin could be replaced with the plate identified as 31 in Fiorido to arrive at the elements of the '121 Patent's claim 3 and/or claim 12 limitations) could be made to achieve the claimed invention because minor changes in the dimensions, size, or shape of the thrust-bearing element (*e.g.*, changing a handle from an elongated shape to a thinner flat and/or circular plate shape) would be a matter of mere design choice for one of ordinary skill in the art.

Indeed, the '121 Patent identifies no criticality of the thrust-bearing element's shape (*see e.g.*, only its location and function, the '121 patent, 3:54–57: “The positioning between seal 24 and plate 31 is such that the rotation of the latter will not be hindered by the presence of the seal 24 and, at the same time, both will be kept bearing against the disc 16.”). One of ordinary skill in the art would have a reasonable expectation of success in any alterations of the Martin handle using the plate shape/configuration of element 31 in Fiorido to arrive at the claimed invention, as both are used to attach the shaft to the seed disk and both bear against the seed disk on the side of the seed disk facing the part of the housing with the pneumatic suction chamber. One of ordinary skill in the art would have reason to combine Martin with Fiorido to solve the problem described in Webber (*e.g.*, resistance from the seal against the seed disk) or merely as a different means of attaching to the seed disk and would have a reasonable expectation of success.

Furthermore, note that it would be obvious to a person of ordinary skill in the art to add a washer between the handle of Martin and the seed disk, which washer would likewise rotate with the seed disk and which would serve as a plate. It is well known in the art that placement of a washer (which is a flat, rigid plate with a hole formed therethrough) between

two components can serve as a bearing. Therefore, even absent the disclosure of Florido, the subject matter of claims 3 and 12 are obvious in view of Martin in combination with a washer.

Even if Maschio contends that Martin does not show “A sowing element for precision seed drills comprising a frame on which a seed distribution element according to claim 1 is mounted,” as in Claim 8 of the ’121 Patent, this frame element is shown in Ven Huizen, which recites “...each row unit 30 has a frame 31 on which is mounted a first hopper 32 for retaining seed and a second hopper 34 for retaining a dry herbicide. Below the seed hopper 32 is a metering unit 36 and a chute, not shown, directs seed from the hopper 32 to the metering unit 36.” (Ven Huizen ¶ 43.) This frame on which the seed distribution element is mounted is also depicted in FIGS. 1–3 of Ven Huizen.

Furthermore, even if Maschio contends that Martin does not show “A kit for the retrofitting of seed distribution elements,” as in independent claim 10 of the ’121 Patent, this element is shown in Ven Huizen (*e.g.*, “a kit for modifying the metering unit,” Ven Huizen ¶¶ 11, 17; “a kit that includes an improved seed disk for insertion into the metering unit” Ven Huizen, 2:32-36), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to Martin to arrive at the recited claims could be made to achieve the claimed invention. That is, one of ordinary skill in the art would have reason to combine Ven Huizen with the Martin to solve the problem described in Ven Huizen (*e.g.*, modifying a metering unit) and would have a reasonable expectation of success.

Claims 1–3, 8, and 10–12 are anticipated by **Webber**, as shown in the claim chart provided in Ex. B. For example, as fully shown in the claim charts, Webber describes the problem of resistance encountered by the rotating seed disk 28 by the seal which bears against the opposite side of the seed disk 28 from the seed mass (Webber, p. 5, par. 3). This is the same problem addressed by the claimed “thrust-bearing element” in claims 1 and 10. Furthermore, Webber discloses that the seed distribution element comprises a thrust-bearing element of the sowing disc in the form of a handle 32 positioned in the movable portion which locks the seed disc 28 on the hub 22 and rotates with the hub (Webber, Fig. 3, p. 8, par. 2-3), which means that the handle 32 is supported rotatably in the movable portion. Due to the contact of the handle with the disc at least some of the axial load produced by the disc on the seal is withstood.

Claims 1–3, 8, and 10–12 are rendered obvious by **Webber by itself**. To the extent Maschio contends that any limitations of the Asserted Claims of the '121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that minor changes to Webber's shaft or the manner in which it is driven to arrive at the recited claims (such as, for instance, its sowing disc being rotated by a shaft that is “motor-driven”) could be made to achieve the claimed invention. For example, minor changes in the means for rotating a shaft are routine in the art of agricultural machinery. Indeed, the '121 Patent identifies no criticality of the shaft being rotated by a motor-driven transmission, but merely recites that the shaft is “driven in rotation at predetermined adjustable speeds by a transmission which is not shown.” Likewise, Webber discloses “The seed disk... must be

driven by the hub through the seed mass and past various other restraining objects within the seed meter housing.” (Webber at 1 ¶ 3).

Claims 1–3, 8, and 10–12 are further rendered obvious by **Webber in view of Riewerts, Fiorido, the Amazone Manual, Martin, and/or Ven Huizen**. To the extent Maschio contends that the requirement of a “motor driven” transmission drive shaft” of claims 1 and 10 of the Asserted Claims of the ’121 Patent are absent, one of ordinary skill in the art would recognize at the time of the invention that the shaft could be a motor-driven transmission drive shaft to achieve the claimed invention. That is, this claim element would have been obvious over the Webber in view of Riewerts, which recites “Conventional techniques for providing rotary power to turn individual seed meters on each row unit of a seeding machine include: a central ground drive transmitted through complex shafting systems; hydraulic motors to turn a complex shafting system which in turn fans out to drive each seed meter; or an electric motor on each row unit to provide the rotational drive to control and drive the corresponding seed meter.” (Riewerts, 1:52-58). Furthermore, rate control is discussed in Riewerts, which recites “Electric motor drives are costly but do offer individual rate control including single row drive disconnects.” (Riewerts, 1:63-65). This illustrates that whether ground driven or directly motor driven, any such motor-driven alternatives for rotating the seed disk would have thus been obvious at the time of the invention. That is, one of ordinary skill in the art would have reason to combine Riewerts with Fiorido in order to drive rotation of the shaft using one of a variety of well-known methods disclosed in Riewerts and would have a reasonable expectation of success.

To the extent Maschio contends that any limitations of the Asserted Claims of the '121 Patent are absent (e.g., the thrust-bearing plate of claim 3), one of ordinary skill in the art would recognize at the time of the invention that minor changes to Webber to arrive at the recited claims (such as, for instance, that the handle in Webber could be replaced with the plate identified as 31 in Fiorido to arrive at the elements of the '121 Patent's claim 3 and/or claim 12 limitations) could be made to achieve the claimed invention because minor changes in the dimensions, size, or shape of the thrust-bearing element (*e.g.*, changing a handle from an elongated shape to a thinner flat and/or circular plate shape) would be a matter of mere design choice for one of ordinary skill in the art.

Indeed, the '121 Patent identifies no criticality of the thrust-bearing element's shape (*see e.g.*, only its location and function, the '121 Patent, 3:54–57: “The positioning between seal 24 and plate 31 is such that the rotation of the latter will not be hindered by the presence of the seal 24 and, at the same time, both will be kept bearing against the disc 16.”). One of ordinary skill in the art would have a reasonable expectation of success in any alterations of the Webber handle using the plate shape/configuration of element 31 in Fiorido to arrive at the claimed invention, as both are used to attach the shaft to the seed disk and both bear against the seed disk on the side of the seed disk facing the part of the housing with the pneumatic suction chamber. One of ordinary skill in the art would have reason to combine Webber with Fiorido to solve the problem described in Webber (*e.g.*, resistance from the seal against the seed disk) and/or as a different means of attaching to the seed disk and would have a reasonable expectation of success.

Furthermore, note that it would be obvious to a person of ordinary skill in the art to add a washer between the handle of Martin and the seed disk, which washer would likewise rotate with the seed disk and which would serve as a plate. It is well known in the art that placement of a washer (which is a flat, rigid plate with a hole formed therethrough) between two components can serve as a bearing. Therefore, even absent the disclosure of Florido, the subject matter of claims 3 and 12 are obvious in view of Martin in combination with a washer.

Even if Maschio contends that Webber does not show “A sowing element for precision seed drills comprising a frame on which a seed distribution element according to claim 1 is mounted,” as in Claim 8 of the ’121 Patent, this frame element is shown in Ven Huizen, which recites “...each row unit 30 has a frame 31 on which is mounted a first hopper 32 for retaining seed and a second hopper 34 for retaining a dry herbicide. Below the seed hopper 32 is a metering unit 36 and a chute, not shown, directs seed from the hopper 32 to the metering unit 36.” (Ven Huizen ¶ 43). This frame on which the seed distribution element is mounted is also depicted in FIGS. 1–3 of Ven Huizen.

Furthermore, even if Maschio contends that Webber does not show “A kit for the retrofitting of seed distribution elements,” as in independent claim 10 of the ’121 Patent, this element is shown in Ven Huizen (*e.g.*, “a kit for modifying the metering unit,” Ven Huizen ¶¶ 11, 17; “a kit that includes an improved seed disk for insertion into the metering unit” Ven Huizen, 2:32-36), and a person having ordinary skill in the art would recognize at the time of the invention that minor changes to Webber to arrive at the recited claims could be made to achieve the claimed invention. That is, one of ordinary skill in the art

would have reason to combine Ven Huizen with Webber to solve the problem described in Ven Huizen (e.g., modifying a metering unit) and would have a reasonable expectation of success.

Claims 1–3, 8, and 10–12 rendered obvious by **the Applicant-admitted prior art** in view of **Fiorido**. The '121 Patent when describing prior art seed distribution elements, describes mounting on the fixed portion the transmission which drives in rotation the motor-driven shaft which rotates the disc. ('121 Patent, col. 1:63–65.) Furthermore, the '121 Patent describes the pneumatic suction chamber portion being provided on the fixed portion and the seed collection chamber being provided on the movable portion. (the '121 Patent, 1:66-67, 2:1-3). However, it is obvious over this admitted prior art in the '121 Patent in view of Fiorido to make the pneumatic suction chamber portion movable and the seed collection chamber fixed. Specifically, Fiorido discloses that the driving elements for the disk 13 can be introduced and thus mounted on either side of the housing, making it obvious at the time of the invention for either portion of the housing to be made movable or fixed. Thus, it would be obvious for the seed collection chamber to be in the fixed portion and the pneumatic suction chamber be in the movable portion, as recited in claims 1 and 10 of the '121 Patent. Thus, one of ordinary skill in the art would have reason to combine the Applicant-admitted prior art with Fiorido as a different means of attaching the housing and would have a reasonable expectation of success.

III. Statement Regarding Invalidity under 35 U.S.C. §§ 101 and 112

Claims 1–3, 8, and 10–12 are invalid under 35 U.S.C. § 101 and 35 U.S.C § 112 for indefiniteness. Claim 1 includes a recitation of “a sowing disc which is rotated by a motor-

driven transmission drive shaft at controlled speed”. The “motor-driven transmission” is not positively recited, fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty, and is therefore indefinite. At the very least, the phrase “which is rotated by a motor-driven transmission drive shaft at controlled speed” should be given no patentable weight as a phrase of intended use. The term “controlled speed” in claim 1 is only ever recited in the claims and is also indefinite. That is, the term “adjustable speeds” is recited (see the ’121 Patent, 2:60-63), however it is not clear that adjustable speeds and controlled speed is the same thing, as their scope is not identical. Furthermore, it is unclear how the speed is controlled. Furthermore, the first element of claim 1 combines the claiming of an apparatus (“a sowing disc”) with a method step (“rotated by a motor-driven transmission drive shaft at controlled speed,”) and is thus invalid as mixed-class claims and necessarily indefinite or ineligible under 35 U.S.C. § 101. Claim 10 likewise contains this same claim element and therefore is invalid for the same reasons described above.

Furthermore, claim 1 includes a recitation of “in order to withstand at least some of the axial load produced by the disc on the seal”. The phrase “in order to” makes this an intended use statement, fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty, and makes claim 1 indefinite. At the very least, the phrase “in order to withstand at least some of the axial load produced by the disc on the seal” should be given no patentable weight as a phrase of intended use. Claim 10 likewise contains the same phrase and therefore is indefinite for the same reasons described above.

Furthermore, claim 1 includes a recitation of “the facing surface of the disc”. The phrase “the facing surface” lacks antecedent basis and fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty, and makes claim 1 indefinite. Claim 10 likewise contains the same phrase and therefore is indefinite for the same reasons described above.

At least claims 3 and 12 of the '121 Patent are invalid as indefinite because the claims, read in light of the specification delineating the patent and the prosecution history, fail to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty because the claims recite “which can bear,” which is indefinite as it is unclear whether the limitation requires the thrust-bearing plate to actually bear on that surface, or if it is just saying that it “can” as in “may,” which makes the phrase that follows the term appear to be optional and therefore indefinite.

At least claims 3 and 12 of the '121 Patent are invalid as indefinite because the claims, read in light of the specification delineating the patent and the prosecution history, fail to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty because the claims recite “which can bear on that surface of the sowing disc which faces the seal,” which lacks antecedent basis and fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty.

Claims 1, 3, 10, and 12 are invalid as being indefinite because, read in light of the specification delineating the patent and the prosecution history, fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty. Claims 1, 3, 10, and 12 recite “the ring of holes,” which lacks antecedent basis and fails to inform

a person of ordinary skill in the art about the scope of the invention with reasonable certainty.

Claim 11 is also invalid as being indefinite because, read in light of the specification delineating the patent and the prosecution history, fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty. Specifically, claim 11 depends from claim 10, but recites that “the movable portion and the thrust-bearing element comprise at least one feature according to claim 2,” which claim 2 depends from claim 1. This is therefore a multiple dependent claim. However, the phrase “at least one feature according to claim 2” is ambiguous, because claim 2 depends on independent claim 1, so the at least one feature according to claim 2 could be interpreted as including, in the alternative, any one of the features recited in claims 1 or 2. But claims 1 and 10 are both independent claims and recite many of the same features, which means that claim 11 is then not narrower than claim 10 but rather recites the same scope as claim 10. Claim 11 is therefore indefinite as the scope of the claim is unclear and/or does not further limit the claim from which it depends.

Similarly, claim 12 is also invalid as being indefinite because, read in light of the specification delineating the patent and the prosecution history, fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty. Specifically, claim 12 depends from claim 10, but recites that “the movable portion and the thrust-bearing element comprise at least one feature according to claim 3,” which claim 3 depends from claim 1. This is therefore a multiple dependent claim. However, the phrase “at least one feature according to claim 3” is ambiguous, because claim 3 depends on

independent claim 1, so the at least one feature according to claim 3 could be interpreted as including, in the alternative, any one of the features recited in claims 1 or 3. But claims 1 and 10 are both independent claims and recite many of the same features, which means that claim 12 is then not narrower than claim 10 but rather recites the same scope as claim 10. Claim 12 is therefore indefinite as the scope of the claim is unclear and/or does not further limit the claim from which it depends.

Claim 10 is also indefinite because it recites “a kit for retrofitting of seed distribution elements” but then goes into detail describing the elements of the distribution elements (i.e., “wherein the distribution elements are of the type including”) and then only devotes the last wherein clause to the kit, stating “wherein the kit comprises: the movable portion pre-assembled with a thrust-bearing element of the sowing disc, which thrust-bearing element is supported rotatably in the movable portion in order to withstand at least some of the axial load produced by the disc on the seal.” So it is unclear (and therefore indefinite) which elements are positively recited and therefore should be given patentable weight and which elements are required for the recited and claimed “kit.” That is, it is unclear whether the movable portion (of the distribution elements) is the only claimed item, or if the thrust-bearing element and the sowing disc are passively or positively recited. Therefore, the confusing structure of claim 10 makes this claim, on the whole, indefinite.

For the claims identified above as indefinite, the claims, read in light of the specification of the patent and the prosecution history, fail to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty.

For the claims identified below as lacking written description, the figures, specification, and claims of the '121 Patent do not describe the invention sufficiently to convey to a person of skill in the art that the patentee had possession of the claimed invention at the time of the application.

For the claims identified below as lacking enablement, the specification of the '121 Patent, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation.

The phrase “motor-driven transmission drive shaft” lacks written description and is not enabled. Specifically, to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. However, the “motor-driven transmission drive shaft” is only recited in the Abstract and the claims, with the abstract merely stating “a sowing disc (16) rotated by a motor-driven transmission shaft (20)” without describing what such a shaft would include. For example, one of ordinary skill in the art would not know if the inventor had possession of merely a shaft, or also a motor and a transmission, and if the shaft is driven directly by the transmission which is driven directly by the motor, or if any of these components are indirectly driven thereby. The Detailed Description recites “The sowing disc 16 is removably mounted on a motor driven drive shaft 20,” leaving out the “transmission” in this second reference to element 20, and further recites this shaft is “supported in the fixed portion 11 and driven in rotation at predetermined adjustable speeds by a transmission

which is not shown.” (the ’121 Patent, 2:60-63). Furthermore, Maschio apparently asserts that Precision’s accused products meet the “a motor-driven transmission drive shaft at a controlled speed” limitation with a peripherally located shaft and gear arrangement located on what Maschio identifies as the “movable portion”. (*See, e.g.*, Maschio Infringement Contentions, Exhibit A, pp. 8, 14-17). As applied by Plaintiff in its infringement contentions, the claim lacks written description. By not showing or further describing such a transmission, nor the motor driving it, one skilled in the art could not reasonably conclude that the inventor had possession of the claimed invention at the time of filing. Thus, the phrase “motor-driven transmission drive shaft” does not satisfy the written description requirement.

Furthermore, a lack-of-enablement rejection must be found when a claim is unpatentable because its specification does not provide enough information to enable a person skilled in the art to make and use the invention. As stated above, the “motor-driven transmission drive shaft” is only recited in the Abstract and the claims, with the abstract merely stating “a sowing disc (16) rotated by a motor-driven transmission shaft (20)” without describing what such a shaft would include. For example, one of ordinary skill in the art would not know if the inventor had possession of merely a shaft, or also a motor and a transmission, and if the shaft is driven directly by the transmission which is driven directly by the motor, or if any of these components are indirectly driven thereby. Although the specification states “The presence of the transmission requires the shaft 20 to be mounted on the fixed portion 11 of the housing 10,” (the ’121 Patent, 2:64-65) note that merely knowing that a transmission is present does not enable a person skilled in the art to

know where and how such a transmission would be “present.” Is the transmission attached to the fixed portion or somewhere outside of the fixed portion, or somehow within the fixed portion? It is impossible to say, as the transmission and any motor associated therewith are not shown or described any further. Therefore, the specification does not provide enough information to enable a person skilled in the art to make and use the invention and thus the phrase “motor-driven transmission shaft” invalid for lack of enablement.

The term “controlled speed” in claims 1 and 10 also lacks enablement and does not satisfy the written description requirement. Specifically, this term is only ever recited in the claims. The term “adjustable speeds” is recited (the ’121 Patent, 2:60-63), however it is not clear that adjustable speeds and controlled speed is the same thing, as their scope is not identical. Furthermore, even if “controlled speed” and “adjustable speeds” were found to convey to a person of skill in the art that the patentee had possession of the claimed invention at the time of the application, these terms are not enabled, as there is no discussion of how the speed is controlled. Thus, the term “controlled speed” in claims 1 and 10 lacks enablement and does not satisfy the written description requirement and are thus invalid.

The recitation of a “kit for the retrofitting of seed distribution elements” in claim 10 also lacks enablement and does not satisfy the written description requirement. Specifically, the term “kit” is not adequately defined in the specification, where merely states “The whole of the movable portion 12 complete with thrust bearing element 26 and seal 24 lends itself advantageously to the production of a kit for the retrofitting of existing seed drills. It is sufficient in this case to separate the old type of movable portion by

removing the hinge pin 13 and replacing the old movable portion with the aforesaid kit. By reconnecting the pneumatic pipes previously disconnected, the seed drill becomes ready for use.” (the ’121 Patent, 3:60-67) and does not enable a person skilled in the art to make and use such a kit.

Finally, the term “pre-assembled” is indefinite, lacks enablement, and does not satisfy the written description requirement. The phrase is not included in the specification at all, and it is unclear to a person of ordinary skill in the art what the distinction is between being “assembled” and “pre-assembled.”

IV. Document Production

Precision produces herewith a copy or sample of the prior art identified above.

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Respectfully Submitted,

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CERTIFICATE OF SERVICE

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