



2026:DHC:1828



* **IN THE HIGH COURT OF DELHI AT NEW DELHI**

% Judgment delivered on: 28/02/2026

+ **C.A.(COMM.IPD-PAT) 19/2023 & I.A. 20715/2025**
CRYSTAL CROP PROTECTION LTDAppellant

versus

**ASSISTANT CONTROLLER OF PATENTS AND DESIGNS
& ORS.**Respondents

Advocates who appeared in this case

For the Appellant : Ms. Priyam Lizmary Cherian,
Advocate.

For the Respondents : Ms. Anubha Bhardwaj, CGSC with
Ms. Ananya Shamsbery, Advocates
for R-1.
Mr. Ajay Amitabh Suman, Mr.
Shravan Kumar Bansal, Mr. Rishi
Bansal, Mr. Pankaj Kumar, Mr.
Deepak Srivastava, Mr. Rishabh
Gupta, Ms. Shruti Manchanda and Ms.
Deasha Mehta, Advocates for R-2.

**CORAM:
HON'BLE MR. JUSTICE TEJAS KARIA**

JUDGMENT

TEJAS KARIA, J

I.A. 20715/2025

INTRODUCTION

1. This is an Application filed on behalf of Respondent No. 2 under Rule 6(v)(xii) of Delhi High Court Intellectual Property Division Rules, 2022



(“**IPD Rules**”), Order XLI Rule 27 read with Section 151 of the Code of Civil Procedure, 1908 (“**CPC**”) for placing additional documents on record.

2. The specifics of the additional documents are as under:
 - a. Registration of Halosulfuron Methyl 75% with EPA, USA (2009)
 - b. Registration of Metribuzin with EPA, USA (2009)
 - c. Publication: Metribuzin Analysis of Risks to Endangered and Threatened Salmon and Steelhead EPA, (2004)
 - d. Registration of Tribenuron Methyl with EPA, USA (2009)
 - e. Registration of Tribenuron Methyl with EPA, USA (2008)
 - f. Product Details from University of Tennessee Record (2008)
 - g. Description of Carfentrazone-ethyl as PPO Inhibitor (University of Hertfordshire, since 1997)
 - h. Article on PPO 14 (E) Inhibitor Function (University of California)
 - i. Registration of Carfentrazone-ethyl EPA, (1997/1998)
 - j. Article: Persistence of Sulfosulfuron Applied in Wheat on Succeeding Crop of Sorghum (2007)
 - k. Resolution in favour of Ms. Tarannum Khan

SUBMISSIONS ON BEHALF OF THE APPELLANT

3. The learned Counsel for the Appellant submitted as under:
 - 3.1. The present Application has been filed to bring on record documents that were not presented to the learned Controller at the time of adjudication of Pre-Grant Opposition I and were available in public domain on the date of publication of the Subject Application, as Respondent No. 2 admits, “6.a...*The documents*



listed...are publicly available records with the Environmental Protection Agency (EPA), USA.”

- 3.2. Respondent No. 2 has not established any of the requirements under Order XLI Rule 27 of the CPC as: (i) it is not Respondent No. 2’s case that the learned Controller refused to admit the additional documents under Order XLI Rule 27(1)(a) of the CPC; (ii) has not shown how despite its due diligence these documents were not within its knowledge under Order XLI Rule 27(1)(aa) of the CPC; and (iii) how the additional documents would enable pronouncement of a judgement under Order XLI Rule 27(1)(b) of the CPC.
- 3.3. The Act provides various opportunities to third parties to supply documents to challenge the patentability of an application *viz.*:
- a. While making representations before the Patent Office: (i) Section 25(1) of the Act read with Rule 55(1) of the Rules: representation before the grant of patent along with evidence; and (ii) Section 25(2) of the Act: after patent grant but before the expiry of one year from the publication of patent grant, by any person interested.
 - b. Before hearing before the Patent Office: (i) Rule 60 of the Rules: Further evidence only can be submitted with the leave of the learned Controller but before a hearing under Rule 62 of the Act; (ii) Rule 62(4) of the Rules: party intending to rely on publication at the hearing not already mentioned in the notice, statement or evidence, shall give not less than five days’ notice;



and (iii) Rule 128 of the Rules: where the learned Controller is of the opinion that for proper prosecution or completion of any proceedings it is necessary for a party to file a document or produce evidence, for which provision has not been made in the Act, he may, by notice require such party to file the document or produce the evidence.

- 3.4. Respondent No. 2 had several occasions available to file additional documents particularly at the stages of Pre-Grant Opposition I, Reply Statements I and II and the Hearing. The present Application to place the additional documents on record was filed on 19.08.2025. This shows a clear lack of diligence over a period of several years. The law requires an act to be done in a particular manner; the act has to be done in that manner alone or not done at all. All other methods of doing the act are necessarily forbidden. Respondent No. 2 has not produced this evidence in the manner prescribed in law, and therefore, cannot be allowed at this stage. Reliance was placed upon the decision in *Akebia Therapeutics INC. v. Controller General of Patents*, 2023 SCC OnLine Del 4841 while making the above submission.
- 3.5. The validity of a patent can be challenged even after grant. The Act provides different remedies to a person interested to raise a challenge to a patent. Section 25(2) of the Act allows a “*person interested*” to challenge the grant of a patent. Such notice of opposition can include additional documents that the opponent may wish to rely upon. Further, Section 64(1) of the Act allows seeking



revocation of a patent, where additional documents may be relied upon.

- 3.6. Respondent No. 2 has not shown how admission of the additional documents is necessary to pronounce a satisfactory judgment. The requirement of the Court to enable it to pronounce judgment or for any other substantial cause is not likely to arise ordinarily unless some inherent lacuna or defect becomes apparent on an examination of evidence. Only if absence of such additional documents / evidence would result in a defective decision, would Order XLI Rule 27(b) of the CPC come into effect. Order XLI Rule 27(b) of the CPC, which permits the admission of additional evidence if the appellate court “*requires*” it to “*pronounce judgment, or for any other substantial cause*”. This provision does not apply automatically. The test is whether the Court can pronounce a satisfactory judgment on the materials already available on record without the additional evidence. There has been no plea of apparent defect / lacuna in the facts of the present Appeal or how non-admission of additional documents would result in a defective decision. Caution is to be exercised in dealing with claims for additional evidence, after a long lapse of time. Here, the additional documents are sought to be placed after two years of filing the present Appeal. Mere difficulty to pronounce a judgment is not sufficient to allow additional documents at the stage of an appeal. Reliance was placed upon the following decisions while making the above submission:



- a. *K. Venkataramiah v. A. Seetharama Reddy*, 1963 SCC OnLine SC 216
 - b. *Wadi v. Amilal and Others*, (2015) 1 SCC 677
 - c. *N. Kamalam v. Ayyasamy*, (2001) 7 SCC 503 4
 - d. *Union of India v. Ibrahim Uddin*, (2012) 8 SCC 148
- 3.7. Section 107 read with Order XLI Rule 27 of the CPC does not allow a litigant to patch up the weakness parts of their case and fill up omissions for the first time in the Court of appeal. Allowing these documents would result in allowing Respondent No. 2 to make a fresh case by adding and varying the evidence, previously examined, in order to prove a case which had not been set up before the learned Controller. Reliance was placed upon the decisions in *Md. Saifur Rahman v. State of Assam*, 1983 SCC OnLine Gau 8 and *Hurpurshad v. Sheo Dyal*, 1876 SCC OnLine PC 12 while making the above submission.
- 3.8. Accordingly, the present Application shall be dismissed.

SUBMISSIONS ON BEHALF OF RESPONDENT NO. 2

4. The learned Counsel for Respondent No. 2 submitted as under:
- 4.1. The onus is on the Appellant to prove inventive step as per Section 2(1)(ja) of the Act. The Supreme Court in *Novartis AG v. Union of India*, (2013) 6 SCC 1, has clearly held that the touchstone for patentability in India is strict, and the applicant must demonstrate not only novelty but also a significant technical advance having economic significance or an inventive step as defined under Section 2(1)(ja) of the Act. The burden of proof lies squarely upon the



applicant /appellant to establish such inventive step. The Appellant has not disputed this legal proposition. Yet, despite such an admitted position, the Appellant has neither furnished efficacy data nor made any endeavor to distinguish the subject matter from existing prior arts.

- 4.2. It is a statutory and manual requirement to disclose relevant prior arts. The Act read with the Patent Manual requires that every applicant must disclose all material prior arts known to him in the specification itself. Such a disclosure ensures that the examination process is conducted fairly and with complete knowledge of the existing state of the art.
- 4.3. The Appellant has admitted that additional documents and prior arts are vital and necessary for adjudication of the Subject Patent. The Appellant has not given any specific reply contesting the prior arts, their relevancy, or their effect on the Subject Patent by Respondent No. 2 in the present Application for defeating its alleged patentability. The present case is within the ambit of Order XLI Rule 27(1)(b) of the CPC justifying the production of such prior arts before this Court. Even Sections 13(1)(a) and 13(1)(b) of the CPC provides for testing the patentability of the Subject Application on the basis of all the prior arts, in existence prior to filing of the Subject Application.
- 4.4. The mere grant of a patent by the learned Controller does not create presumption of its validity, as the examination process may not encompass all relevant prior arts or grounds of objection. Patents



must be evaluated for patentability based on the entirety of prior arts available before the filing date, as incomplete consideration by the learned Controller can lead to erroneous grants. The patent examination process is not infallible, and post-grant proceedings provide an opportunity to rectify oversights in considering prior arts. Reliance was placed upon the decision in ***F. Hoffmann-LA Roche Limited v. Cipla Ltd.***, 2009 (40) PTC 125 (Del) while making the above submission.

- 4.5. Counterclaims for patent invalidity based on prior arts can be entertained even after the patent's expiry, as the grant's validity remains contestable in ongoing infringement suits. To safeguard public interest, Courts must scrutinize patents against all prior arts to avoid granting monopolies on non-inventive subject matter. It promotes a balanced intellectual property regime, ensuring patents are revoked if prior arts reveal anticipation or obviousness. Reliance was placed upon the decisions in ***Macleods Pharmaceuticals Ltd. v. Controller of Patents***, Neutral Citation: 2025:DHC:158 and ***F. Hoffmann-La Roche Ltd.*** (*supra*) while making the above submission.
- 4.6. The mere availability in the public domain does not mean that such documents were within the knowledge, power, or possession of Respondent No. 2. The duty to disclose such prior arts lay upon the Appellant while filing the Subject Application. Thus, the plea of delay or public domain does not absolve the Appellant of his



statutory duty to disclose all the prior arts while filing the Subject Application.

- 4.7. The Appellant has not furnished any efficacy data or evidence to demonstrate how the present invention is distinguishable from prior arts. In *Novartis AG (supra)*, the Supreme Court categorically mandated that incremental inventions without demonstrable enhancement of efficacy cannot qualify for patent protection. In the absence of such data, the claimed invention cannot be said to involve an inventive step.
- 4.8. The Appellant has misconceived and sought to misapply the decision in *Ibrahim Uddin (supra)*. There is contextual misapplication as the said decision pertains to a private land title dispute (in *personam*), not a public monopoly right (in *rem*) like patents. The public interest imperative in patent matters overrides strict procedural barriers outlined in the said decision. It is the Court's inherent duty to examine all prior arts in patentability assessment necessitates admission, rendering the *Ibrahim Uddin (supra)* restrictions inapposite. The said decision's emphasis on "*substantial cause*" actually supports the admission due to fraud and public policy, contrary to the Appellant's selective reliance upon the said decision. There is precedential divergence as patent appeals warrant liberal evidentiary admission unlike the rigid framework in the said decision which has non-intellectual property context.



- 4.9. When this Court granted liberty to file written submissions on relevancy on 03.09.2025, the Appellant neither challenged the details provided in the present Application under Order XLI Rule 27 of the CPC in its written submission nor reliance on any further submission has been made. There is not any pleading with respect to rebuttal on relevance of additional prior arts. In absence of any pleading in the written submission, the Appellant cannot argue what is not pleaded.
- 4.10. The grant of a patent constitutes an action in *rem*, conferring upon the patentee a monopolistic right that operates *erga omnes* i.e., against all persons. Given the far-reaching implications, the Act is designed to strictly regulate and scrutinize such grants to prevent unwarranted monopolies. Reliance was placed upon the decisions in *M/s Golden Tobie Private Limited (Formerly known as Golden Tobie Limited) v. M/s Golden Tobacco Limited*, Neutral Citation: 2021:DHC:1820 and *Indian Network for People living with HIV/AIDS v. Union of India & Ors.*, 2009 (39) PTC 468 (Mad) (DB) while making the above submission.
- 4.11. The Act incorporates multi-layered framework for challenging patents including pre-grant opposition under Section 25(1) of the Act, post-grant opposition under Section 25(2) of the Act, revocation petitions under Section 64 of the Act, revocation by way of counterclaim in infringement suits under Section 64(1) of the Act and appeals against the learned Controller's orders under Section 117A of the Act. Notably, counterclaims for revocation are



maintainable even against expired patents. This scheme underscores the legislative intent to allow repeated scrutiny of patent validity. Reliance was placed upon the decisions in *Macleods Pharmaceuticals Limited (supra)* and *F. Hoffmann-La Roche Ltd. (supra)* while making the above submission.

- 4.12. Invention and patentability are different. For an invention to qualify as patentable, it must satisfy the criteria under Section 2(1)(j) of the Act, it must be new, involve inventive step, and be capable of industrial application that involves technical advance as compared to existing knowledge. Reliance was placed upon the decision in *Novartis AG (supra)* while making the above submission.
- 4.13. In alignment with Section 2(1)(j) of the Act all prior arts existing before the filing date of the patent application must be comprehensively evaluated to assess patentability. This includes publications, public use, or any other disclosures worldwide that could render the invention obvious. Failure to account for such prior art undermines integrity of the patent examination process and contravenes the Act's objective of granting patents to genuine inventions only. The Patent Manual mandates that the patent applicant disclose all relevant prior arts in the specification itself, including those that may anticipate or render the invention obvious. This disclosure facilitates thorough examination by the learned Controller and opponents. In the present case, the Appellant has deliberately suppressed the additional documents, which qualify as pertinent prior arts, thereby misleading the Patent Office. Reliance



was upon Clause 5.3.5, Patent Manual, Version 3.0, dated 26.11.2019 while making the above submission.

- 4.14. The Appellant has entirely failed to address the relevancy and necessity of the additional documents within the meaning of Order XLI Rule 27(1)(b) of the CPC which permits additional evidence if required to enable the Appellate Court to pronounce proper judgment. This omission leaves the Appellant with no ground to challenge admission of these additional documents, conceding their admissibility. It is a well-established proposition that an application under Order XLI Rule 27 of the CPC for adducing additional document must be decided conjointly with the main appeal, rather than deciding prior to Appeal. The application should be considered alongside the merits of the appeal. Reliance was placed upon the following decisions while making the above submission:
- a. *Eastern Equipment & Sales Limited v. Ing. Yash Kumar Khanna*, 2008 (12) SCC 739
 - b. *Rameshwari Devi and Another v. Rakesh Mishra*, Neutral Citation: 2024:AHC:34990
 - c. *Savitri Devi v. Gayatri Devi & Ors.*, 2010 (114) DRJ 327
 - d. *B. Nagaraja Reddy v. B. Sambo Sankar Reddy*, 2020 SCC OnLine AP 4623
 - e. *Rajathi Ammal and Others v. Venkatasubbu Reddiar and Others*, 2021 SCC OnLine Mad 11251
- 4.15. Order XLI Rule 27 of the CPC empowers the Appellate Court to admit additional evidence even if not strictly relevant under



traditional evidentiary rules, provided it is necessary for the pronouncement of a just and proper judgment. The additional documents meet this threshold as envisaged under Section 2(1)(j) of the Act, ensuring a complete record for deciding the appeal. Reliance was placed upon the following decisions while making the above submission:

- a. *K. Venkataramiah (supra)*
 - b. *Northern Eastern Railway Administration, Gorakhpur v. Bhagwan Das (Dead) by LRs*, 2008 (8) SCC 511
 - c. *Sayed Abdul Khader v. Rami Reddy and Others*, 1979 (2) SCC 601
 - d. *Wadi (supra)*
 - e. *Ibrahim Uddin (supra)*
- 4.16. Order XLI Rule 24 of the CPC mandates that the Appellate Court dispose of the appeal on its merits wherever possible, with remand to the Trial Court permitted only in the rarest of cases where the record is insufficient. It is the duty of the Trial Court and the Appellate Court to elicit the truth, and judgment should be based on truth. Reliance was placed upon the following decisions while making the above submission:
- a. *Union of India and Another v. Umrao Kevalchand Bothra*, 2018 SCC OnLine Bom 2868
 - b. *Ashwinkumar K. Patel v. Upendra J. Patel and Others*, (1999) 3 SCC 161



c. *High Court Bar Association, Allahabad v. State of Uttar Pradesh and Others*, 2024 SCC (6) 267

4.17. Accordingly, the present Application shall be allowed, and the additional documents shall be taken on record.

ANALYSIS AND FINDINGS

5. Respondent No. 2 has discovered that the additional documents are highly pertinent to resolve the dispute between the Parties. Through the present Application, Respondent No. 2 seeks to introduce the abovementioned additional documents, which were not available to Respondent No. 2 at the time of filing of the Appeal.

6. Respondent No. 2 became aware of these prior art references during the preparation of the case and, and even more recently, additional documents have come to light. These documents are filed *vide* separate list of documents dated 19.08.2025.

7. The learned Counsel for Respondent No. 2 has submitted the following table to establish the relevancy of the additional documents:

S. No	Impugned Patent Feature	Disclosure in Prior Art	Para of O 41 R27	Relevance / PSITA Motivation
a.	Composition: Halosulfuron Methyl 12% w/w + Metribuzin 55% w/w	GWN-9889: Metribuzin 58.3% + Halosulfuron Methyl 11.2% w/w + Tribenuron Methyl 5.5% w/w	EPA Record – Para 5(a)-(e)	Prior art already discloses both active ingredients at nearly identical ratios; only difference is omission of Tribenuron Methyl.
b.	Target crop: (Sugarcane)	EPA data: Halosulfuron Methyl	EPA Record – Para 5(a)-	PSITA would omit Tribenuron Methyl



		and Metribuzin – documented sugarcane herbicides; Tribenuron Methyl – not targeted to sugarcane	(e)	from GWN-9889 when creating sugarcane-specific herbicide due to its lack of sugarcane efficacy.
c.	Halosulfuron Methyl – Sulfonylurea group herbicide	GWN-9889: Same classification; Tribenuron Methyl also Sulfonylurea group	EPA Record – Para 5(a)-(e)	Structural & functional similarity makes omission of Tribenuron Methyl a predictable, routine modification.
d.	Metribuzin – (photosynthesis blocker)	Prior art: Metribuzin well-known in sugarcane weed control; inhibits electron transport in photosystem II	EPA Record – Para 5(c), (g), (h)	Substitution of a PPO inhibitor (e.g., Carfentrazone) with a PSII inhibitor already known for sugarcane use is obvious to PSITA.
e.	Known combination: Halosulfuron Methyl + Carfentrazone-ethyl	2008 product label: Carfentrazone-ethyl (50%) + Halosulfuron-methyl (12.5%)	Para 5(f)-(g)	PSITA could replace Carfentrazone-ethyl with Metribuzin because both disrupt photosynthesis and Metribuzin has proven sugarcane compatibility.
f.	Alternative combination: Metribuzin + Sulfosulfuron	US 5,900,048: Metribuzin (60%) + Sulfosulfuron (15%) – applied to wheat	Para 5(j)	Sulfosulfuron and Halosulfuron are both Sulfonylureas; PSITA motivated to swap Sulfosulfuron for Halosulfuron when



				targeting sugarcane.
g.	Crop specificity	Carfentrazone-ethyl registered for wheat, corn, soybeans (1997), not sugarcane	Para 5(i)	Reinforces motivation to replace Carfentrazone with sugarcane-specific active (Metribuzin).

8. Documents Nos. (a) to (e) discuss about the active ingredients halosulfuron-methyl and metribuzin. These herbicidal agents are discussed targeting *saccharum officinarum* (sugarcane). Therefore, these documents are relevant to pronounce the proper judgement in this case.

9. Documents Nos. (c), (g) to (i) discuss the function of PPO inhibitor 14(E). These documents also discuss the use of metribuzin on sugarcane and showing its function through the inhibition of electron transport in the photosynthesis pathways. Therefore, these documents become relevant.

10. Document Nos. (f) and (g) discuss the use of a combination of carfentrazone-ethyl (50%) and halosulfuron-methyl (12.5%). The documents also show use of carfentrazone-ethyl with respect to PPO 14 (E) Inhibitor Function while metribuzin (27%) was also shown as PPO 14 (E) Inhibitor Function. Document No. (j) shows that it also belongs to the sulfonylurea group of herbicides.

11. The IPD Rules under Rule 6 (iv) and (v) allows the additional documents with the leave of the Court. The party who submits the additional documents have to specify the details and relevance of the additional documents. The Rule 6 (iv) and (v) is reproduced hereunder:



“6. IPD Procedure for Appeals

(iv) Documents that are not part of the record of the IPO shall generally not be accepted by the IPD except with the leave of the Court. 7

(v) Memorandum of appeal shall specify as to whether the documents being filed are part of the record of the IPO and if any additional documents are being filed, the details and relevance thereof shall be specified. Such documents shall be accompanied with an application seeking leave of the Court, in which case principles akin to Order XLI Rule 27 of the Code of Civil Procedure, 1908 would apply.”

12. In view of the above, the additional documents sought to produced are relevant for pronouncing the judgement in this Appeal and, therefore, they are considered during the course of the hearing of the present Appeal.

C.A.(COMM.IPD-PAT) 19/2023

INTRODUCTION

13. The present Appeal has been filed under Section 117A of the Patents Act, 1970 (“**Act**”) against the order dated 28.03.2023 (“**Impugned Order**”) passed by the Assistant Controller of Patents and Designs (“**Respondent No. 1 / Controller**”) rejecting grant of patent to the Indian Patent Application No. 2228/DEL/2011 (“**Subject Application**”) titled ‘*Herbicide Composition for Field Crops*’ (“**Subject Patent**”) under Section 25(1) of the Act.

FACTUAL MATRIX

14. The Subject Application was filed on 05.08.2011 before the Patent Office, Delhi (“**Patent Office**”) by the Appellant, *Crystal Phosphates Ltd.* The Appellant later changed its name to *Crystal Crop Protection Ltd.* The Complete Specification in the Subject Application was filed on 06.08.2012.



15. The Appellant filed the request for examination on 10.10.2012. The Subject Application was published in the Patent Office Journal under Section 11A of the Act on 08.02.2013.

16. On 16.03.2017, Respondent No. 2, *Haryana Pesticides Manufactures' Association* filed the pre-grant opposition under Section 25(1) of the Act to the Subject Application (“**Pre-Grant Opposition I**”). Respondent No. 1 issued the first examination report in the Subject Application on 05.01.2018 (“**FER**”). The Appellant filed the response to the FER on 02.05.2018 (“**Reply**”). The reply statement to the Pre-Grant Opposition I was filed by the Appellant on 20.07.2021 (“**Reply Statement I**”).

17. On 07.01.2022, Respondent No. 3, Dr. Meera Sharma filed the pre-grant opposition under Section 25(1) of the Act to the Subject Application (“**Pre-Grant Opposition II**”). The reply statement along with a claim amendment to the Pre-Grant Opposition II was filed by the Appellant on 15.10.2022 (“**Reply Statement II**”).

18. The replication filed by Respondent No. 3 to the Reply Statement II on 21.11.2022. Hearing notice under Section 25(1) of the Act was issued on 23.12.2023 (“**Hearing Notice**”) scheduling the hearing for Pre-Grant Oppositions I and II on 02.02.2023 (“**Hearing**”).

19. During the Hearing, oral submissions were conducted by the Parties. On 15.02.2023, the Appellant filed a Petition under Rule 138 of the Patent Rules, 2003 (“**Rules**”) for extension of one month for filing the post-hearing written submissions. Respondent Nos. 2 and 3 filed their respective post-hearing written submissions on 17.02.2023.



20. On 07.03.2023, the Appellant filed Form 13 with minor amendments in the Complete Specification in the Subject Application. The Appellant filed its written submissions on 09.03.2023.

21. Subsequently, Respondent No. 1 issued the Impugned Order rejecting the Subject Application stating that the Subject Patent:

- a. is not an invention under Section 2(1)(ja) of the Act;
- b. does not have an inventive step in view of the disclosure of the prior arts and claim nos. 1 to 7 are refused by Respondent No. 1 under Section 25(1)(e) of the Act; and
- c. is not patentable under Section 3(e) of the Act and the claim nos. 1 to 7 are refused by Respondent No. 1 under Section 25(1)(f) of the Act.

SUBMISSIONS ON BEHALF OF THE APPELLANT

22. The learned Counsel for the Appellant submitted as under:

- 22.1. The Appellant is a company registered under the Companies Act, 1956. The Appellant is a research and development company engaged in the crop protection manufacturing, marketing and sale of agro-chemicals and agro-products being insecticides, fungicides, herbicides, plant growth regulators / micronutrients. The products of the Appellant cater to the entire lifecycle of crops, from sowing to harvesting. The Appellant provides crop protection solutions to Indian farmers to assist them to maximize productivity and profitability.
- 22.2. The Subject Patent relates to synergistic herbicidal ready to use composition for control of major unwanted vegetation in a wide



variety of agricultural crops, wherein the herbicidal composition comprises synergistically effective amounts of a first active ingredient i.e., halosulfuron-methyl and a second active ingredient i.e., metribuzin combined in specific weight concentrations.

- 22.3. The object of the present invention is to provide a synergistically effective amount of each of the active ingredients such that each ingredient significantly enhances and abets the activity of the other active ingredient. The first active ingredient, halosulfuron-methyl belongs to the chemical class of sulfonylurea and is a known systemic herbicide. Halosulfuron-methyl is absorbed by the root system and / or leaf surface and translocated to meristem tissues where it inhibits synthesis of essential amino acids valine, leucine, and isoleucine, thereby resulting in rapid cessation of cell division and plant growth in both roots and shoots. The second active ingredient, metribuzin belongs to the chemical class of triazinone and exhibits selective systemic action. It inhibits the photosynthetic activities and disrupts plant growth, ultimately leading to death of target weeds. The third active ingredient, tribenuron-methyl is optional or does not contribute to the efficacy of the ternary combination of D1. D1 teaches away from the present invention for at least the reason that tribenuron-methyl is an essential active ingredient of D1, without which, the ternary composition of D1 would be lacking in efficacy. A person skilled in the art (“**PSITA**”) would not have any reasonable reason to “remove” tribenuron-methyl, and that “removing” tribenuron-methyl would yield an



“effective” combination, i.e., the binary composition of the present invention. The “mere” identification of metribuzin and halosulfuron-methyl at similar concentrations as being common between D1 and the present invention is wholly insufficient for D1 being relevant. Any such conclusion of relevancy is the sole result of hindsight and cherry picking, which is to be strictly avoided in inventive step determination. Reliance was placed upon the decision in *Bristol-Myers Squibb Holdings Ireland Unlimited Company and Ors. v. BDR Pharmaceuticals International Pvt. Ltd. and Anr.*, 2020 SCC OnLine Del 1700 while making the above submission.

- 22.4. The present invention discloses the ready to use synergistic composition of the herbicides including weight concentration of halosulfuron-methyl in said composition to be in the range of 10 to 15% and weight concentration of metribuzin in said composition to be in the range of 50 to 60%.
- 22.5. The inventive step of the present invention lies in the fact that a synergistic effect is achieved by the combination of the two active ingredients in specific weight concentrations of the active ingredients. It is a trite that if the observed effect of the combination of two active ingredients is over and above the expected additive effect of the individual ingredients, then such an effect is synergistic and the combination is entitled to patent protection. Reliance was placed upon the decisions in *Biomoneta Research Pvt. Ltd. v. Controller General of Patents Designs and Anr.*, 2023



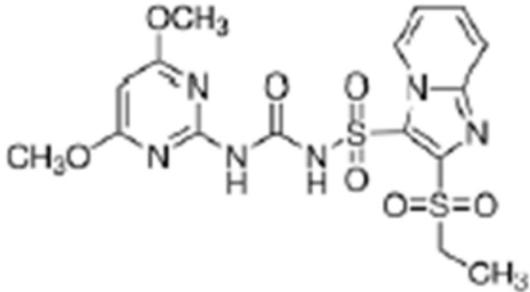
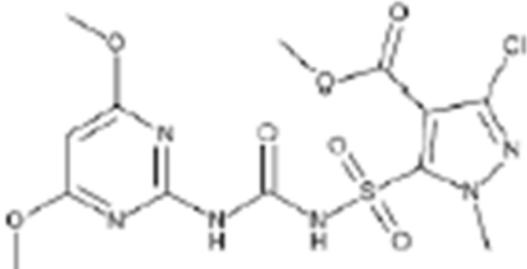
SCC OnLine Del 1482 and *Avery Dennison Corporation v. Controller of Patents and Designs*, 2022 SCC OnLine Del 3659 while making the above submission.

- 22.6. The prior art titled “*Comparison of Sulfonylurea Herbicides for Spring Transition*” relates to the effect of various (7) individual members of the sulfonylurea family members on removal of perennial ryegrass. Pertinently, halosulfuron-methyl is not even listed among the (7) different members of the sulfonylurea class of herbicides tested and identified in the “*Abstract*” of the prior art as relied upon by the Respondents. The “*Abstract*” of the said prior art is reproduced hereunder:

“In six field experiments that were conducted during the spring of 2004 with seven sulfonylurea herbicides for removing perennial ryegrass from bermudagrass turf, the most rapid response and effective ryegrass removal occurred with the latest applications made in June compared to applications made in April or May. Flazosulfuron, formasulfuron, rimsulfuron, trifloxysulfuron, and chlorsulfuron were effective in removing most of the ryegrass. Sulfosulfuron and metsulfuron were least effective for removing ryegrass, especially during the cooler April and May timings.”

- 22.7. Halosulfuron-methyl is not an obvious substitution for sulfosulfuron. Furthermore, sulfosulfuron is structurally starkly different from halosulfuron-methyl, in view of which, it cannot be said that halosulfuron-methyl is an obvious and equivalent functional substitute of sulfosulfuron. The Respondents have provided no proof of any motivation to substitute halosulfuron-methyl with sulfosulfuron. The structural difference between halosulfuron-methyl with sulfosulfuron is reproduced hereunder:



Sulosulfuron	Halosulfuron-methyl
 <chem>COS(=O)(=O)c1cnc2c1C(=O)N2C3=CC(OC)=C(OC)N3</chem>	 <chem>COS(=O)(=O)c1cnc2c1C(=O)N2C3=CC(OC)=C(Cl)N3</chem>

As stated above, sulfosulfuron is structurally entirely different from halosulfuron-methyl, which by itself suggests that they are unlikely to be equivalent functional substitutes. Thus, in view of the above, the present invention is inventive and non-obvious over the aforesaid prior art.

22.8. Respondent No. 2 claims that the present invention is not patentable under Section 3(e) of the Act. The Impugned Order as well comes to a conclusion of lack of synergy in the present invention without any discussion on how Table No. 1 of the Complete Specification fails to indicate synergism. Table No. 1 clearly shows that application of halosulfuron-methyl (12%) and metribuzin (55%) in treatment 2 (T-2), at a reduced dosage (54g halosulfuron-methyl + 247.5g metribuzin = 301.5g) as compared to the additive amounts from their individual applications (67.5g halosulfuron-methyl + 350g metribuzin = 417.5g), is synergistic as it shows enhanced control of *Cyperus rotundus*, *Amaranthus* spp., *Dactyloctenium* spp., and *Bracharia* spp. A PSITA would not expect any



“enhancement” in control of weeds by reducing the amounts of the actives as compared to the expected additive effect at comparable amounts of actives. Thus, the demonstrated enhanced control despite usage of lower amounts of the actives is clearly and unambiguously indicative of synergism. Therefore, the present invention cannot be considered as “mere admixture resulting only in the aggregation of the properties of the components”, and thus, the bar of Section 3(e) of the Act is met and sufficiently overcome by the present invention. Table No. 1 is reproduced hereunder:

Table-1: Effect of herbicidal treatment on weed density of narrow and broad leaves weeds at 30 DAA

Treatments	Dose/ ha	Narrow and Broad leaves weeds per square meter							
		Cyperus rotundus		Amaranthus spp.		Dactyloctenium sp		Bracharia spp.	
		Live pop.	% control	Live pop.	% control	Live pop.	% control	Live pop.	% control
CPL-1255	300g	2.0	83.00	0.66	80.00	4.33	0.00	3.00	0.00
CPL-1255	450g	0.20	98.28	0.06	98.23	1.5	65.35	1.00	66.67
CPL-1255	600g	0.15	98.71	0.00	100	1.4	67.66	1.00	66.67
CPL-1255	900g	0.00	100	0.00	100	1.4	67.66	1.00	66.67
Halosulfuron methyl 75% WG	90g	1.0	91.42	3.6	0.00	3.12	27.94	3.33	0.00
Metribuzin 70% WP	500g	8.33	29	1.3	61.76	4.66	0.00	4.33	0.00
Untreated	-	11.66	-	3.4	-	4.33	-	3.00	-

22.9. Further, the Respondents speculate that the Appellant has merely shown that increasing dosage results in increasing control of weeds,



which is not unexpected and therefore, not synergistic. The Appellant refutes any such gross simplification and lack of understanding by the Respondent, and highlights that treatment 2 (T-2) utilizes a dose of 450g of the claimed combination, which provides 66.67% control of *Bracharia* spp. Increasing the dosage to 600mg (approximately 33% increase) in treatment 3 (T-3) does not result in any concurrent comparable increase in control of *Bracharia* spp. In fact, at 600mg dosage also provides the same 66.67% control of *Bracharia* spp. Even an increase to 900mg (100% increase compared to T-2) in treatment 4 (T-4) does not result in any increase whatsoever in *Bracharia* spp. In the case of the other narrow and broad leaf weeds also, it can be seen that any gains in control by higher dosage is insignificant. These trial data establish that the effect of the claimed composition is not attribute merely to higher formulation dosage per acre as alleged by the Respondents.

22.10. Accordingly, the Impugned Order is liable to be set aside and the Appeal shall be allowed.

SUBMISSIONS ON BEHALF OF RESPONDENT NO. 1

23. The learned Counsel for Respondent No. 1 submitted as under:

23.1. The present invention does not contain any technical advancement as compared to the prior art cited by Respondent Nos. 2 and 3. It is merely a mixture of already existing substances used. The ingredients used in the present invention are halosulfuron-methyl and metribuzin. The Appellant applied for a grant of patent by



changing the percentage of the existing substance which is already used as herbicidal composition and which is not sufficient for the inventive step and efficacy. In the Impugned Order, the prior art documents which were cited by Respondent Nos. 2 and 3 were considered as the closest documents and found the present invention is not an invention under the Act.

- 23.2. The learned Controller has refused to grant the Subject Patent on the grounds of pre-grant opposition which was found valid from the main grounds of Section 25(1)(e) of the Act and on the grounds of non-patentability under Section 25(1)(f) of the Act. The learned Controller has not recorded / mentioned in the Impugned Order that the present invention is not novel. According to Rule 55 (1 to 5) of the Rules, if even one ground of the pre-grant opposition is found to be valid, then that application cannot be patented.
- 23.3. The Appellant, to think that the herbicidal composition in the Subject Application should be granted a patent since it is a novel composition is wrong. According to the Act, the invention should be inventive and patentable as well, as compared to the existing prior art, so it is necessary to have technical advancement in comparison to the prior art. The Appellant has attempted to obtain a patent by narrowing the ratio of an already existing substance in the prior art.
- 23.4. The learned Controller observed that there was no scope for amendment in the Subject Application and it fell under Section 25(1) of the Act and Rule 55 (1) to (5) of the Rules. Therefore,



when the grounds of the pre-grant opposition were found to be valid and the patent was not grantable, there was no basis for giving a hearing under Section 14 of the Act. After the Hearing, even when there was no scope for amendment in the Subject Application, the Appellant made *suo moto* amendments.

- 23.5. The Pre-Grant Oppositions I and II, against the Subject Application, were filed for claim nos. 1 to 7. Claim nos. 1 to 7 were the broadest claims of the Subject Application and the same claims were filed at the time of Reply by the Appellant. Thereafter, the Appellant deleted his own methods claims in the Reply Statement II. The Pre-Grant Oppositions I and II filed by Respondent Nos. 2 and 3, respectively were for both composition and methods claim. Therefore, the learned Controller had to give a decision for all claims, which included the consideration of claim nos. 1 to 5, after amendments.
- 23.6. The table below provides a reference key of the prior arts cited by Respondent No. 1 in the Hearing Notice and those cited by Respondent Nos. 2 and 3 in the Pre-Grant Oppositions I and II, some of which were numbered differently by Respondent Nos. 2 and 3:

Prior art cited in Hearing Notice	Prior art cited by Respondent No. 2	Prior art cited by Respondent No. 3
D1 – WO2000027203 A1	D1 – WO2000027203 A1	-
D2 – US 8921271 B2	D2 – US 8921271 B2	-



D3 – EP 2498604 A1	D3 – EP 2498604 A1	-
D4 – Umeda et al., University of Arizona College of Agriculture, 2004, Turf grass and Ornamental Research Report, Dec 1, 2004 pp 1-9	D4 – Umeda et al., University of Arizona College of Agriculture, 2004, Turf grass and Ornamental Research Report, Dec 1, 2004 pp 1-9	-
-	D5 – US 5990048 A	-
-	-	D1 – Herbicide Product – “GWN 9889” U.S.EPA registration no. 81880-25 Registrant – Canyon Group, LL c/o Gowan Company Date of Issuance – Dec. 07, 2010
-	-	D2 – WO 2009/015064 A2

- 23.7. Respondent No. 2's D1 describes a novel herbicidal synergistic composition comprising an herbicidal active compound combination that is suitable for selectively controlling undesirable vegetation in crops of useful plants resistant to protoporphyrinogen oxidase inhibitors, for example, maize, sugar beet, soya beans, rape, cotton, sunflowers, cereals, rice and sugar cane.
- 23.8. Respondent No. 2's D2 discloses an herbicidal composition comprising, as active ingredients, (i) flazasulfuron or its salt and (ii) metribuzin or its salt.



- 23.9. Respondent No. 2's D5 discloses the novel herbicidally active compound combinations comprising (i) metribuzin of the Formula I and (ii) an active compound from the group of the substituted imidazo [1,2-a] pyridin-3-yl-sulfonyl compounds of the Formula II.
- 23.10. Respondent No. 3's D2 discloses the tank mix which is reproduced hereunder:

Table 4C	
	tank mixes
	H
PERMIT®	0.031 lbs. active/acre
YUKON®	--
CALLISTO ®	--
ATRAZINE 90DF®	--
ROUNDUP Original MAX® 4.5 AE	--
HALEX GT 4.38L®	--
IMPACT 2.8SC®	--
LAUDIS 3.5SC®	--
SENCOR DF®	0.094 lbs. active/acre
COC	--
liquid AMS	2.5% v/v
ACTIVATOR 90®	0.25% v/v
Water	q.s.

- 23.11. In the prior art, D1 (WO2000027203) claim nos. 8, 19, 20 disclosed halosulfuron-methyl, metribuzin which is used as a herbicidal composition, for controlling weeds and grasses in crops, so that the



combination of halosulfuron-methyl and metribuzin may exhibit desired herbicide effect irrespective of the amount (“wt.%”) of halosulfuron-methyl and metribuzin present in the combination / composition the wt.% of halosulfuron-methyl and metribuzin in the claimed composition cannot be construed to be contributing to the inventive step of the presently claimed composition.

- 23.12. Respondent No. 3’s D1 discloses an herbicide product ‘GWN-9889’ comprising 58.3 wt.% metribuzin, 11.2 wt.% halosulfuron-methyl and 5.5 wt.% tribenuronmethyl, wherein metribuzin and halosulfuron-methyl are present in an amount (% and / or ratio) falling under the range claimed in the pending claim no. 1 of the present application. The active compounds used as a composition in the present invention, halosulfuron and metribuzin, have been known for a long time and have proved useful for the selective control of weeds, in particular in soybean and potato.
- 23.13. Respondent No. 3’s D2 discloses a tank mix composition comprising halosulfuron-methyl and metribuzin in a weight ratio of ~1:3 along with other excipients that are duly tested for its herbicidal activity exhibiting 99% weed-controlling efficacy.
- 23.14. It is clear from the prior art documents, which have been cited by Respondent Nos. 2 and 3 that the two active ingredients halosulfuron-methyl and metribuzin used for the herbicidal composition of the present invention are already known in the prior art. The Appellant filed the Subject Application by changing just the ratio / percentage of the two active ingredients halosulfuron-



methyl and metribuzin well-known used for the herbicidal composition in the prior art in which there is no technical advancement and therefore, the Subject Application is not patentable.

- 23.15. The claim nos. 1 to 7 of the present invention are not patentable under Section 3(e) of the Act and such a ground of opposition is validly established by Respondent Nos. 2 and 3. The claim nos. 1 to 7 do not contain synergistic ratios of the constituents. The ingredients used in the present invention are halosulfuron-methyl and metribuzin which are already known in the prior art. In view of cited prior arts namely D1, D2 and D5 and known technologies and practices in agricultural activities, the composition is well-known to the people related to agrochemicals and the use of various inactive excipients is also well-known in the agriculture field and the Appellant just mixed the active and inactive ingredients to get claimed herbicidal composition.
- 23.16. The Appellant has failed to demonstrate any synergistic effect of the present composition. Based on the cited documents of Respondent Nos. 2 and 3, it is clear that the Appellant has used active ingredient herbal compositions that are already available in the prior art, it is merely a mixture of already existing substances.
- 23.17. In view of the above, the Impugned Order ought to be upheld, and the present Appeal is liable to be dismissed.



SUBMISSIONS ON BEHALF OF RESPONDENT NO. 2

24. The learned Counsel for Respondent No. 2 submitted as under:

24.1. The Subject Application is barred under Section (2)(1)(ja) of the Act. As per the requirement under Section (2)(1)(ja) of the Act, ‘inventive step’ means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a PSITA. Hence, the Subject Application was required to show that it involves technical advance as compared to the existing knowledge or having economic significance or both. Once the Appellant was confronted with prior arts namely D1, D2 and D5, the Appellant was required to show technical advancement by way of producing experimental data, which has not been done in the case. Reliance was placed upon the decision in *Astrazeneca AB and Ors. v. Intas Pharmaceuticals Limited and Ors.*, 2020 (84) PTC 326 (Del) while making the above submission.

24.2. The Subject Application is barred under Section 25(1)(e) of the Act as it is anticipated and obvious. In Respondent No. 3’s D1, halosulfuron-methyl was shown as 11.2%, while metribuzin was used as 58.3%. While in the Subject Application, Table No. 1 shows similar use of both the ingredients. The relevant Table No. 1 is reproduced hereunder:

Table 1: Ingredients for 12% Halosulfuron methyl + 55% Metribuzin WG



S. No.	Ingredient	Concentration
1	Halosulfurona.i.	12.00% m/m
2	Metribuzinea.i.	55.00% m/m

Thus, it is apparent that halosulfuron-methyl was shown as 12%, while metribuzin was used as 55% which is almost similar to weight percentage ratio as used in D1. Hence, the present invention was obvious to a PSITA.

24.3. In Respondent No. 2's D1, claim no. 20 describes a herbicidal composition for controlling weeds in crops of sugar cane resistant to protoporphyrinogen oxidase inhibitors, where the co-herbicide b) is a compound selected from the group consisting of atrazine, ametryn, dicamba, terbutryn, prosulfuron, hexazinone, asulam, diuron, 2,4-D, halosulfuron-methyl, flazasulfuron, isoxaflutole, azafenidin, tebuthiuron, sulcotrione, pendimethalin, clomazone, metribuzin, thiazopyr, glyphosate, glufosinate, sulfosate and ethoxysulfuron, and also the compound of the Formula C. While the Subject Application also relates to an herbicidal composition for controlling weeds in crops of sugar cane comprising of halosulfuron-methyl and metribuzin. Thus, active ingredients of Subject Application have already been disclosed in D1.

24.4. Respondent No. 2's D1 describes a novel herbicidal synergistic composition comprising an herbicidal active compound combination which is suitable for selectively controlling undesirable vegetation in crops of useful plants resistant to protoporphyrinogen oxidase inhibitors, for example maize, sugar



beet, soya beans, rape, cotton, sunflowers, cereals, rice and sugar cane. While in the Subject Application, the “*Field of Invention*” relates to a broad-spectrum herbicidal composition for controlling broad leaved as well as narrow leaved weeds in sugarcane crop. Merely claiming invention in the alleged proportion of both the active ingredients cannot render it patentable, given the fact that the alleged better result of the composition is not attributable to the alleged proportion of active ingredient, rather effective amount of active ingredients.

- 24.5. Table 4C as mentioned in Respondent No. 3’s D2 specifically discloses Tank Mix Composition of halosulfuron-methyl [permit] and metribuzin [sencor] clearly reflects weight ratio of 0.031 lbs to 0.094 lbs, equivalent to 1:3.03. If the weight ratio of the active compound in the Subject Application is seen, then it comes to halosulfuron-methyl at 10 to 15% of weight ratio and metribuzin at 50 to 60% weight ratio. Hence, one of the permissible weight percentages of halosulfuron-methyl and metribuzin comes as 1:3.03. Thus, the weight ratio of both of the active ingredients is almost identical to that of D2. The Tank Mix Composition of halosulfuron-methyl and metribuzin as disclosed in D2, having weight ratio of 1:3.03, having herbicidal quality show 99% weed control efficacy.
- 24.6. Respondent No. 2’s D5 describes a novel herbicidally active compound composition. Claim nos. 2 and 3 are reproduced hereunder:



“2. The **herbicidal composition** according to claim 1, wherein **0.005 to 50 parts** by weight of the sulfosulfuron (2-ethyl-sulfonyl-N-[[4,6-dimethoxy-pyrimidin-2yl)amino]carbonyl]imidazo[1,2-a]pyridine-3-sulfonamide) is employed per part by weight of active compound metribuzin of the formula (I).

3. The **herbicidal composition** according to claim 2, wherein **0.02 to 20 parts** by weight of sulfosulfuron (2-ethyl-sulfonyl-N-[[4,6-dimethoxy-pyrimidin-2yl)amino]carbonyl]imidazo[1,2-a]pyridine-3-sulfonamide) is employed per part by weight of active compound metribuzin of the formula (I).”

In view of the disclosures made in the prior arts namely, D1, D2 and D5, the Subject Application is anticipated. Reliance was placed upon the decision in **Chugai Seiyaku Kabushiki Kaisha v. Controller of Patents**, Neutral Citation: 2022:DHC:1337 while making the above submission.

24.7. The Subject Application is barred being non-patentable under Section 25(1)(f) read with Section 3(e) of the Act. The present invention is a mere admixture of known substances, namely halosulfuron-methyl and metribuzin. The synergistic effect should be clearly brought out in the description by way of comparison at the time of filing of the Subject Application itself, which has not been done in the case at hand. The Subject Application fails to show any synergism and that the same is merely an ad-mixture of prior known active ingredients. The data provided by the Appellant in the Complete Specification fails to show synergy. The Appellant itself asserted that the present invention lies in their effective amount and not on the proportion of the components.



24.8. The Appellant itself asserted that the present invention lies in their effective amount and not on the proportion of the components. Hence, the claimed number of halosulfuron-methyl ranges from 10 to 15% weight ratio and metribuzin ranges from 50 to 60% weight ratio is incorrect. The Appellant has given the details of different treatment in the Subject Application. The relevant portion of the Subject Application is reproduced hereunder:

Treatment s	Treatment Details	Dose/ha	ai/ha
T-1	Halosulfuron methyl 12% + Metribuzin 55% WG (CPL-1255)	300g	36g + 165g
T-2	Halosulfuron methyl 12% + Metribuzin 55% WG (CPL-1255)	450g	54g + 247.50g
T-3	Halosulfuron methyl 12% + Metribuzin 55% WG (CPL-1255)	600g	72g + 330g
T-4	Halosulfuron methyl 12% + Metribuzin 55% WG (CPL-1255)	900g	108g + 495g
T-5	Halosulfuron methyl 75% WG	90g	67.5g
T-6	Metribuzin 70% WP	500g	350g
T-7	Untreated	-	-

From bare perusal of the aforementioned treatment details, it is apparent that even though the proportion of both the active ingredients remains the same, i.e., halosulfuron-methyl range 12% weight ratio and metribuzin range 55% weight ratio, however,



effective amount of both the active components kept on increasing. In T-1, the actual dosages per acre was 300g (36g and 165g), T-2 450g (54g to 247.50g), for T-3 600g (72g and 330g), T-4 900g (108g and 495g). Thus, the actual amount of the active component kept on increasing from T-1 to T-4. As per Table No. 1, T-4 is giving the better result, but the effective amount of both of the components is more than another example.

24.9. The findings recorded by the learned Controller are cogent, well-reasoned, and based on proper appreciation of the material on record. The Appellant has failed to demonstrate any perversity, illegality, or material irregularity in the findings. In the absence of any such infirmity, no ground is made out warranting interference by this Court. Reliance was placed upon the decision in *Mohd. Mehtab Khan and Others v. Khushnuma Ibrahim Khan and Others*, (2013) 9 SCC 221 while making the above submission.

24.10. Accordingly, the Impugned Order is to be upheld, and the present Appeal be dismissed.

ANALYSIS AND FINDINGS

THE INVENTION

25. The present invention relates to a synergistic herbicidal composition which controls unwanted vegetation in a variety of agricultural crops. The “*Field of Invention*” is reproduced hereunder:

“Field of Invention

The present invention relates to a synergistic herbicidal composition for control of major unwanted vegetation in a wide variety of agricultural crops. More particularly, the present invention relates to



a broad spectrum herbicidal composition for controlling broad leaved as well as narrow leaved weeds in sugarcane crop.”

26. The object of the present invention is to provide a synergistic herbicidal composition to overcome the problems associated with the prior art and existing knowledge. The object of the present invention is reproduced hereunder:

*“The main objective of a present invention is to provide a synergistic herbicidal composition which overcomes some or all of the problems associated with the prior art as identified above and others. Accordingly one of the objectives of our present invention is to provide an herbicidal composition which is highly effective in low dosage amounts. Another objective of the present invention is to provide an herbicidal composition whose application and effects on the weeds can be directly and visually assessed. Yet another objective of the present invention is to provide an herbicidal composition which could directly adhere to the surface of the weeds. Another object of the present invention is to provide an herbicidal composition which is highly effective against broad and narrow leaved weeds in sugarcane crop especially weeds such as *Cyprus rotundus* along with other *Cyprus spp.*, *Digitaria spp.*, *Chenopodium spp.* and *Melilotus spp.* The other objectives and preferred embodiments and advantages of the present invention will become more apparent from the following description of the present invention when read in conjunction with the accompanying examples which are not intended to limit the scope of the present invention in any manner.”*

27. The problem in the prior art is discussed in the Complete Specification which is reproduced hereunder:

“Further, there are a few plants for which the weed problem is more severe and complex. The most common example of such a plant is sugarcane, where the weeds tend to flourish extremely well due to abundant water and nutrient supply conditions that are basic requirement for the sugarcane crop. Also, the growth of sugarcane is very slow taking around 100 days from germination till development of full canopy cover. This gives ample time for the weeds to grow in the field. Therefore, a selective herbicide for sugarcane plant can be



extremely beneficial to selectively control the target weed without causing any phytotoxic effects to the sugarcane plant. The existing herbicides in this area do not necessarily meet the requirements of effectiveness and selectivity. In accordance with the above, there is a need for a selective herbicidal composition for plants that is effective against the target weeds at a very low concentration and exhibit excellent selectivity with minimal or no phytotoxicity.”

28. The claims submitted in the Reply to the FER are hereunder:

“We claim:

- 1. A herbicidal composition comprising **synergistically effective** amount of two active ingredients, wherein the first active ingredient is Halosulfuron methyl in an amount ranging from **10-15%wt** and the second active ingredient is Metribuzin in an amount ranging from **50-60%wt**.*
- 2. The composition as claimed in claim 1, wherein the amount of **Halosulfuron methyl is 12%wt**.*
- 3. The composition as claimed in claim 1, wherein the amount of Metribuzin is 55%wt.*
- 4. A formulation comprising a composition as claimed in claim 1, and one or more **adjuvants**.*
- 5. The formulation as claimed in claim 4, wherein the amount of one or more **adjuvants ranges from 25%wt to 40%wt**.*
- 6. The formulation as claimed in claim 4, wherein the formulation is in the **form of a 15 powder, solid or liquid**.*
- 7. A **method for controlling** unwanted vegetation in agricultural crops, where unwanted vegetation includes weed population, said method comprising obtaining a composition as claimed in claim 1 or a formulation as claimed in claim 4 and contacting said composition or formulation with unwanted vegetation in agricultural crops.”*

29. The learned Counsel for the Appellant submitted that the filing of ten additional documents by Respondent No. 2 itself demonstrates an implicit acknowledgment that there are deficiencies and issues in the Impugned Order. Respondent No. 2 by seeking to introduce these additional documents at this stage, is effectively attempting to set up a new case.

**Prior Art: WO2000027203 A1**

30. The invention claims an herbicidal synergistic composition for the selective control of broad-leaved weeds / grasses in crops of useful plants resistant to protoporphyrinogen oxidase inhibitors, comprising, in addition to customary inert formulation auxiliaries, as active compounds of a mixture of an herbicide inhibiting the action of protoporphyrinogen oxidases and further pesticide selected from the group consisting of co-herbicides / fungicides / insecticides / parasites.

31. Claim no. 7 of this document specifies the target crop and weeds. Claim no. 7 describes an herbicidal composition to control broad-leaved weeds and grasses in crops such as maize / sugar beet / soya beans, cotton, sunflowers, cereals, rice and sugarcane which are resistant to protoporphyrinogen oxidase inhibitors. Additionally, Claim nos. 8 and 20 of the document D1 describes a herbicidal composition in which the co-herbicide b) is a compound selected from the group including metribuzin.

Prior Art: US8921271B2

32. The invention relates to an herbicidal composition which is comprising of flazasulfuron or its salt and metribuzin or its salt. The prior arts failed to disclose specific combinations of the herbicidal composition and synergistic effects obtainable by the combination which is claimed in the present invention.

Prior Art: WO 2009/015064 A2

33. This prior art is titled as "*Improved Processes for the Control of Undesired Vegetation*" and the invention relates to an improved process for the control of undesired vegetation amongst crops.



34. Under Table 4C, (tank mix entry 'H') discloses a tank mix composition of halosulfuron-methyl and metribuzin in a weight ratio of 1:3.

35. This prior art also discusses the herbicidal activity in Table 4CR, entry 'H'. The Table 4CR is reproduced hereunder:

Days after planting:	common lambsquarter (% controlled)				common ragweed (% controlled)			
	38 days	58 days	79 days	113 days	38 days	58 days	79 days	113 days
Tank mix:								
none (C1)	0	0	0	0	0	0	0	0
C2	99	99	99	99	99	99	99	99
C3	99	98	98	95	94	88	93	86
C4	99	99	99	99	99	99	99	99
A	99	99	96	94	95	91	89	87
B	99	99	99	99	99	93	96	94
C	98	83	80	75	99	87	83	78
D	99	90	80	74	99	95	87	84
E	99	89	82	73	99	93	89	85
F	99	96	88	84	99	97	94	90
G	99	99	89	85	99	99	92	88
H	99	97	91	88	98	84	83	80
I	99	99	96	94	99	99	97	96
J	99	99	99	99	99	98	99	99
K	99	99	96	97	99	96	93	90
L	99	99	99	94	99	93	94	90
M	99	99	99	99	99	99	99	99
N	99	99	98	99	99	99	99	99

36. This Court notes that the entry 'H' of Table 4C discloses the composition of halosulfuron-methyl and metribuzin in a weight ratio of 1:3.

**Prior Art: GWN-9889**

37. This prior art is a publication of the U.S. Environmental Protection Agency containing the number EPA Reg. No. 81880-25. This prior art discloses halosulfuron-methyl at 11.2%, metribuzin at 58.3% and tribenuron-methyl at 5.5%. The relevant extract of GWN-9889 is reproduced hereunder:

ACTIVE INGREDIENT:	% By Wt.
Metribuzin.....	58.3%
Halosulfuron-methyl.....	11.2%
Tribenuron-methyl.....	5.5%
OTHER INGREDIENTS.....	25.0%
	TOTAL 100.0%

38. The learned Counsel for Respondent No. 2 submitted that the Appellant has not furnished any experimental results / comparative synergy data which demonstrate the technical enhancement / unexpected efficacy over the cited document.

Prior Art: US5990048A

39. This prior art discloses the use of metribuzin [60] and use of sulfosulfuron [15] as herbicidal composition. The relevant excerpt is reproduced hereunder:

TABLE A

<u>Post-emergence test/greenhouse</u>					
Active compound or active compound combination	Application rate in g/ha (of active compound)	Test plants			
		<u>Damage or activity in %</u>			
		<u><i>Apera spica-venti</i></u>		<u><i>Setaria viridis</i></u>	
		found	calc.	found	calc.
(I) - known -	60	20	50		
(II-1)	15	80	80		



- known -

(I) + (II-1)

60+15

98

84

100

90

- according to the

invention -

40. This prior art discloses its use with metribuzin (60) and sulfosulfuron (15) in herbicidal compositions. This evidence shows that combinations of sulfonylurea class herbicides with metribuzin were well-known, and the Subject Patent merely adopts another member of the same chemical class (halosulfuron-methyl) in nearly identical concentration without demonstrating any surprising technical advantage.

Prior Art: Comparison Of Sulfonylurea Herbicides for Spring Transition

41. This prior art already discusses limitations of sulfosulfuron. Additionally, the above discussed document US5990048A discloses its use with metribuzin (60) and sulfosulfuron (15) in herbicidal compositions.

42. Since the limitations of sulfosulfuron are disclosed and the halosulfuron-methyl belongs to the same class, the combinations of sulfonylurea class herbicides with metribuzin would be obvious to PSITA. In other words, the Subject Application merely adopts another member of the same chemical class in nearly the same concentration. Additionally, in the absence of data demonstrating technical advantage, the inventive step threshold cannot be assessed.

43. Citing the claim nos. 5 and 6, Respondent No. 2 submitted that the adjuvants are not mentioned in claim nos. 5 and 6 and other claims are vague, as nature, and adjuvate are not mentioned. The relevant claims are reproduced hereunder:



- “5. A formulation prepared using the composition of claim 1, wherein the formulation comprises of one or more adjuvants.*
- 6. The formulation as claimed in claim 5, wherein the amount of adjuvant/s ranges from about 25% w/w to 40 % w/w.*
- 7. The formulation as claimed in claim 5, wherein the formulation is in the form of powder, solid or liquid.*
- 8. A method for controlling unwanted vegetation in agricultural crops, where unwanted vegetation includes weed population.”*

44. The learned Counsel for Respondent No. 2 submitted that the Appellant had to put data and compare with this synergistic data. No such data is provided by the Appellant. Therefore, as per Respondent No. 2, the synergistic effect is not proved, and the provided data is not relevant for synergism, but it is relevant for inventive step. This Court notes that, in WO 2009/015064 A2, metribuzin and halosulfuron-methyl are present in an amount (% and / or ratio), which falls under the range claimed in the claim no. 1 of the Subject Application. The Table 4C tank mix ‘H’ of WO 2009/015064 A2, shows halosulfuron-methyl and metribuzin. The relevant excerpts are reproduced hereunder:

Present invention	D2
Halosulfuron methyl 10-15wt%	Halosulfuron methyl 75wt%
Metribuzin 50-60wt%	Metribuzin 70wt%

Under Table 4C, (tank mix entry ‘H’) discloses a tank mix composition of halosulfuron-methyl and metribuzin in a weight ratio of 1:3 which falls within the range of composition as claimed in the claims of the Subject Application. D2 (WO 2009/015064 A2) clearly teaches a tank-mix composition comprising halosulfuron-methyl and metribuzin in a weight ratio of ~1:3 along with other excipients that is duly tested for its herbicidal activity exhibiting 99% weed-controlling efficacy. Additionally, the prior art GWN-



9889 discloses halosulfuron-methyl at 11.2%, metribuzin at 58.3% and tribenuron-methyl 5.5%. Therefore, in the absence of a date (described below) to prove synergy, the prior art documents make it obvious to a PSITA.

45. The learned Counsel for the Appellant has given the details of different treatment in the Subject Application. The Appellant claims a fixed ratio of halosulfuron-methyl (12% w/w) and metribuzin (55% w/w). It is important to note that the actual quantity of both active ingredients increases continuously across treatments from T-1 to T-4. The dosages, according to Table No. 1 above is calculated hereunder:

- a. In T-1 the dosage/ha is 300 g wherein Halosulfuron is 36 g and Metribuzin is 165 g.
- b. In T-2 the dosage/ha is 450 g (54 g Halosulfuron is 54 g and Metribuzin is 247.5 g.
- c. In T-3 the dosage/ha is 600 g wherein Halosulfuron is 72 g and Metribuzin is 330 g.
- d. In T-4, the dosage/ha is 900 wherein Halosulfuron is 108 g and Metribuzin is 495 g.

46. It is apparent from the above that there is a constant increase in the ai/ha from T-1 to T-4. From T-1 to T-4, T-4 is leading to the best result. Such an improvement increase in ai/ha correlates with a higher dose of both actives.

47. Therefore, based on the above discussion, it can be inferred that the rise in biological efficacy is attributable to higher amount / concentration dosage per acre and not to synergistic effect arising from the fixed ratio.

48. A PSITA, while reading the above cited document together can reach to the invention claimed in the Subject Application. Amended claim nos. 1 to 7 on record, lack inventive step and being obvious in view of combined



teaching of the above cited documents. Therefore, the analysis of the learned Controller is providing reasoning behind the objection raised.

OBJECTION UNDER SECTION 25(1)(F) READ WITH SECTION 3(E) OF THE ACT

49. The learned Counsel for Respondent No. 2 submitted that as per the Complete Specification of the Subject Application the two compounds show synergistic effect if used in the claimed amount. The learned Counsel for Respondent No. 2 further submitted that the synergistic effect should be clearly brought out in the description by way of comparison at the time of filing of the Subject Application itself, which has not been done in the case at hand.

50. As discussed above, the data submitted by the Appellant is not sufficient to establish the synergistic effect as the improvement / increase in ai/ha correlates with higher dose of both actives.

51. In this regard, reference may be taken from the Manual of Patent Office, Practice and Procedure (“**Patent Manual**”). The Patent Manual serves as a practical procedural guide for the Patent Office. Even though it is not binding, it can be relied upon as persuasive reference material. The Patent Manual under Paragraph No. 09.03.05.05 states that synergistic effect should be clearly established from the description through comparison. Paragraph No. 09.03.05.05 of the Patent Manual is reproduced as hereunder:

“09.03.05.05

A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance is not an invention. An admixture resulting in synergistic properties is not considered as mere admixture. Hence, substances like soap, detergent, lubricants, may be considered as patentable. A mere aggregation of features must be



*distinguished from a combination invention. The existence of a combination invention requires that the relationship between the features or groups of features be one of functional reciprocity or that they show a combinative effect beyond the sum of their individual effects. The features should be functionally linked together which is the actual characteristic of a combination invention. In general, all the substances which are produced by mixing components or a process of producing such substances should satisfy the requirement of synergistic effect in order to be patentable. **Synergistic effect should be clearly brought out in the description by way of comparison at the time of filing of the Application itself.** The subsequent submissions regarding synergism can be accepted in a reply to the office action as a further support of synergy.”*

52. Therefore, the synergism as claimed in the Subject Application is not proved as the data provided by the Appellant is not reliable.

53. In *Best Agrolife Limited v. Deputy Controller of Patents & Anr.*, 2022 SCC OnLine Del 1982, this Court held that a known substance that does not lead to enhanced efficacy of that substance would not be an invention under Section 3(e) of the Act. The relevant paragraphs are reproduced hereunder:

“43. Both Section 3(d) and 3(e) fall under Chapter II of the Act. Section 3(d) provides that a mere discovery of a new form of a known substance which does not result in enhanced efficacy of that substance shall not be an invention. Explanation to the Section provides that 'combinations' shall be considered to be the same substance unless they differ significantly in properties with regard to efficacy. **Section 3(e) provides that a substance obtained by a mere admixture resulting only in the aggregation of properties of the components thereof shall not be an invention.** Plain reading of the two provisions, indicates that Section 3(d) entails an assessment of 'enhanced efficacy' of the claimed composition in comparison to the efficacy of the known substance while the assessment under Section 3(e) is with a view to determine the synergistic effect of claimed composition with the individual properties of each component comprising the composition. Legislature in its wisdom has enacted two different provisions and the tests for both are different. The Supreme Court in *Novartis (supra)* has observed that Section 3(d) is



not ex majore cautela and sets up a second tier of qualifying standards in chemical substances/pharmaceutical products to encourage genuine inventions, at the same time keeping check on evergreening. Section 3(d) provides a safeguard to patentability of a new form of known substance if it does not pass the threshold of enhanced efficacy. Thus, the Respondents may not be wholly correct in arguing that an adjudication under Section 3(e) of novelty or a product not being a mere admixture would cover the adjudication under Section 3(d). There is merit in the contention of the Petitioner that the patent applicant has claimed a suspo-emulsion of admixture/combination of Diafenthiuron and Pyriproxyfen and therefore, the applicant would have to pass the test under both Section 3(d) and 3(e), albeit on different aspects by showing enhanced efficacy over known combination of a suspo-emulsion qua Section 3(d) and synergistic effect over the mere additive effect of individual components of suspo-emulsion composition. Therefore, it was incumbent upon Respondent No. 1 to take note of the pre-grant opposition under Section 3(d) and deal with the same, in accordance with law and the material placed on record.

44. This Court also finds prima facie merit in the contention of the Petitioner that synergistic effect can be demonstrated by a combined effect of increase in bio-efficacy and stability of the admixture beyond the sum of their individual effects. However, if bio-efficacy/stability is to be tested in respect of Section 3(d), the test would be bio-efficacy/stability of the form, i.e., suspo-emulsion in this case and not the admixture, over and above the closest prior art brought forth by the opposer, which is the known substance as a comparator. Petitioner has also raised a plea that the data provided by Respondent No. 2 related to bio-efficacy/stability and not with respect to enhanced efficacy as compared to the prior art, i.e., the alleged known substance. Therefore, once the Petitioner had raised opposition under Section 3(d) and 3(e) both, Respondent No. 1 was required to deal with the opposition, looking at the scheme of the Act and the intent of the legislature in enacting two separate provisions.”

54. In view of the above analysis, the present invention is not permissible under Section 3(e) of the Act.

55. As regards whether the Impugned Order is well-reasoned in terms of the objection of lack of inventive step, it is important to examine the approach



of the learned Controller in the Impugned Order. In *F-Hoffmann-la Roche Ltd. & Anr. v. Cipla Ltd.*, Neutral Citation: 2015: DHC:9674, this Court emphasized on the following steps which must be followed while raising an objection on the ground of lack on inventive step under Section 2 (1)(ja) of the Act. The steps are reproduced hereunder:

*“Step No.1 To identify an ordinary person skilled in the art,
Step No.2 To identify the inventive concept embodied in the patent,
Step No.3 To impute to a normal skilled but unimaginative ordinary person skilled in the art what was common general knowledge in the art at the priority date.
Step No.4 To identify the differences, if any, between the matter cited and the alleged invention and ascertain whether the differences are ordinary application of law or involve various different steps requiring multiple, theoretical and practical applications,
Step No.5 To decide whether those differences, viewed in the knowledge of alleged invention, constituted steps which would have been obvious to the ordinary person skilled in the art and rule out a hindsight approach.”*

56. The learned Controller has discussed the inventive concept embodied in the Subject Patent of the present invention. Thereafter, the 3rd step that pertains to common general knowledge in the art at the priority date is compiled by the discussion of the cited prior arts. Pursuant to that, the comparison of the cited documents with the present invention was undertaken and the same was assessed to come to the conclusion. Therefore, the Impugned Order is well-reasoned and does not contain any infirmities. Accordingly, no interference is required in this Appeal.

CONCLUSION

57. In view of the above analysis, Respondent No. 2 has established the relevancy of the additional documents and, accordingly, I.A. 20715/2025 is hereby allowed and the additional documents are directed to be taken on



2026:DHC:1828



record. As the Impugned Order is well-reasoned, the present Appeal is hereby dismissed. There shall be no order as to costs.

TEJAS KARIA, J

FEBRUARY 28, 2026

'KC' / 'N'