IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MINNESOTA

United Beet Seeds BV,

Plaintiff,

vs.

KWS Saat SE & Co. KGaA,

Defendant.

Court File No. _____

COMPLAINT FOR DECLARATORY JUDGMENT

JURY TRIAL DEMANDED

Plaintiff United Beet Seeds BV ("UBS"), by and through its undersigned counsel, files this Complaint for a Declaratory Judgment against Defendant KWS Saat SE & Co. KGaA ("KWS"), and alleges as follows:

NATURE OF ACTION

1. Plaintiff UBS seeks a declaration that U.S. Patent Nos. 10,767,191 ("the '191 patent") and 11,597,944 ("the '944 patent") (collectively, "the Patents-in-Suit") are invalid, unenforceable, and/or not infringed by the manufacture, use, intended sale, and/or offer for sale or importation of Plaintiff's sugar beet seed products.

2. UBS brings this action to remove the harm and uncertainty created by the imminent threat of a lawsuit by Defendant KWS against UBS for alleged infringement of the Patents-in-Suit. Without declaratory relief, the threat of suit poses a substantial risk of injury to UBS as well as its subsidiaries, suppliers, and intended customers who make, use, plan to sell or import UBS's sugar beet seed products. The continued existence and threat

of suit of these patents harms UBS's manufacture, marketing, use, and plans to sell their sugar beet seed products.

3. KWS initiated discussions with UBS's shareholder, DLF Seeds A/S ("DLF", regarding DLF's sugar beet seed products by accusing DLF of infringing KWS's intellectual property rights, including the Patents-in-Suit. This resulted in multiple in person meetings and written communications where DLF and later UBS attempted to resolve this matter by offering that the parties to enter into a business arrangement including the possibility of licensing KWS's intellectual property. Rather than attempt to negotiate terms of an agreement between the parties, KWS steadfastly maintained its position that DLF and later UBS was infringing KWS's intellectual property rights, including the Patents-in-Suit, and that KWS would enforce these rights unless UBS ceased and desisted all production and testing of UBS's accused sugar beet seed products. Given KWS's acts and statements, and UBS's current field trials of the accused sugar beet seed products in the United States, a real, immediate, and substantial dispute exists between the parties concerning the Patent-in-Suit for which UBS now seeks declaratory relief.

THE PARTIES

4. Plaintiff UBS is a joint venture between Groupe Florimond Desprez ("GFD") and DLF Seeds A/S ("DLF"), specializing in all aspects of sugar beet seed research, production, processing and commercialization, organized under the laws of Belgium, with its principal place of business located at Industriepark 15, 3300 Tienen, Belgium.

5. On information and belief, Defendant KWS is an independent and family-owned company organized under the laws of Germany that focuses on plant breeding, with a principal place of business at Grimsehistr. 31, P.O. Box 1463, 37555 Einbeck, Germany.

JURISDICTION AND VENUE

6. This Court has subject matter jurisdiction over UBS's request for declaratory judgment under 28 U.S.C. §§ 2201 and 2202. This action arises under the patent laws of the United States, 35 U.S.C. §§ 100 et seq., which are within the subject matter jurisdiction of this Court under 28 U.S.C. §§ 1331 and 1338(a).

7. KWS is subject to general personal jurisdiction in this judicial district based on its purposeful, systematic, and continuous contacts with Minnesota, including its contacts with its United States subsidiary, KWS Seeds LLC (formerly known as Betaseed Inc.), which is incorporated in Minnesota, and has a principal place of business at 5705 W. Old Shakopee Road, Suite 110, Bloomington, Minnesota, 55437. On information and belief, KWS manages the overall strategy, research, and breeding programs of KWS Seeds LLC, providing new plant varieties to KWS Seeds LLC for propagation, distribution, and sales within Minnesota and throughout the United States, including those for sugar beet seed products. *See* https://www.kws.com/corp/en/company/. KWS Seeds LLC has Research and Breeding Stations in Shakopee, Minnesota, Moorhead, Minnesota, and Randolph, Minnesota. *See* https://www.kws.com/us/en/products/sugarbeet/research-breeding/. On information and belief, KWS operates KWS Seeds LLC as its alter ego within the United States in order to conduct KWS's business of conducting research, breeding, testing, marketing, and selling KWS's seed products, including sugar beet seeds,

within the United States. In addition, KWS sells its CR+ Cercospora resistant sugar beet seeds that are covered by the Patents-in-Suit, through or in connection with KWS Seeds LLC, throughout Minnesota, including the Minnesota – North Dakota ("Minn-Dak") region and the Southern Minnesota region. *See* https://www.betaseed.com/regions/. As a result, on information and belief, KWS Seeds LLC is an exclusive licensee of the Patents-in-Suit within the United States.

8. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400 because KWS is a defendant which is not a resident in the United States and therefore may be sued in any judicial district and because KWS is subject to personal jurisdiction within this judicial district.

FACTUAL BACKGROUND

9. Sugar is mainly produced from two crops, sugar beet and sugarcane. Sugar beet (*Beta vulgaris*) makes up approximately one-fifth of the global sugar production annually. The sugar beet seed market in the United States is essentially a two player market, with KWS having a dominant market position commanding more than 90% of the market, and the remaining seed varieties sold by UBS's venture company, Magno Seed LLC, representing the only significant competitors to KWS regarding sugar beet seeds in the U.S. The most serious disease affecting sugar beet production in the foliar disease Cercospora leaf spot, caused by the fungus *Cercospora beticola*, which can result in yield loss exceeding 40%.

A. UBS's Sugar Beet Seed Products

10. UBS's accused sugar beet seeds are of certain varieties that allows them to be resistant to the *Cercospora beticola* fungus. This Cercospora Resistance (CR) was achieved through traditional breeding techniques, where naturally occurring resistant wild beet accessions were successively bred to achieve high levels of resistance, as opposed to utilizing recombinant DNA technology to introgress a non-native CR resistant gene into the endogenous sugar beet host cells.

11. As of 2024, UBS conducted Official Variety Trials (OVT) of a number of its varieties of its CR sugar beet seeds in various regions within the United States, including the Minnesota – North Dakota region (Minn-Dak), Southern Minnesota, Michigan, and Wyoming. OVTs are planting trials that are professionally managed and conducted by a team of experts that provide unbiased and comprehensive information that assists farmers in making decisions about selecting the best cultivars for planting, and they often evaluate a variety of traits, including disease resistance, plant vigor, and uniformity.

B. The Patents-in-Suit

12. Upon information and belief, KWS holds title by assignment to the '191 patent, entitled "Gene Conferring Resistance To Cercospora Beticola In Beets," issued on September 8, 2020, and claiming priority to a PCT/EP2019/054008 application, dated February 18, 2019. The claims of the '191 patent are generally directed to sugar beet seeds which contain a gene that confers resistance to Cercospora Beticola (CR gene), where the gene is identified by having at least 95% identity to the expressed amino acid sequence of

a particular sequence identified as SEQ ID NO:3. A true and correct copy of the ’191 patent is attached hereto as **Exhibit A**.

13. Upon information and belief, KWS holds title by assignment to the ’944 patent, also entitled “Gene Conferring Resistance To Cercospora Beticola In Beets,” issued on March 7, 2023, and also claiming priority to the PCT/EP2019/054008 application. The ’944 patent issued from an application that was a continuation application of the ’191 patent. The claims of the ’944 patent are generally directed to sugar beet plants which contain the CR gene identified by either the SEQ ID NO. 3 sequence or an amino acid sequence having at least 95% identity to SEQ ID NO. 3. A true and correct copy of the ’944 patent is attached hereto as **Exhibit B**.

C. KWS’s Dispute With UBS Regarding The Patents-in-Suit

14. As early as December 5, 2023, DLF and GFD publicly announced their intention to enter into a joint venture to merge their respective sugar beet seed, fodder beet, and industrial chicory business into what would later become UBS. *See* DLF Seeds A/S, Groupe Florimond Desprez Announce Intention to Enter into a Joint Venture.

15. On August 6, 2024, KWS contacted DLF via email accusing DLF of “infringing IP rights of KWS” and requested a face-to-face meeting. These parties met in person on August 26, 2024 where KWS alleged that DLF was infringing KWS’s world-wide patent rights based on certain field trials of DLF’s CR sugar beets, and where KWS informed DLF that it was looking closely at other activities by DLF involving its CR sugar beets in other regions where KWS has strong patent positions. DLF responded that it took

these allegations very seriously, that it believed that there was no patent infringement, and that DLF would thoroughly investigate the matter.

16. By August 30, 2024, DLF informed KWS that it had completed its investigation and requested a follow up in-person meeting. The parties met again on October 2, 2024 where DLF informed KWS that DLF obtained its CR sugar beet seed source material from a publicly available source prior to the filing KWS's patents, including the Patents-in-Suit, and that the CR trait claimed by KWS's patents was also publicly available in the prior art through a publicly available seed deposit. DLF further explained that it did not want to enter into a legal dispute with KWS and expressed its desire to resolve this issue amicably. Both parties agreed at this meeting to further investigate the issue and to try and resolve this issue prior to an already-scheduled in-person meeting between DLF, GFD and KWS on November 5, 2024.

17. On September 17, 2024, DLF and GFD publicly announced the signing of an agreement to merge their sugar beet, fodder beet, and industrial chicory seed businesses and the related Research and Development activities into a new joint venture called United Beet Seeds (UBS). *See* United Beet Seeds | Groupe Florimond Desprez and DLF Seeds A/S join forces to create United Beet Seeds.

18. On October 10, 2024, KWS informed both DLF and GFD that the planned in person meeting, which was scheduled to take place on November 5, 2024, was cancelled. DLF and GFD responded to KWS throughout October and November reiterating their desire to resolve this issue amicably and quickly, with DLF providing a detailed explanation as to why it believed it was not violating any valid patent rights of KWS.

19. On November 20, 2024, KWS sent DLF a letter accusing DLF of "unlawfully obtain[ing] samples of the KWS Varieties" and that DLF is "obliged to immediately refrain from any use, production, distribution and commercialization" of the DLF CR sugar beet varieties, that DLF "immediately stop any Unlawful Activities and to immediately confirm this in writing," and that otherwise, KWS "reserve[s] the right to prepare legal actions in any country where DLF is planning to conduct Unlawful Activities." Notably, this letter specifically identified KWS's pending European patent applications, including EP3696188, which is the European counterpart patent application of the Patents-in-Suit.

20. By this time, the joint venture between DLF and GFD to form UBS had been formalized. Therefore, in response to this letter, UBS and KWS had a telephone conversation on November 27, 2024, which was followed up with an email memorializing this conversation, dated November 28, 2024. UBS reiterated its position of having the parties resolve this dispute amicably without having to resort to legal proceedings challenging the KWS patents. UBS proposed that the parties enter into a license agreement regarding KWS patents directed to the CR gene in sugar beets and that UBS would consider paying a royalty based on seed sales starting in the 2024/2025 and 2025/2026 growing season, subject to further negotiations regarding specific terms.

21. In response, KWS sent UBS a letter, dated November 29, 2024. KWS stated that UBS's proposals in its November 28th email "do not and cannot offer a basis for an amicable settlement of our case." KWS then stated that UBS affiliated companies have "entered more than 50 sugar beet hybrids containing a Cercospora resistance into official trials globally ***including the US where KWS has several granted patents regarding its***

Cercospora trait." (emphasis added). KWS maintained its allegations that UBS "unlawfully" obtained samples of KWS sugar beet varieties to develop the UBS varieties, that this "illegal access" affects the validity of UBS's variety registrations and intellectual property applications, and that this "unlawful" activity cannot be the basis of any license. KWS reiterated its demand that UBS "refrain from any use, production, distribution and commercialization of the said Cercospora resistant varieties, as well as from filing and maintaining any variety registration or application for intellectual property protection relating to such varieties." KWS then threatened with the ultimatum that if it did not receive an "express and unequivocal written confirmation" by UBS agreeing to these demands before December 31, 2024, KWS "reserve[s] the right to undertake any and all legal actions in any country" where UBS companies are planning to market the said varieties "on the basis of all legal means available to us [KWS], including patents." A true and correct copy of KWS's November 29, 2024 letter is attached hereto as **Exhibit C**.

22. KWS's allegations that UBS has infringed KWS's patents, including the Patents-in-Suit, combined with its demands that UBS abandon all activity related to its CR sugar beet varieties, and its ultimatum that it would be prepared to file a patent infringement lawsuit after the specifically defined deadline of December 31, 2024 if its demands are not met, create an actual case or controversy regarding the validity, enforceability, and alleged infringement of the Patents-in-Suit. KWS's infringement allegations threaten actual and imminent injury to UBS that can be redressed by judicial relief, and that injury is of sufficient immediacy to warrant the issuance of a declaratory judgment. Absent a declaration of invalidity, unenforceability, and/or non-infringement of the Patents-in-Suit,

KWS's continued wrongful assertions of infringement of the Patents-in-Suit against UBS related to its manufacture, use, intended sale, offer for sale and/or importation of its CR sugar beet seeds products, will harm UBS, its affiliates, and its future customers.

COUNT I

DECLARATORY JUDGMENT OF INVALIDITY OF THE '191 PATENT

23. The allegations of the preceding paragraphs are incorporated by reference as if fully set forth herein.

24. An actual and substantial controversy has arisen and now exists between the parties concerning the validity of the '191 patent.

25. Claims 1-12 of the '191 patent are invalid because the purported inventions therein fail to meet the conditions for patentability specified in 35 U.S.C. §§ 101 *et seq*., including but not limited to 35 U.S.C. §§ 102, 103, and 112, and nonstatutory common law doctrines.

A. The Claims of the '191 Patent Are Invalid For Being Anticipated and/or Obvious Over at Least The Publicly Available BETA 1859 Accession Number Seed Deposit

26. By way of example and without limiting the grounds of invalidity that will be asserted in this action, each claim of the '191 patent is invalid under 35 U.S.C. § 102 and/or 35 U.S.C. § 103 based on the deposit of a seed with Accession Number BETA 1859 (DEU001: 57701; Accession-ID:227318; DOI: 10.25642/IPK/GBIS/227318) at the IPK Gene Bank in Gatersleben (Corrensstraße 3, D-06466 Gatersleben, Germany), which was made publicly available as of August 6, 2003. The IPK (Leibniz Institute) Gene Bank is one of the world's largest plant germplasm collections where the bulk of the collection is

stored as seed housed in cold rooms under which conditions of seed viability typically last several decades. Once seed samples are deposited with the IPK Gene Bank, the public at large is able to request a sample of this seed through a material transfer agreement and by paying a handling fee. The BETA 1859 seed deposited with the IPK Gene Bank, and made available to the public as of August 6, 2003, anticipates and/or renders obvious the claims of the '191 patent.

27. For example, claim 1 of the '191 patent is directed to:

> A pelleted seed of a sugar beet plant comprising a nucleic acid molecule encoding a polypeptide that is able to confer resistance to *Cercospora beticola* in a sugar beet plant in which the polypeptide is expressed, wherein the polypeptide comprises an amino acid sequence that is at least 95% identical to the amino acid sequence according to SEQ ID NO: 3

28. The SEQ ID NO:3 sequence is the amino acid sequence of the CR gene described in the '191 patent with the DNA sequence of SEQ ID NO:1. Thus, a DNA sequence of SEQ ID NO:1 will by definition translate into the amino acid sequence of SEQ ID NO:3.

29. UBS obtained a sample of the BETA 1859 seed from the IPK Gene Bank on March 21, 2012, which was described as a wild sugar beet with an origin in Portugal (Ericeira Bay). This was several years before the earliest possible effective filing date of the '191 patent. The seeds were grown into sugar beet plants and the genome of these plants was sequenced. UBS later determined that the CR gene within these BETA 1859 samples is 100% identical to the claimed SEQ ID NO:1 gene described and claimed in the '191

patent. *See* Declaration of Dr. Hendrik Tschoep, dated October 10, 2024, a true and correct copy of which is attached hereto as **Exhibit D**.

30. As a result, the BETA 1859 seed, which was publicly available as of August 6, 2003 - more than 15 years before the earliest possible effective filing date of the '191 patent – is the seed claimed in claim 1 of the '191 patent: it is a sugar beet seed comprising a nucleic acid molecule which when expressed comprises the amino acid sequence of SEQ ID NO:3. That this seed contains the same CR gene described and claimed in the '191 patent also means that it has all inherent characteristics of this seed, including a polypeptide of the expressed gene that confers resistance to *Cercospora beticola*.

31. While claim 1 of the '191 patent also claims that the seed is pelleted, this is not a novel distinction since pelleted crop seeds were routinely known in the prior art, as acknowledged by the '191 patent itself when referring to U.S. Patent No. 4,067,141 ("the '141 patent") for well-known pelleting methods of crop seeds. *See* '191 patent, col. 24:60-62. The '141 patent issued on January 10, 1978, more than 40 years before the earliest possible effective filing date of the '191 patent, which again shows how routine and well-known pelleting seeds were in the prior art. Moreover, the prior art was also replete with examples of pelleted sugar beet seeds, such as Heijbroek et al (Crop Protection (1995) Vol. 14; pp. 363-366), which was published more than 20 years before the earliest possible effective filing date of the '191 patent, and which disclosed pelleted sugar beet seeds, including wherein the pelleting contains fungicides and insecticides. Other prior art references which describe pelleted sugar beet seeds include DE3442317A1 ("Verfahren zur Pillierung von pflanzlichen Samen"), which was published on May 22, 1986,

DE2607785A1 ("AUFBEREITETES SAATGUT"), which was published on September 9, 1976, and U.S. application US2002/0139046A1 ("Seed with a covering which contains a nitrogenous fertilizer"), which was published on October 3, 2003.

32. Therefore, claim 1 of the '191 patent is either anticipated or rendered obvious by the prior publicly available IPK Gene Bank seed deposit of BETA 1859.

B. The Claims of the '191 Patent Are Invalid For Being Anticipated and/or Obvious Over at Least The FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Applications

33. By way of further example and without limiting the grounds of invalidity that will be asserted in this action, each claim of the '191 patent is invalid under 35 U.S.C. § 102 and/or 35 U.S.C. § 103 based on the European applications for Plant Variety Protection (PVP) and/or Seed Marketing Authorization of KWS sugar beet varieties FIAMMETTA KWS and GIACOMINA KWS, dated December 14, 2017.

34. In 2023, KWS declared in the PINTO (Patent Information and Transparency On-line) database of the European Seed Association that the European counterpart patent application to the '191 patent relate to KWS sugar beet varieties identified as FIAMMETTA KWS and GIACOMINA KWS.

35. FIAMMETTA KWS and GIACOMINA KWS sugar beet varieties have an application date for PVP and/or seed marketing authorization of December 14, 2017, which is more than a year before the earliest possible effective filing date of the '191 patent. Moreover, the field trials for PVP and/or seed market authorization are open to inspection by the public and the public has access to these trials.

36. The FIAMMETTA KWS and GIACOMINA KWS sugar beet varieties were found to be resistant to *Cercospora beticola* and marketed by KWS for this purpose. As a result, the seeds used to grow these KWS sugar beet varieties are identical to the seeds described and claimed in the '191 patent, since they all contain the CR gene identified by the expressed polypeptide of SEQ ID NO:3 and these seeds express a polypeptide that confers resistance to *Cercospora beticola*.

37. Upon information and belief, the seeds used to grow the FIAMMETTA KWS and GIACOMINA KWS sugar beet varieties were pelleted. For example, the FIAMMETTA KWS variety is labeled as being pelleted, as shown below.

Even if they were not, creating pelleted seeds from conventional seeds was routine in the prior art for all the reasons discussed above.

38. Therefore, claim 1 of the '191 patent is either anticipated or rendered obvious by the PVP and/or seed market authorization application of the FIAMMETTA KWS and GIACOMINA KWS sugar beet varieties and their prior public use in field trials in support of these applications.

C. The Claims of the ’191 Patent Are Invalid For Lack of Written Description and Enablement

39. By way of further example and without limiting the grounds of invalidity that will be asserted in this action, each claim of the ’191 patent is also invalid under 35 U.S.C. § 112 for lack of written description and enablement. While the claims cover sugar beet seeds that were generated by traditional breeding techniques with highly random and mutated DNA sequences, which the applicants describe as the SEQ ID NO:1 DNA sequence and the SEQ ID NO:3 amino acid sequence of the claimed CR gene, the applicants never indicate in their specification of the ’191 patent that they deposited biological samples of plant material comprising the resistance gene as a “native trait” to show that they actually possessed the claimed invention. While UBS determined through their own investigation that the claimed CR resistant sugar beet seeds were deposited with the IPK Gene Bank under accession number BETA 1859, this information was never disclosed in the specification of the ’191 patent. Moreover, one of ordinary skill in the art would have no way of arriving at the claimed sequences using traditional breeding methods without resorting to undue experimentation. In addition, the claims cover sugar beet seeds that have at least 95% identity to the claimed SEQ ID NO:3 sequence. As discussed below, this literally covers billions of possible gene sequence combinations. There is no evidence that the inventors were in possession of such a vast genus of sequences. In addition, the person of skill in the art would not be able to make this vast number of sequence possibilities using traditional breeding techniques without undue experimentation.

40. In support of the claims, the patent specification discloses examples where the claimed plants are made using recombinant DNA technology (Examples 1 and 2) or traditional breeding methods (Examples 3 and 4). Thus, properly construed, all of the claims cover genetically modified, *Cercospora beticola* tolerant, sugar beet plants produced by traditional breeding or by recombinant DNA. By traditional breeding methods, the patent describes pooling wild beet material from certain publicly available accension lines as the starting material for a breeding program, which further consisted of crossing 150 resistant plants, selecting plants with optimal resistance, and repeating this process for several generations. *See* '191 patent, Example 3. This was described as resulting in a highly mutated sequence, claimed as the DNA that encodes SEQ ID NO. 3, which the inventors described was the result of random mutations indicating "a significant genetic restructuring" of the native gene where "it was not possible to trace back the resistance gene back to the starting material of the breeding program." *See* '191 patent, Example 4, col. 63:20-25.

41. Although the applicants disclosed the SEQ ID NO. 3 sequence in the patent, they did not describe in their specification depositing these seeds of the mutated sugar beet plant containing this highly mutated fungal resistance gene. Thus, one of skill in the art would not be able to reliably reproduce the claimed inventions as they relate to sugar beet plants produced by traditional breeding by following the teachings of the patent. At best, the skilled person could only make recombinant plants based on the SEQ ID NO. 3 sequence, but not plants using traditional breeding to arrive at the randomly produced highly mutated sequence, which are also covered by the claims. Therefore, the claims are

invalid for lack of enablement because the skilled worker would have to resort to undue experimentation to arrive at the claimed traditionally bred sugar beet plants.

42. Moreover, the claims also cover CR sugar beet seeds and methods of making these seeds that derive their resistance based on the expression of not just the gene encoding the SEQ ID NO. 3 sequence, but genes that encode at least 95% identity to SEQ ID NO. 3. Notably, SEQ ID NO. 3 is 883 amino acids long. Amino acid sequences that have at least 95% identity to this would include anywhere from one difference and up to 44 differences in amino acids throughout the entire sequence, which would literally cover many billions of different combinations. (3.94×10^{26}). The applicants never described CR sugar beet seeds containing all of these different billions of sequences but only CR sugar beet seeds containing DNA that encodes the single SEQ ID NO. 3 sequence. As a result, the claims are invalid for lack of written description because the applicants never showed that they had possession of the CR sugar beet seeds that were the result of expressing all of these different sequence variations. These claims are also invalid for lack of enablement for this same reason because the skilled person would not be able to produce the claimed CR sugar beet seeds with all of these genetic variations without undue experimentation.

43. Thus, because the applicants never described depositing the claimed seeds in their specification, the claims lack written description because one of skill in the art would not recognize that the inventors were in possession of the claimed CR resistant seeds made through traditional breeding techniques. Moreover, the failure of describing this deposit also renders the claims invalid for lack of enablement because the person of skill in the art would have to resort to undue experimentation to arrive at the claimed seeds using

traditional breeding techniques. Finally, the claims are invalid for lack of written description and enablement because they cover seeds with such a vast number of sequence combinations (several billions) which were not in possession by the inventors and which the skilled person could not enable using traditional breeding techniques without undue experimentation.

44. UBS expressly reserves the right to assert additional grounds of invalidity after having the ability to conduct discovery.

45. UBS seeks a declaratory judgment that each claim of the ’191 patent is invalid.

COUNT II

DECLARATORY JUDGMENT OF INVALIDITY OF THE ’944 PATENT

46. The allegations of the preceding paragraphs are incorporated by reference as if fully set forth herein.

47. An actual and substantial controversy has arisen and now exists between the parties concerning the validity of the ’944 patent.

48. Claims 1-22 of the ’944 patent are invalid because the purported inventions therein fail to meet the conditions for patentability specified in 35 U.S.C. §§ 101 *et seq*., including but not limited to 35 U.S.C. §§ 102, 103, and 112, and nonstatutory common law doctrines.

49. By way of example and without limiting the grounds of invalidity that will be asserted in this action, each claim of the ’944 patent is invalid for much of the same reasons set forth above with respect to the invalidity of the claims of the ’191 patent.

50. Whereas the claims of the ’191 patent are mainly directed to sugar beet seeds that contain the claimed CR gene identified by the expressed amino acid SEQ ID NO:3 sequence, the claims of the ’944 patent are substantially similar in that instead of claiming the sugar beet seeds, these claims focus on the sugar beet plants (which are naturally grown from seed) that contain the same claimed CR gene.

51. For example, claim 1 of the ’944 patent states:

> A plant of the subspecies *Beta vulgaris* subsp. vulgaris comprising a nucleic acid molecule encoding a polypeptide that is able to confer resistance to *Cercospora beticola* in a plant in which the polypeptide is expressed, characterized in that the nucleic acid molecule comprises a nucleotide sequence which is selected from the group consisting of:
>
> (a) a nucleotide sequence that encodes a polypeptide having the amino acid sequence according to SEQ ID NO: 3; and
>
> (b) a nucleotide sequence that encodes a polypeptide which has an amino acid sequence that is at least 95% identical to the amino acid sequence according to SEQ ID NO: 3.

52. As a result, the claims of the ’944 patent invalid under 35 U.S.C. § 102 and/or 35 U.S.C. § 103 based on the BETA 1859 deposited seed for the same reasons stated above with respect to the ’191 patent. While this IPK Gene Bank deposit was in the form of seeds, the public at large is able to order these seeds and grow them into plants. In fact, that is exactly what UBS did when it obtained these samples, grew them into plants, and sequenced the plant genome to discover that it contains the exact same CR gene claimed in the ’944 patent. Thus, for all the reasons set forth above with respect to the ’191 patent, the claims of the ’944 patent are also invalid for being anticipated and/or obvious over the BETA 1859 deposited seed.

53. Moreover, for the same reasons set forth above with respect to the claims of the ’191 patent, the claims of the ’944 patent are also anticipated and/or rendered obvious over the European applications for Seed Marketing Authorization of KWS sugar beet varieties FIAMMETTA KWS and GIACOMINA KWS, dated December 14, 2017. These KWS sugar beet varieties were grown to actual sugar beet plants that contained the claimed CR gene and were shown to be resistance to *Cercospora beticola*. Moreover, these sugar beet plants were grown in trials which were open to inspection by the public. Thus, the PFP and/or marketing authorization application and these field trials constitute a prior public use that anticipated or rendered obvious the claims of the ’944 patent.

54. Finally, each claim of the ’944 patent is invalid under 35 U.S.C. § 112 for lack of written description and enablement for the same reasons discussed above with respect to the claims of the ’191 patent. Like the claims of the ’191 patent, the claims of the ’944 patent cover sugar beet plants that contain the claimed CR gene that were generated by traditional breeding techniques. Moreover, like the claims of the ’191 patent, the claims of the ’944 patent cover plant with not just the CR gene identified by the specific SEQ ID NO:3 amino acid sequence, but plants that contain a gene that has an amino acid sequence that is “at least 95% identical” to SEQ ID NO:3. Just as with the ’191 patent claims, the ’944 claims cover plants that can contain literally several billion variations of the CR gene. Because the applicants never described depositing the claimed seeds in their specification, the claims of the ’944 patent also lack written description because one of skill in the art would not recognize that the inventors were in possession of the claimed CR resistant seeds made through traditional breeding techniques. Moreover, the failure of

describing this deposit also renders the claims of the ’944 patent invalid for lack of enablement because the person of skill in the art would have to resort to undue experimentation to arrive at the claimed seeds using traditional breeding techniques. Finally, the claims are invalid for lack of written description and enablement because they cover seeds with such a vast number of sequence combinations (several billions) which were not in possession by the inventors and which the skilled person could not enable using traditional breeding techniques without undue experimentation.

55. UBS expressly reserves the right to assert additional grounds of invalidity after having the ability to conduct discovery.

56. UBS seeks a declaratory judgment that each claim of the ’944 patent is invalid.

COUNT III

DECLARATORY JUDGMENT OF UNENFORCEABILITY OF THE ’191 PATENT

57. The allegations of the preceding paragraphs are incorporated by reference as if fully set forth herein.

58. An actual and substantial controversy has arisen and now exists between the parties concerning the enforceability of the ’191 patent.

59. The ’191 patent and each of its claims are unenforceable for inequitable conduct and fraud on the U.S. Patent and Trademark Office (“Patent Office) by KWS for its failure to comply with the duty of candor and good faith dealing with the Patent Office,

as set forth in one or more provisions of 37 C.F.R. § 1.56 or under other judicially-created bases for unenforceability.

60. By way of further example and without limiting the grounds of unenforceability that will be asserted in this action, KWS, through its attorneys who prosecuted the '191 patent, including Chris N. Davis of the Troutman Sanders LLP law firm, and the named inventors of the patent, Otto Torjek, Dietrich Borchardt, Margaret Rekoske, Wolfgang Mechelke, Britta Schulz, and Jens Christopher Lein ("the named inventors") committed inequitable conduct before the Patent Office by intentionally misrepresenting that the claimed invention was the result of "a significant genetic restructuring" of the native gene where "it was not possible to trace back the resistance gene back to the starting material of the breeding program." *See* '191 patent, Example 4, col. 63:20-25. This statement was made in the specification authored by KWS and the named inventors and submitted by Mr. Davis, on February 18, 2020. *See* Specification at 90. As discussed above, this statement is false because the actual claimed CR resistance gene was contained in a native seed deposited with the IPK Gene Bank as BETA 1859, which was publicly assessable as early as August 6, 2003. Thus, KWS, Mr. Davis, and the named inventors also committed inequitable conduct by failing to disclose this BETA 1859 deposit with the Patent Office, which was anticipatory prior art to the pending claims, especially given the fact that KWS, Mr. Davis, and the named inventors disclosed dozens of other publicly available deposited seeds with their own respective accession numbers. *See* '191 patent, Example 4. This was an intentional attempt to mislead the Patent Office into believing that the claimed inventions were not anticipated and/or obvious because the

claimed SEQ ID NO:1 and SEQ ID NO:3 sequences could not be traced back to publicly available deposited seeds. But for these intentional misleading statements within the patent specification and the intentional withholding of the BETA 1859 deposit information, which constituted material prior art, KWS, Mr. Davis, and the named inventors would not have been able to overcome the Patent Office rejections of the pending claims, and the '191 patent would not have issued.

61. Moreover, KWS, Mr. Davis, and the named inventors also committed inequitable conduct by failing to disclose the prior art FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Application and publicly accessible trials. These individuals must have known about these variety applications and trials because the '191 patent specification is replete with examples of other KWS varieties that the inventors suggested could be used with the claimed invention, such as the DAPHNA, KORTESSA KWS and SABATINA KWS varieties. *See e.g.*, '191 patent, col. 28:58-61 ("Suitable sugar beet varieties for the introduction of the resistance gene are for example BTS 7300 N, BTS 2045, BTS 3750, DAPHNA, KORTESSA KWS or SABATINA KWS"); col. 27:47-50; col. 27:56-59; col. 27:66 – col. 28:3; col. 28:9-13. Thus, KWS, Mr. Davis, and the named inventors intentionally failed to disclose the FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Application and publicly accessible trials which involved sugar beet varieties that contains the claimed CR gene of the '191 patent and were in fact grown by the seeds claimed by this patent. But for this intentional withholding of this prior art, which constituted material prior art because as described above, they actually anticipate the claims of the '191 patent, KWS, Mr. Davis, and the named inventors would not have

been able to overcome the Patent Office rejections of the pending claims, and the '191 patent would not have issued.

62. During prosecution, the pending claims were rejected in an Office Action, dated April 16, 2020. Among the bases of the rejection was a Section 103 obviousness rejection based on Nilsson et al (1999), which disclosed *Cercospora beticola* resistant sugar beet plants and Heijbroek et al. (1995), which disclosed pelleted sugar beet seeds. The Patent Examiner reasoned that because the pending claims covered ***an*** amino acid sequence according to SEQ ID NO:3, and that a sequence as short as a dipeptide (2 amino acid chain) would fall within the scope of the claims, the CR sugar beet plants described in Nilsson would inherently possess at least one identical dipeptide sequence within SEQ ID NO:3. At the same time, the Examiner indicated that if the claims were amended to require that the claimed seeds express a protein comprising an amino acid sequence with at least 95% identity to the complete SEQ ID NO:3 sequence, the claims would be allowable.

63. KWS and the named inventors, through Mr. Davis, responded on May 15, 2020 by amending the claims as suggested by the Examiner while also disputing that the prior art disclosed the elements of the newly amended claims.

64. On July 16, 2020, the Patent Office issued its Notice of Allowance. Critically, the Patent Office provided the following reasons for allowing the claims.

> The following is an examiner's statement of reasons for allowance: the prior art does not teach or fairly suggest a protein having an amino acid sequence that is at least 95% identical to the instant SEQ ID NO: 3. According to the instant specification, the protein of SEQ ID NO: 3 is encoded by the genomic sequence of SEQ ID NO: 1 and is the result of a breeding program that began with open pollination of 150 publically available resistant plants followed by crossing and selection (see page 85). ***The marker and sequence analysis***

> ***shows that the resulting resistance gene cannot be traced back to any of the publically available accessions listed in Table 2 (see paragraph bridging pages 89-90). The data indicates that there was likely a significant genetic restructuring at this locus that took place during the breeding and selection program used to generate the resistance gene of the instant invention (see page 90). Such a genetic restructuring is unpredictable and is neither obvious nor anticipated in the prior art.***
>
> Notice of Allowance at 2-3. (emphasis added).

65. Thus, while KWS, the named inventors, and Mr. Davis convinced the Patent Office that the invention was novel and patentable because it could not be traced back to a publicly available source, such as seed deposits identified by the disclosed accession numbers, and that instead the claimed invention was the result of a highly unpredictable spontaneous genetic restructuring, KWS, Mr. Davis, and the named inventors knew that this was wrong. In fact, the claimed seeds with the claimed CR gene identified by the claimed DNA and amino acid sequences can be traced to the IPK Gene Bank BETA 1859 accession number deposited seed. Equally egregious is that KWS, Mr. Davis, and the named inventors disclosed several dozen other deposited sugar beet seeds by accession number in the prior art (*see* '191 patent, Example 4), ***but not the BETA 1859 accession number***, to falsely suggest that the claimed seeds could not be traced back from a public source and therefore were not anticipated and/or obvious.

66. The BETA 1859 accession number seed deposits are neither cited in the specification nor in any of the Information Disclosure Statements submitted during prosecution. Thus, this intentional failure to disclose the BETA 1859 deposited seeds constitutes a withholding of material prior art because, as demonstrated above, the BETA 1859 seed deposits actually anticipate and/or render obvious the claims of the '191 patent.

The fact that the BETA 1859 seeds contain the ***exact*** CR gene across 3720 nucleotides described and claimed in the '191 patent shows that, on information and belief, KWS, Mr. Davis, and the named inventors knew of this BETA 1859 deposited materials, since these seeds were likely the source of the patented invention instead of a breeding program that began with open pollination of 150 publicly available resistant plants followed by crossing and selection that resulted in significant genetic restructuring of the CR gene, as falsely argued by KWS, Mr. Davis, and the named inventors. The chances that such an extensive breeding program causing the purported significant genetic restructuring could result in the exact same sequence of the CR gene across 3720 nucleotides in the publicly deposited BETA 1859 seeds are scientifically impossible. *See* **Exhibit D**. Yet, despite being aware of this BETA 1859 deposited seed, neither KWS, Mr. Davis, nor the named inventors disclosed this material prior art to the Patent Office. This, along with their intentional misrepresentation of the source of the claimed CR gene within the claimed seeds, constitute inequitable conduct before the Patent Office resulting in the unenforceability of the claims.

67. Moreover, despite knowing of the FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Application and publicly accessible trials, KWS, Mr. Davis, and the named inventors intentionally withheld this invalidating prior art from the Patent Office since they are neither described in the patent specification nor disclosed in the Information Disclosure Statements submitted during prosecution. Even though these individuals cited other KWS sugar beet seed varieties within the patent specification, such as DAPHNA, KORTESSA KWS and SABATINA KWS, which they represented could be used with the claimed inventions, on information and belief, they intentionally failed to

disclose the very KWS seed varieties that embodied the claims of the ’191 patent. This constitutes inequitable conduct before the Patent Office resulting in the unenforceability of the claims.

68. UBS expressly reserves the right to assert additional grounds of unenforceability after having the ability to conduct discovery.

69. UBS seeks a declaratory judgment that each claim of the ’191 patent is unenforceable.

COUNT IV

DECLARATORY JUDGMENT OF UNENFORCEABILITY OF THE ’944 PATENT

70. The allegations of the preceding paragraphs are incorporated by reference as if fully set forth herein.

71. An actual and substantial controversy has arisen and now exists between the parties concerning the enforceability of the ’944 patent.

72. For the reasons set forth above with respect to the claims of the ’191 patent, each claim of the ’944 patent is unenforceable for inequitable conduct and fraud on the Patent Office by KWS for its failure to comply with the duty of candor and good faith dealing with the Patent Office, as set forth in one or more provisions of 37 C.F.R. § 1.56 or under other judicially-created bases for unenforceability.

73. The claims of the ’944 patent are unenforceable under the doctrine of infectious unenforceability. The ’944 patent issued from Application No. 17/005,909, which is a continuation application of Application No. 16/793,505, which issued as the

'191 patent. As a result, the '191 patent is the "parent" patent of the '944 patent, and as such, it shares essentially the same specification, the same inventors, claims priority to the same PCT/EP2019/054008 application, and the claims are substantially the same.

74. In addition, the prosecution history of the '944 patent mirrors closely the prosecution history of the '191 patent, with essentially the same rejections and prior art raised in both prosecutions, where the same attorney, Chris N. Davis of the Troutman Sanders LLP law firm, prosecuted both patent applications before the same Patent Examiner.

75. As discussed above, the claims of the '191 patent are unenforceable based on inequitable conduct. This inequitable conduct during the prosecution of the '191 patent bears an immediate and necessary relation to the enforcement of the '944 patent because the inequitable conduct that occurred during the prosecution of the parent '191 patent is directly related to the claims of the '944 patent.

76. Just as with the '191 patent, the exact same intentional misrepresentations within the patent specification were made in the '944 patent, where KWS, the named inventors, and Mr. Davis represented that the claimed invention was the result of "a significant genetic restructuring" of the native gene where "it was not possible to trace back the resistance gene back to the starting material of the breeding program." *See* '944 patent, Example 4, col. 63:54-59. Moreover, the same BETA 1859 deposited seeds is anticipatory prior art over the claims of both the '191 and '944 patents, and as a result, the intentional failure by KWS, the named inventors, and Mr. Davis to disclose this BETA 1859 prior art during the prosecution of the '944 patent, along with the same misrepresentations within

both patents regarding the source of the CR gene, constitute inequitable conduct before the Patent Office for the same reasons discussed above with respect to the claims of the '191 patent. In addition, the FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Application and publicly accessible trials are anticipatory prior art to the claims of the '944 patent. The '944 patent cites to the same references to other KWS sugar beet varieties, such as DAPHNA, KORTESSA KWS and SABATINA KWS, which the inventors represented could be used with the claimed inventions. Thus, even though KWS, Mr. Davis, and the named inventors knew of the existence of other KWS seed varieties that could be used with the claimed inventions, they intentionally failed to disclose the FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Application and publicly accessible trials that actually embodied the claimed inventions of the '944 patent. This constitutes inequitable conduct before the Patent Office for the same reasons discussed above with respect to the claims of the '191 patent.

77. Therefore, based on the fact that the '191 and '944 patents are within the same family, claim the same priority date, share the same inventors and specification, have substantially similar claims with a substantially similar prosecution file history, contain the same intentional misrepresentation regarding the source of the claimed CR gene, and the fact that the same BETA 1859 deposited seed and the FIAMMETTA KWS and GIACOMINA KWS Marketing Authorization Application and publicly accessible trials anticipate the claims of both patents, which were intentionally not disclosed during prosecution of the '944 patent, the claims of the '944 patent are also unenforceable under the doctrine of infectious unenforceability because the inequitable conduct during

prosecution of the ’191 patent bears an immediate and necessary relation to the enforcement of the ’944 patent.

78. UBS expressly reserves the right to assert additional grounds of unenforceability after having the ability to conduct discovery.

79. UBS seeks a declaratory judgment that each claim of the ’944 patent is unenforceable.

COUNT V

DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE ’191 PATENT

80. The allegations of the preceding paragraphs are incorporated by reference as if fully set forth herein.

81. An actual and substantial controversy has arisen and now exists between the parties concerning whether the manufacture, use, intended sale, and/or offer for sale or importation of UBS’s accused CR sugar beet seed products infringes any valid claim of the ’191 patent, either directly or indirectly, literally, under the doctrine of equivalents, or otherwise.

82. By way of example and without limiting the grounds of non-infringement that will be asserted, UBS’s accused CR sugar beet seed products do not infringe the claims of the ’191 patent if those claims are construed to be limited to sugar beet seeds that were developed using recombinant DNA technology. UBS’s accused seed products were produced by conventional breeding techniques and not by recombinant DNA technology, and therefore, if the claims are construed to be limited to seeds that are made using

recombinant DNA technology, UBS's accused seed products would not infringe any of the claims of the '191 patent.

83. UBS expressly reserves the right to assert additional grounds of non-infringement after having the ability to conduct discovery and the Court has construed the claims.

84. UBS seeks a declaratory judgment that the manufacture, use, intended sale, and/or offer for sale or importation of its accused CR sugar beet seed products do not and will not infringe any valid claim of the '191 patent.

COUNT VI

DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '944 PATENT

85. The allegations of the preceding paragraphs are incorporated by reference as if fully set forth herein.

86. An actual and substantial controversy has arisen and now exists between the parties concerning whether the manufacture, use, intended sale, and/or offer for sale or importation of UBS's accused CR sugar beet seed products infringes any valid claim of the '944 patent, either directly or indirectly, literally, under the doctrine of equivalents, or otherwise.

87. By way of example and without limiting the grounds of non-infringement that will be asserted, UBS's accused CR sugar beet seed products do not infringe the claims of the '944 patent if those claims are construed to be limited to sugar beet plants that were developed using recombinant DNA technology. UBS's accused seed products were

produced by conventional breeding techniques and not by recombinant DNA technology, and therefore, if the claims are construed to be limited to plants that are made using recombinant DNA technology, UBS's accused seed products would not infringe any of the claims of the '944 patent.

88. UBS expressly reserves the right to assert additional grounds of non-infringement after having the ability to conduct discovery and the Court has construed the claims.

89. UBS seeks a declaratory judgment that the manufacture, use, intended sale, and/or offer for sale or importation of its accused CR sugar beet seed products do not and will not infringe any valid claim of the '944 patent.

JURY DEMAND

Pursuant to Federal Rules of Civil Procedure 38(b), UBS demands a trial by jury of all issues so triable.

PRAYERS FOR RELIEF

WHEREFORE, Plaintiff UBS requests that judgment be entered in favor of UBS and against KWS:

a. Declaring each claim of the '191 patent invalid;

b. Declaring each claim of the '944 patent invalid;

c. Declaring each claim of the '191 patent unenforceable;

d. Declaring each claim of the '944 patent unenforceable;

e. Declaring that UBS does not and will not infringe any valid claim of the '191 patent, including but not limited to through the manufacture, use, intended sale, and/or offer for sale or importation of UBS's accused CR sugar beet seed products;

f. Declaring that UBS does not and will not infringe any valid claim of the '944 patent, including but not limited to through the manufacture, use, intended sale, and/or offer for sale or importation of UBS's accused CR sugar beet seed products;

g. Enjoining KWS from enforcing the Patents-in-Suit;

h. A finding that this case is exceptional under 35 U.S.C. § 285;

i. Awarding UBS its costs and legal fees; and

j. Such other relief as this Court or a jury may deem proper and just under the circumstances.

Dated: January 6, 2025

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