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

% Judgment reserved on: 16.02.2026
Judgment delivered on: 08.04.2026

+ C.A.(COMM.IPD-PAT) 86/2022

CRYSTAL CROP PROTECTION LIMITED .....Appellant

versus

SUDPITA DEY ASSISTANT CONTROLLER OF PATENTS AND DESIGNS & ORS. .....Respondents

Advocates who appeared in this case:

For the Appellant : Mr. Priyam Lizmary Cherian and Ms. Shruti Jain, Advocates
For the Respondents : Ms. Pratima N. Lakra, CGSC with Mr. Shailendra Kumar Mishra and Mr. Abhishek Sharma, Advocates for R-1 Mr.Ajay Amitabh Suman and Mr. Shravan Kumar Bansal, Advocates for R-3

CORAM:
HON'BLE MR. JUSTICE TUSHAR RAO GEDELA

J U D G M E N T

TUSHAR RAO GEDELA, J.

1. Present appeal has been filed under Section 117A of the Patents Act, 1970 (hereinafter referred to as *"the Act"*) assailing the order dated 11.01.2022 passed by the Assistant Controller (hereinafter referred to as *"learned AC")* of Patents and Designs under Section 25(1) of the Act, refusing the grant of patent application no.1607/DEL/2010 (hereinafter referred to as *"subject application"*).

BRIEF FACTS:-

2. The appellant had submitted the Patent Application no. 1607/DEL/2010 in respect of an Insecticidal Composition was filed on 08.07.2010. The First Examination Report (hereinafter referred to as "*FER*") was furnished on 26.05.2017 and the response thereto was submitted by the appellant on 22.09.2017. The appellant had amended its claims *vide* communication dated 22.11.2019. It is stated that between the years 2017 and 2021, four pre-grant oppositions were filed against the said application and the appellant had filed replies thereto.

3. The first hearing notice was issued on 03.09.2021, however, the appellant sought adjournment, which was granted. Subsequently, the Assistant Controller heard the arguments on 23.11.2021 before passing the impugned order on 11.01.2022. It is this order which is challenged before this Court by way of the present appeal.

4. The appellant claims that the subject application provides a broad spectrum insecticidal composition for controlling a wide range of insects, namely: (i) biting and chewing types (Spodoptera, Fruit Borer, Helicoverpa) and (ii) the sucking types (mites, leaf miners and thrips). The appellant claims that there does not exist a single insecticidal composition which is effective against a wide range of insects, which would include the biting and chewing types as also the sucking types. It claims that different types of insecticides are used for different varieties of insects, thereby increasing the cost and causing considerable economic loss.

5. The appellant claims that to overcome the limitations in the prior art, a broad spectrum insecticidal composition was needed and subject application is one such insecticidal composition. Primarily, the appellant claims the use of "Fipronil", which is a member of the Phenyl-Pyrazole Class of pesticides, which is a systemic and contact insecticide disrupting the central nervous system by blocking the GABA (gamma-aminobutyric acid) receptor and glutamate-gated chloride channels (GluCI) and Emamectin Benzoate (EB), which is a member of the Avermectin Class of pesticides and is a contact insecticide blocking the neurotransmitter GABA. The composition comprises Fipronil (F) and Emamectin Benzoate (EB) in specific weight concentrations namely, 3.5% w/w of F and 1.5% w/w of EB, formulated as a suspension concentrate (SC) formulation. It is claimed that the combination of F & EB exhibits an enhanced insecticidal activity at a much lower concentration than when either of them is used alone, thereby confirming a surprising synergistic effect. The appellant claims that if a combination of two active ingredients leads to a synergistic effect which is over and above the additive effect, then such a synergistic combination is entitled to patent protection as laid down by this Court in ***Biomoneta Research Pvt. Ltd. vs. Controller General of Patents, Designs and Anr.***, reported in ***2023 SCC OnLine Del 1482***.

6. The independent claim 1 of the subject application is stated as under:

> "1. *An insecticidal composition comprising synergistically effective amount of Fipronil and Emamectin Benzoate, wherein Fipronil weight concentration in the said composition is 3.5% w/w, Emamectin Benzoate weight concentration in the said composition is 1.5% w/w, and the said composition is in the form of a suspension concentrate (SC)*".

7. The appellant states that the rejection *vide* the impugned order is on the grounds of (a) lack of novelty; (b) lack of inventive step and (c) non-patentability under Section 3(d) of the Act.

8. Learned counsel appearing for the appellant submits that a perusal of the impugned order would reflect a clear non-application of mind with regard to the conclusion of lack of novelty, inasmuch as no reasons or grounds for reaching such a conclusion have been provided by the learned AC. Equally, she submits that so far as the conclusion of lack of inventive step is concerned as well, no reasons whatsoever have been provided as to why the appellant's submissions in that regard are not acceptable.

9. She further submits that the conclusion of the invention does not meet the requirement under Section 3(d) of the Act has been reached without providing any reasons as to why the activity supplied in the complete specification is not acceptable. In fact, according to learned counsel, the impugned order merely reproduces the post-hearing submissions of the pre-grant opposition in lieu of recording independent findings, which are mandated to be provided by the learned AC, who functions as a quasi-judicial authority. Learned counsel submitted that the mere observations that the "*arguments regarding the instant composition as a suspension concentrate is not convincing*", cannot be construed as a proper application of mind by the learned AC. On that short ground, Mr. Priyam Lizmary Cherian, learned counsel would contend that the impugned order be quashed and the appeal be allowed by remitting the subject application back to the learned AC for *de novo* consideration of the entire claims.

10. In support of the above, learned counsel had advanced the following submissions, which are reproduced in a tabulated form for the sake of clarity and convenience:

"Prior Arts for Rejection on Grounds of Lack of Novelty and Inventive Step

Prior Art	***Discussion in the Impugned Order***	***Principles of Patent law ignored by the Impugned Order***
Title: *"A Composite Fipronil Insecticide" (Relied on By Respondent No. 2,3,4 and 5 in Pre grant and Respondent No. 1 in Refusal order)*	*Disclosure of CN1969627 (CN'627):* *CN'627 discloses an insecticide comprising 3.5% Fipronil and 1.5% of Emamectin benzoate (Please see embodiment 5 on page 19 of CN'627). CN'627 also discloses that an insecticide composition can be formulated as suspension. In particular, CN'627 discloses in claim 8 an insecticide composition in the form of suspension.* *CN'627 also discloses a formulation comprising Fipronil and Emamectin benzoate along with one or more adjuvants, including wetting agent (Please see claim 2), dispersant/dispersion agent (Please see claim 2), emulsifying agent (Please see claim 5), solvent (Please see claim 5). The amount of adjuvants is the same as that claimed in claim 4 of the impugned application. (Please see claims of CN'627).* *CN'627 also teaches that the said insecticide composition can be used for controlling rice borer, plant hopper, diamondback moth, beet armyworm, cigarette beetle and cotton bollworm (Please see abstract and claim 1 of CN'627)*	*The Ld. Controller has failed to deal with the Appellant's arguments that:* *1. The specific combination of 3.5% w/w Fipronil (F) + 1.5% w/w Emamectin Benzoate (EB) in SC formulation without a synergist, as the present invention, is not disclosed in any claims of CN'627.* *2. Claim 1 only discloses a range of 0.5-15% F, 0.1-10% EB and other auxiliary agents formulated as miscible oil, wetting powder, suspending agent, or microemulsion. It does not disclose the specific selection from the range, and it does not disclose any formulation as a SC. Hence, generic disclosure in the prior art may not necessarily take away the novelty of*

	Embodiment 5 of CN'627: *5% Fipronil and Emamectin Benzoate miscible oil (by weight):* | Components	Percentage by weight
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Fipronil	3.5%
Emamectin Benzoate	1.5%
Emulsifying agent	5%
Co-solvent	5%
Stabilizer	2%
Synergistic agent	3%
Organic solvent	60%
Penetrant	18%
Defoamer	1%
PH adjusting agent	1%
The sum of the components is	100% | *present set of claims of the impugned application; and not relevant for Novelty. However, the office finds that, the composition of 3.5% w/w Fipronil and 1.5% w/w Emamectin Benzoate as claimed in the claims 1 to 4 of the impugned application are being anticipated by the disclosure of any one of the CN'627 or CN'546.* *Therefore, the Novelty for the claims 1 to 4 of the impugned application has not been acknowledged vis-à-vis disclosure of CN'627 or CN'546.*	*the specific disclosure.* *3. Embodiment 5 is an EC formulation and not SC, as claimed. EC and SC cannot be treated interchangeably. They are completely different chemical formulations having different properties such as (i) different size of active ingredients, (ii) SC is water based thus more environment friendly over EC which is an emulsifiable oil,* *(iii), their interaction with soil therefore differs and they have different environmental effects accordingly.* *4. Further, Embodiment 5 necessarily comprises a synergistic agent which is absent in the claimed invention. Even, all the remaining other Embodiments, i.e. 1-4 and 6-12 comprise the combination of F and EB along with a synergistic agent (necessarily) and in a different formulation types other than SC formulation, as claimed in the present invention. Thus, the claimed invention cannot be hit by novelty in light of CN'627. Hence, CN'627*

		clearly teaches away from the claimed invention. *The Ld. Controller has erred in relying on CN'627 for both - novelty and for inventive step. The same prior art cannot render an invention as lacking novelty (when tested on a standalone basis) and also lacking inventive step (when it is combined with other prior arts). Without Prejudice:* *5. As synergistic agent is an essential component of CN'627, CN'627 actually teaches away from engaging in experiment without a synergistic agent. Lack of synergistic agent is an essential component of claimed invention.* *6. There is nothing in CN'627 which teaches, suggests or motivates a person to experiment a combination of F+EB without a synergist.* *7. There is also no teaching for SC, let alone preference for SC in CN'627. There is no reason why a person skilled in the art would attempt a SC based on reading of CN '627*

		either alone or in any combination/ mosaic with other prior art(s) or common general knowledge of the field. *8. Further, for an invention to lack novelty, a single prior art must anticipate all the features of the invention, but the CN'627 does not have all the features as claimed in the present invention. Hence, the Ld. Controller has erred in relying of CN'627 for novelty.*
CN'546 *Title: "A kind of pesticide mixture of emamectin benzoate andfipronil" (Relied on* *by Respondent No. 2,3,4* *and 5 in Pre grant and Respondent No. 1 in Refusal order*	*Disclosure of CN101019546 (CN'546):* *Example 5 of CN'546 is describing the active ingredients Emamectin Benzoate (1.5%) and Fipronil (3.5%), which is exactly the composition claimed by the subject matter of the present impugned application.* *Further, paragraph 6, page 4 of CN'546 distinctly states that the composition can be formulated either as emulsifiable oils, microemulsions and aqueous emulsions.* *present set of claims of the impugned application; and not relevant for Novelty. However, the office finds that, the composition of 3.5% w/w Fipronil and 1.5% w/w Emamectin Benzoate as claimed in the claims 1 to 4 of the impugned application are being anticipated by the disclosure of any one of the CN'627 or CN'546.*	*The Ld. Controller has failed to deal with the Appellant's arguments that:* *1. The specific combination of 3.5% w/w F + 1.5% w/w EB in SC formulation without a synergist, as the present invention, is not disclosed in an claim of CN'546.* *2. Claim 1 (Pg. 522 of Appeal paperbook) only discloses a range of 0.2-10% F, 0.1-10% EB and other functional aid/adjuvants, organic solvent or carrier.* *Hence, generic disclosure in the prior art may not necessarily take away the*

	Therefore, the Novelty for the claims 1 to 4 of the impugned application has not been acknowledged vis-à-vis disclosure of CN'627 or CN'546.	*novelty of the specific disclosure. Further, organic solvent is an EC formulation, in contrast to the SC formulation, as in the present invention.* *3. Although Example 5 (Pg. 525 of Appeal paperbook) teaches F as 3.5% and EB as 1.5% but only as a combination with organic solvent in an emulsion oil that is a EC formulation whereas the present invention is in SC formulation.* *4. Further, Table at page 525 of appeal paperbook discloses a combination of F and EB applied as emulsifiable oil at very higher dosage of 20g/mu (21.4g/acre) than in the claimed invention at 10g/acre. Thus, clearly the claimed invention cannot be hit by novelty in light of teachings in CN'546.* *Similarly, the Ld. Controller has erred in relying on CN'546 for both - novelty and for inventive step. The same prior art cannot render an invention as lacking novelty (when tested on a standalone basis) and also lacking inventive*

		step (when it is combined with other prior arts). Without Prejudice: *1. CN'546 does not teach, suggest or motivate the person skilled in the art about the synergist, hence teaches away.* *2. The present claimed invention does not comprise an organic solvent as present in CN'546, hence teaching away. There is no reason in CN'546 to make/prefer SC over emulsion oils.* *3. Moreover, for an invention to lack novelty, it must be fully disclosed and present in its entirety within a single prior art reference, accompanied by adequate information. In this context, CN'546 fails to invalidate the present invention on novelty grounds, as it does not fulfil this criterion.*
CN'037 *Title:* *"Compound insecticides for controlling rice Insects" (Relied on by Respondent No. 4 and 5*	*Disclosure of CN1911037 (CN'037):* *CN'037 discloses a composite insecticide for controlling rice pests comprising combination of Fipronil and Emamectin Benzoate, wherein the mass ratio of Fipronil to Emamectin Benzoate is 0.25-10 : 0.01-5 (see,*	*Principles of Patent law ignored by the Impugned Order* *The Ld. Controller has failed to deal with the Appellant's arguments that:*

in Pre grant and Respondent No. 1 in refusal order)	*CN'037, claims 5 and 6; and page 4, last two paragraphs and page 5, 1st paragraph).* *In addition, CN'037 explicitly discloses examples of Fipronil-Emamectin Benzoate suspension concentrate (SC) formulations (see, CN'037, Page 9). Further, CN'037 also demonstrates existence of synergism between Fipronil and Emamectin Benzoate (see, CN'037, Page 5, 5th paragraph; and Page 11, under 'Field control experiment').* *With regards to CN'037, discloses an insecticide composition for the control of rice insects comprising Fipronil and Emamectin benzoate, wherein the mass ratio of Fipronil to Emamectin benzoate is in the range of 0.25 to 10: 0.01 to 5 (covering the wt% of Fipronil (3.5%) and Emamectin benzoate (1.5%) as claimed in claim 1 of the impugned application) formulated into suspension formulation. Hence, the claims of the present impugned application (claims 1–4) are obvious in view of the teachings of the document CN'037 either singly or when taken in combination with either of documents CN'546, CN'627 or CN'055.* *From the disclosure of CN'160 [suspension concentrate (see page 4, lines 19–21) pesticidal composition comprises 5% Fipronil with 1% Emamectin benzoate; 3% Fipronil with 0.2% Emamectin Benzoate and 4% Fipronil along with 0.5% Emamectin benzoate (See example 1)]; and CN'037 [suspension concentrate (see, CN'037, Page 9) pesticidal composition*	*1. The specific combination of 3.5% w/w F + 1.5% w/w EB in SC formulation without a synergist, as in the present invention, is not disclosed in any claims of CN'037 except for a broad range. Hence, disclosure of a broad range in the prior art will not by itself it renders as obvious.* *2. The exemplified formulation of CN'037 as in the order at example 2 at page 536-537 of appeal paperbook discloses a combination of F and EB in a suspending agent formulation, but in different concentrations, as claimed in the present invention.* *No teaching/motivation to deviate from the particular exemplified concentration of F and EB, let alone arrive at the specific concentrations claimed in present invention.* *3. Further, the 'Field Control experiment' in CN'037 teaches away the person skilled in the art from the present invention with combination of F and EB by teaching that the*

	comprises 0.25 or 10 wt% Fipronil with 0.01 or 5 wt% Emamectin benzoate], it is obvious for a person skilled in the art to arrive at the teachings of the present impugned invention without exercising any inventive activity. Accordingly, all the claims (claims 1–4) of the present impugned application are obvious in view of the teachings of the document CN'160 and/or CN'037 either singly or when taken in combination with common general knowledge; or when taken in combination with the disclosure of CN'627 and/or CN'546.	*combination of fipronil and chlorpyrifos is more effective in control of rice leaf roller borer over the combination of F and EB. Further, the combination of fipronil + chlorpyrifos is more effective in control of rice stem borer over the combination of F and EB. (Pg 539 of appeal paperbook)* *The Ld. Controller is erred in relying on CN'037 for inventive step as he has not disclosed the specific portion of the prior art that as per the order that teaches, suggests or motivates the person skilled in the art to arrive at the claimed invention. Rather, CN'037 clearly teaches away from the claimed invention. The Ld. Controller has erred in ignoring the settled principle of law that if a prior art teaches away, rather than towards the claimed invention is not even a relevant prior art for inventive step.*
ADDITIONAL PRIOR ARTS FOR REJECTION ON GROUND OF LACK OF INVENTIVE STEP ALONE		
CN'055 "Title: A kind	*Disclosure of CN101066055A (CN'055)*	*The Ld. Controller has failed to deal with the*

of pesticide composition containing emamectin benzoate" *The Ld. Controller has failed to deal with the Appellant's arguments that:* *1. The specific combination of 3.5% w/w F + 1.5% w/w EB in SC formulation without a synergist, as in the present invention, is not disclosed in any claims of CN'055, rather CN'055 is completely contrary in teaching the presence of a synergistic agent as an essential component in the following disclosure:* *a. Claim 1: EB (0.1 - 5%) + Compound B (0.2% - 30%) + Synergist- 0.1-5% + Emulsifying Agent- (5-20%) +Solvent- (45-90%) (Pg. 546 of Appeal paperbook)*	*CN'055 discloses Emamectin Benzoate- 0.1 to 5% with any combination of either Fipronil, chlorfenapyr and diafenthiuron in any proportion. CN'055 discloses a pesticidal composition containing 0.2% - 30% Fipronil and 0.1%-5% Emamectin Benzoate (See claim 1 of CN'055). In example 5, Emamectin Benzoate is specifically mentioned to be 0.5% along with Fipronil-5% along with adjuvants. (See claims 1-5 of CN'055). The adjuvants disclosed in CN'055 include emulsifying agents, solvents and synergist (See claim 1 – 5 of CN'055). Further, CN'055 discloses that the amount of adjuvants is about 50% to 95% w/w (see claim 1 of CN'055, composition 1 and 2 mentioned under Table 2, on page 9). Table 2 on page 9 of CN'055 showed the efficacy test results of the composition which is a mixture of Emamectin Benzoate (0.5%) and Fipronil (5%), wherein the tests indicated the control efficiency of 98.62%.* *Similarly, from the disclosure of CN'055 & CN'970, a person skilled in the art would not face any difficulty whatsoever and would not be required to have any ingenuity to apply the teachings of* *cited documents CN'055 and/or CN'970 to arrive at the present invention. Moreover, the claims of the present impugned application (claims 1-4) are obvious in view of the teachings of the document CN'970*	*Appellant's arguments that:* *1. The specific combination of 3.5% w/w F + 1.5% w/w EB in SC formulation without a synergist, as in the present invention, is not disclosed in any claims of CN'055, rather CN'055 is completely contrary in teaching the presence of a synergistic agent as an essential component in the following disclosure:* *a. Claim 1: EB (0.1 - 5%) + Compound B (0.2% - 30%) + Synergist- 0.1-5% + Emulsifying Agent- (5-20%) +Solvent- (45-90%) (Pg. 546 of Appeal paperbook) 7* *(Relied on by Respondent No. 2 and 3 in Pre grant And Respondent No. 1 in refusal order)* *b. Example 5- F (5%) + EB (0.5%) + Synergist (4%) + Emulsifying Agent (15%) [Adjuvant] as EC (Pg. 556 of Appeal paperbook)* *2. All the remaining other Examples, i.e. 1-4 and 6 comprise the combination of EB with other active ingredient,*

	either singly or when taken in combination with either of documents CN'546, CN'627 or CN'055 or common general knowledge.	*but not F+EB and also present in a different formulation type than SC formulation, as claimed in the present invention.* *Hence, CN'627 clearly teaches away from the claimed invention.* *3. Hence, it has not been explained in the Order as to why a person skilled in the art would consider synergist as an optional element when CN'055 teaches away from this. It is trite that while mosaicking the prior art with the claimed invention, there must be a coherent thread leading from the prior art to the claimed invention where tracing the thread must be an act which follows obviously, that was not the case present here.* *4. Further, formulation type EC as claimed in CN'055 is different than the SC type* *claimed in the present invention, hence teaches away.*
CN'160 *Title:* *"Synergistic Pesticidal Composition" (Relied on by Respondent No.*	*Disclosure of CN1579160 (CN'160):* *CN'160 discloses a synergistical pesticide composition comprising Fipronil and Emamectin Benzoate in the weight ratio of Fipronil and*	*The Ld. Controller has failed to deal with the Appellant's arguments that:* *1. The specific combination of 3.5%*

2 in pre grant and Respondent No. 1 in refusal order)	*Emamectin Benzoate is 1–50:1. (See claim 2 of CN '160). Specific examples are taught in CN'160, wherein the pesticidal composition comprises 5% Fipronil with 1% Emamectin benzoate; 3% Fipronil with 0.2% Emamectin Benzoate and 4% Fipronil along with 0.5% Emamectin benzoate (See example 1). It is evident that the active ingredients Fipronil and Emamectin benzoate and their amount are disclosed in CN'160.* *CN'160 also discloses that an insecticide composition can be formulated as suspension (Please see abstract and claim 4 of CN'160). In particular, CN'160 discloses the method of preparation of the insecticide composition in the form of suspension (Please see page 4, lines 19–21 of CN'160).* *CN'160 discloses the use of one or more adjuvants in formulation comprising Fipronil and Emamectin Benzoate (See claims of CN'160). CN'160 discloses a long list of adjuvants, including wetting agent (see claim 2), dispersant/dispersing agent (see claim 2), emulsifying agent (see claim 5), solvent (see claim 5). The amount of adjuvants is the same as that claimed in claim 4 of the impugned application (See claims of CN'160).* *CN'160 discloses that the said insecticidal composition can be used for preventing and treating various forest pests, such as rice stem borers, plant hoppers and vegetable aphids*	*w/w F + 1.5% w/w EB in SC formulation without a synergist, as in the present invention, is not disclosed in any claims or examples of CN'160.* *2. Claims 1 and 2 (page 541 of Appeal Paperbook) disclose a combination of F + active ingredient B [B being EB (Abstract)] in the preferrable range, 1-30:1, in contrast to the ratio of F and EB as claimed in the present invention, i.e., 2.33:1.* *3. Further, the table (Exploit Example 2 at page 544 of Appeal paperbook) in CN'160 discloses the ratio of F to EB showing the most effective control is at 1:1 contrary to the preferred ratio of 2.33:1 as in claimed invention.* *The CN'160 does not in any way teach, motivate or suggest the person skilled in the art to particularly arrive at the invention as claimed herein and rather the disclosure therein teaches away.*

	(Please see abstract and claim 5 of CN'160).	
CN'970 *Title:* *"Fipronil insecticidal composition" (Relied on by Respondent No. 3 and 4 in Pre grant and Respondent No. 1 in refusal order)*	*Disclosure of CN101151970A (CN'970)* *CN'970 discloses insecticidal composition containing Fipronil and Emamectin or its derivative Emamectin Benzoate as active ingredients in a weight ratio of 1:10 to 10:1 between the active ingredients (See abstract of CN'970), along with adjuvants (page 4 of CN'970). Paragraph 4 describes the various suitable dosage forms, eg. Wettable powder, water soluble powder, water-dispersible granule, pill, tablet, paste, aqueous suspension, emulsion etc. Paragraph 6 describes suitable adjuvants used in the claimed formulation. Example 2 and Example 3 of CN'970 which specifically discloses 2% Emamectin Benzoate and Fipronil microemulsion formulation (Fipronil-1% and Emamectin Benzoate-1%) and 3.3% Emamectin Benzoate and Fipronil microemulsion formulation (Fipronil-0.3% and Emamectin Benzoate-3%) respectively. Control efficiency of these example 2 and example 3 preparations of CN'970 were found to be 94.16% and 94.13% respectively (See page 5/7, example 8), which is beyond what is claimed in the present impugned application.* *Similarly, from the disclosure of CN'055 & CN'970, a person skilled in the art would not face any difficulty whatsoever and would not be required to have any ingenuity to apply the*	*The Ld. Controller has failed to deal with the Appellant's arguments that:* *1. The specific combination of 3.5% w/w F + 1.5% w/w EB in SC formulation without a synergist, as in the present invention, is not disclosed in any claims or examples of CN'160 rather none of the Examples 1-3 of CN'970 disclose F+EB in the claimed SC formulation. Hence, there is no teaching in CN'970 to arrive at the presently claimed concentrations.* *2. Claim 2 (page 559 of Appeal Paperbook) discloses F (1:10) + EB (10:1) but in broad ranges. Hence, disclosure of a broad range in the prior art will not by itself render it as obvious.* *3. Further, the CN'970 teaches away by noting that the combination of fipronil + avermectin is more efficacious than the combination of F+EB (Pg. 566 of Appeal paperbook)*

	teachings of… *cited documents CN'055 and/or CN'970 to arrive at the present invention. Moreover, the claims of the present impugned application (claims 1–4) are obvious in view of the teachings of the document CN'970 either singly or when taken in combination with either of documents CN'546, CN'627 or CN'055 or common general knowledge.* *The office further finds that, formulation of a composition into a suspension form is a standard practice, practiced routinely by a person skilled in the art, and hence, formulating a composition into a suspension form, using the method very well-known conventionally, forms part of the common general knowledge to the skilled person. There is thus nothing surprising or inventive about choosing to formulate a composition as a suspension/suspension concentrate form as claimed. The skilled person would therefore combine the teaching of cited prior arts and will definitely prepare a suspension concentrate formulation of the pesticide composition (comprising 3.5 wt% Fipronil, 1.5 wt% Emamectin Benzoate). Therefore, the argument of the Applicant is meritless and the subject matter of claims 1–4 of the impugned application is obvious to a person skilled in art.*	*The Ld. Controller has considered "Suspension Concentrate" (SC) as a stand-alone feature of the invention as a whole and, for the purposes of inventive step, has wrongly opined that formulating a SC forms part of the common general knowledge. While admittedly SC as a formulation type is known, the prior arts do not provide any preference for the same or teaches functional equivalence, let alone in the context of the presently claimed invention as a whole. The Ld. Controller has also wrongly held that formulating a SC formulation is "nothing surprising or inventive." In fact, the present invention does not claim that formulating the combination of actives as SC is the surprising or inventive aspect of the invention. The Ld. Controller has also wrongly held that inventive step requires a "surprising" result, which is contrary to the provisions of Section 2(1)(ja) of the Patents*

		Act. Considering the teachings of the aforementioned prior art, it is evident that none of the cited prior art documents establish the preference of formulation of a composition in a suspension form as a standard practice. Furthermore, the Ld. Controller has not substantiated this assertion with any additional prior art evidence. The claimed invention unmistakably demonstrates a technological advancement when compared to the cited prior art documents and thus ought to have granted patent protection. *The Ld. Controller has only broadly mentioned the prior art Allan Knowles to rely for covering conventional and advanced formulation type including suspension concentrate formulation (Page 625 of Appeal paperbook) in one of the headings of the said prior art. However, they didn't emphasize that SC formulation is preferred*

		or considered a standard practice compared to other formulation types. Moreover, the Ld. Controller has not specifically extracted the relevant portions of the said prior art to support the reason. Surprisingly, the final conclusion on the lack of inventive step didn't even acknowledge this said prior art. *Further, the mosaicking of prior arts must collectively teach, suggest or motivate a person skilled in the art to arrive at the claimed invention as a whole. However, in this instance, each prior art is predominantly teaching away from the claimed invention, thereby losing its relevance as a prior art.* *Hence, the claimed invention cannot be deemed obvious to a person skilled in the art*

11. Apart from the above, learned counsel submits that the learned AC has considered suspension concentrate (SC) as a standalone feature of the invention and appears to have wrongly opined that formulating an SC forms part of the general knowledge. She further submitted that such an approach reflects a mischaracterisation of the invention, inasmuch as it isolates one

feature without appreciating the invention as a whole. She would contend that while SC as a formulation type is known, however, none of the prior arts provide any preference for the same or teach functional equivalence. The conclusion by the learned AC that the SC formulation is *"nothing surprising or inventive"* is itself erroneous, as the present invention does not claim that formulating the combination of actives as SC is the only surprising or inventive aspect of the invention, whereas the synergistic effect also is an inventive aspect of the invention. She further submits that the impugned order, therefore, fails to consider the invention in its entirety, including the synergistic interaction between the components.

12. In regard to the objection sustained by the learned AC under Section 3(d) of the Act, learned counsel submitted that this objection was not raised in the FER. It is contended that raising a fresh ground at a belated stage, without prior notice in the FER, is contrary to the principles of natural justice. It is submitted by her that only respondent no.3 had made a bald allegation with regard to Section 3(d) of the Act in its representation, which was duly clarified by the appellant by providing a clear explanation. Moreover, during the hearing, respondent no.3 did not urge this ground, thereby effectively conceding the issue. So far as respondent no.5 is concerned, no such objection regarding Section 3(d) of the Act was raised at all, nor was it agitated during the submission, only in the post-hearing submission it was noted that the subject application failed to prove that the SC formulation of the composition exhibits improved efficacy.

13. In the aforesaid context, the learned AC is stated to have arbitrarily noted that the suspension concentrate form of 3.5% w/w Fipronil (F) and 1.5% w/w Emamectin Benzoate (EB) is not allowable under Section 3(d) of the Act, in view of the disclosure of the cited prior arts and that the prior arts disclose either Emulsion Concentrate (EC) and/or SC, and the effectiveness of SC over the other is also comparable to the cited efficacy. Learned counsel would contend that, in terms of the settled law, the objection under Section 3(d) of the Act, in order to be sustainable and valid, has to be raised in the very first instance, i.e. the FER. Moreover, a specific known substance has to be first identified and it must be shown how the known efficacy of that known substance is the same as that of the latter claimed new-formed invention. It was further submitted that in the absence of such identification and comparative analysis, the invocation of Section 3(d) of the Act cannot be sustained. She stoutly contended that this legal aspect was not addressed by the learned AC, rendering the impugned order unsubstantiated. Accordingly, it is contended that the finding under Section 3(d) suffers from lack of reasoning and is liable to be set aside.

CONTENTIONS OF RESPONDENT NO.3:

14. *Per contra*, Mr. Amitabh Suman, learned counsel for the respondent no.3, opposed the arguments addressed on behalf of the appellant. He submitted that the impugned order does not suffer from any infirmity warranting interference by this Court. He specifically refuted the stand that AC has merely reproduced, by way of copy-pasting, the representations filed in the pre-grant opposition stage by the respondents in the impugned order,

which allegedly do not contain any independent application of mind or analysis by the learned AC. According to him, mere similarity of reasoning with the submissions of a party does not *ipso facto* establish non-application of mind. He would contend that the grounds of lack of novelty, lack of inventive step and non-patentability under Section 3(d) of the Act have been examined threadbare by the learned AC by referring to each and every prior art in respect of each of the objections, and that due application of mind is apparent from a plain reading of the impugned order. It is thus contended that the order qualifies as a reasoned determination passed in exercise of quasi-judicial powers.

15. The learned counsel for the respondent no.3 submitted that the impugned patent application lacks novelty and is anticipated in view of the disclosure made in prior art CN1969627. He submits that the said prior art constitutes a clear and enabling disclosure of the claimed composition. He has cited pages, 497-520, specifically, 498, 500, 515, and claims 1, 5 and 8 of the prior art CN1969627. As per the learned counsel, Fipronil 3.5% and Emamectin Benzoate 1.5% is disclosed under the Embodiment 5 of the detailed specification of the said prior art. On this basis, he submitted that the essential features of the claimed invention stand disclosed in the prior art.

16. The learned counsel for the respondent no. 3 submitted that in view of the disclosure made in CN'627, the subject application lacks novelty and is barred under section (25) (1) (b) of the Act. He further submitted that the statutory bar under Section 25(1)(b) of the Act squarely applies in the facts of the present case.

17. While citing the prior art CN101019546, the learned counsel for the respondent no.3 submitted that under Example 5 of the Complete Specification (CS) at page 525 of the prior art, Fipronil and Emamectin Benzoate at 3.5% and 1.5% respectively are disclosed. Further, citing page 521 of the said prior art, the learned counsel for the respondent no. 3 contended that the said prior art also discusses that the composition of the claimed invention can be prepared as EC, EW, and Suspending agent, etc. Thus, according to him, the form of formulation claimed by the appellant is also within the contemplation of the prior art. Citing the same prior art, the learned counsel for respondent no. 3 further submitted that claim 1 of the said prior art claims a kind of pesticide mixture of Emamectin Benzoate and Fipronil. The respondent also contended that as per pages 524 and 525 of the CS of the said document, adjuvants and organic solvents are disclosed. Further, citing page 528 of CN'546, the respondent submitted that the said document discloses the synergism of the composition claimed under the said prior art. It is therefore contended that even the alleged synergistic effect is not novel. Further, citing example 5 of the cited document, the respondent submits that since it shows best co-toxicity efficient of the two active compounds, it teaches towards the present invention of the subject application.

18. Learned counsel for the respondent no.3, referred to the written submissions on its behalf and while relying on the *Manual of Patent Office Practice and Procedure*, 2019, submitted that since the prior art is read through the eyes of a person skilled in the art, there is implicit disclosure of the present invention in the cited documents.

19. The counsel for the respondent submitted that the cumulative reading of these cited prior arts renders the claimed invention obvious.

20. While citing the prior art CNI969627, the counsel for the respondent submitted that at page 500, Example 8 uses 10 -75% of water as a solvent. The counsel also cited the claim 1 of the said document. Thus, according to him, demonstrates that aqueous formulations were already known.

21. The second document relied on by the counsel for the respondent is CN101019546. Citing Example 7 (Pg.525) of this document, the respondent submitted that Fipronil 3.5% and Emamectin Benzoate 1.5 % by weight is disclosed. As per the respondent, at page 524, the said document discloses adjuvants and organic solvents up to 100%.

22. The counsel for the respondent also cited document CN1579160 and contended that at page 544, the examples in the table discloses reagent + Emamectin Benzoate, where the reagent is the structure of Fipronil. Under the abstract, it also discloses Suspending Agents and EC.

23. As per the written submission of the respondent, CN101066055, at page 546, discloses the active ingredient Fipronil (02. to 5%) and Emamectin Benzoate (01. to 5%). Further, the respondent also relied on the abstract of the said cited document. It is contended that the claim ranges fall within the disclosed ranges of the prior art.

24. The next document relied on by the respondent to support the objections under Section (25)(1)(e) of the Act is CN101151970. The counsel for the respondent submitted that at page 556, the said document discloses 5%

Fipronil and 0.5 % Emamectin Benzoate. The responder also argued that the said document also discloses emulsifier, wetting agent and disintegrator.

25. The counsel for the respondent submits that the present invention under claim 1 specifies that said composition is in the form of a suspension concentrate (SC), which is already disclosed in the prior arts. He submits that the selection of SC as a formulation does not involve any inventive step. The respondent has relied on claims 1 and 8 of CN1969627, Examples A, B, C and D of CN1911037, at page 536 and Annexure A-35 (page 567-700) of prior art "Alan Knowles". Citing these documents, the respondent argues that a person skilled in the art would be aware of the advantages of using a water-based suspension concentrate (SC) in place of an Emulsifying Concentrate.

26. The counsel for the respondent submitted that the present invention under claims 2 and 3 claims that the formulation may comprise one or more adjuvants and that adjuvants may include a solvent, an emulsifying agent, a dispersant, a wetting agent, and a foaming agent. The use of adjuvants is disclosed in claims 2 and 5 of CN1969627, page 524 of CN101019546, page 540 of CN 1579160, the abstract of CN 101066055 and page 56 of CN101151970. It is contended that the use of such adjuvants forms part of routine formulation practice.

27. As to the contention of the appellant that the impugned order is suggestive of copy-pasting the submissions of the respondent by the learned AC, and non-application of mind is apparent, he would submit that there is no bar to the adjudicating authority agreeing with the contentions of one of the parties and expressing the same. He submits that concurrence with a party's

reasoning does not vitiate an order, provided independent satisfaction is discernible. He would further submit that even if such portions of the impugned order are eschewed from consideration, though without admitting to the same, if the patent lacks any one of the aspects, i.e., lack of novelty or lack of inventive step, or is barred under the provisions of Section 3 of the Act, such an order is sustainable in law. He submits that the impugned order is independently sustainable on merits. Thus, according to him, there is no substance in such a contention.

28. In the overall conspectus, learned counsel would forcefully contend that in view of the clear findings recorded in the impugned order regarding lack of inventive step and obviousness, coupled with prohibition under section 3 (d) of the Act, the present appeal be dismissed as being devoid of merit.

ANALYSIS AND CONCLUSION:

29. Having heard Mr. Priyam Lizmary Cherian, learned counsel for the appellant and Mr. Suman, learned counsel for respondent no.3, and having perused the pleadings and examined the documents on record, the following order is passed. For the sake of clarity and structured adjudication, the issues are analysed in a topic-wise manner as set out hereinafter.

THE INVENTION

30. The present invention is titled as *"INSECTICIDAL COMPOSITION"* and pertains to an insecticidal formulation comprising a synergistically effective amount of active ingredient Fipronil and Emamectin Benzoate, wherein the said composition is claimed to exhibit excellent insecticidal efficacy. The invention is stated to provide effective control over a wide

spectrum of agricultural pests. The "Field of the Invention" given under the Complete Specification (CS) of the subject application is reproduced hereunder:

> "*The present invention relates to an insecticidal composition comprising synergistically effective amount of a first active ingredient Fipronil and a second active ingredient Emamectin benzoate, wherein the composition exhibits excellent insecticidal properties and is capable of controlling major insects/pests in agricultural crops. More particularly, the present invention relates to a broad spectrum neurotoxic insecticidal composition with contact, systemic and trans-laminar activity. The composition is highly effective in low doses and is also environment friendly.*"

Problem claimed to have been solved by the present invention

31. According to the appellant, existing insecticidal compositions do not effectively address piercing and sucking insects as well as biting and chewing insects in a single formulation. It was further contended that such conventional formulations are often associated with high cost per unit dosage, thereby limiting their commercial viability.

32. It has also been asserted that there are few petrochemical-based materials which can be safely absorbed into the environment and that the availability of environment-friendly and bio-degradable compositions is very low. Therefore, it is desired to have an insecticidal composition that is active against a wide range of insects, that is, a composition with contact/systemic as well as trans-laminar activity against these insects. Additionally, the claim also considers the problem of washing-out of sprayed insecticides due to rain/irrigation. Hence, the need for a broad-spectrum insecticidal composition

which is capable of controlling major insects/pests in various agricultural crops and of overcoming problems associated with the prior art is established.

33. As per the Summary of the Invention, the present invention seeks to provide an efficacious solution for controlling a wide range of agricultural pests through a combination of Fipronil and Emamectin Benzoate. A key feature of the present invention is the alleged synergistic interaction between the two active ingredients, resulting in enhanced insecticidal activity. The summary of the present invention is reproduced hereunder:

> *"SUMMARY OF THE INVENTION*
> *It is an object of the invention to provide a combination of two different active ingredients which are well known insecticides; thereby providing a highly effective and efficacious solution for controlling major insects and pests in various agricultural crops, wherein the two active ingredients are fipronil and ememectin benzoate. Another object of the invention is to provide a broad spectrum insecticide effective against both piercing and sucking type as well as biting and chewing type of insects for all the agricultural crops. The invention encompasses a broad spectrum neurotoxic insecticidal composition with contact, systemic and trans-laminar activity.*
>
> *Yet another object of the invention is to provide a synergistic composition comprising fipronil and emamectin benzoate in synergistically effective amount, wherein each ingredient significantly enhances and abets the activity of the other ingredient. This way, the combination of both the active ingredients exhibits a synergistic effect resulting in a faster and higher mortality of the insect pests. The enhanced mortality ensures reduction in crop damage by insect pests, thereby resulting in a significant increase in the overall yield of the crop. Also, the combination of both has made it possible to achieve a higher insecticidal effect for a larger spectrum of insects/pests. Another object of the invention is to provide an insecticidal composition that is effective even when used in far lower amounts as compared to other insecticides that are usually very expensive; thereby being highly cost effective. Further, since the dose of individual active ingredient, i.e. fipronil and emamectin benzoate in this composition is far less than the*

doses required when used alone, the residue in the soil as well in crop is also lower than their individual residues when used alone. This eliminates any possible side/adverse effects. Consequently, this combination is environmentally safer than its parental compounds. Individually, in such infinitesimally low concentrations, both the components of the combination are very safe to the environment as well as to any non-target organisms including human beings. Therefore, the present composition turns out to be highly economical, effective against a large number of insects and is also environmental friendly. Another object of the present invention is to provide a composition that does not get washed even after two hours of rains following foliar application. This prevents any wastage as well as enhances the effective time period of the application. This also enables the insecticidal composition to act against insects lying on the lower surface of the leaves or other hidden areas which are more prone to attack. It is also an object of the invention to provide a method of preparing the insecticidal composition and its formulations thereof comprising fipronil and emamectin benzoate. Further object of the invention is to provide a method of controlling insects wherein the insects, their habitats and/or plants are treated with the composition of the present invention."

34. The independent claim 1 of the present invention claims an insecticidal composition which comprises a synergistically effective amount of Fipronil and Emamectin Benzoate. Fipronil weight concentration in the composition is 3.5% w/w while the weight concentration of Emamectin Benzoate is 1.5% w/w, and the said composition is in the form of a suspension concentrate (SC). The claims which were considered in the impugned order are as follows:

"We Claim:
1. An insecticidal composition comprising synergistically effective amount of Fipronil and emamectin benzoate, wherein Fipronil weight concentration in said composition is 3.5%w/w, emamectin benzoate weight concentration in said composition is 1.5%w/w, and said composition is in the form of a suspension concentrate (SC).
2. The composition as claimed in claim 1, further comprising one or more adjuvants.

> *3. The composition as claimed in claim 2, wherein the adjuvant is selected from the group consisting of solvent,* ***emulsifying agent****, dispersant,* ***wetting agent****, foaming agent, and* ***combinations thereof****.*
> *4. The composition as claimed in claim 2, wherein the weight concentration of adjuvant is in the range of 50% to 95%w/w.*
>
> [Emphasis Supplied]

35. This Court will now proceed to examine the prior arts to determine whether the reasoning provided by the learned Controller under the objection of lack of novelty and inventive step is sound.

LACK OF NOVELITY:

36. The first issue for determination is whether the subject invention satisfies the requirement of novelty under the Act.

Prior Art CN1969627 (CN' 627):

37. As per the Embodiment 5 of CN'627, an insecticidal composition comprising 3.5% Fipronil and 1.5% of Emamectin Benzoate is expressly disclosed. The said prior art further teaches that such compositions may be formulated as suspensions, including suspension concentrates.

38. Further, claims 2, 5 and 8 of CN'627 disclose formulations comprising Fipronil and Emamectin Benzoate with one or more adjuvants, such as wetting agents, dispersants/dispersing agents, emulsifying agents, and solvents. It is important to note that the amount of adjuvants here is the same as that claimed in claim 4 of the subject application.

39. As per the abstract and claim 1, CN'627 also teaches that the insecticide composition can be used for controlling rice borer, plant hopper, diamond

back moth, beet armyworm, cigarette beetle and cotton bollworm. The abstract and claim 1 of CN'627 are reproduced as follows:

> *"[57] Abstract*
> *A composite Fipronil insecticide, belonging to the technical field of pesticide formulation, particularly relates to a composite formulation of Fipronil and emamectin benzoate. CIt is characterized by that, the composite insecticide comprising foes* ***0.5~15% of Fipronil and 0.1~10% of emamectin benzoate by weight****, and the rest is being additives formulated miscible oil, or wettable powder, or miscible oil, or* ***suspending agent****, or micro-emulsion. When compared with single component type and composite Fipronil insecticide of the prior art, the composite Fipronil insecticide provided by present invention has significantly higher efficiency, improved in efficacy speed, long lasting validity period, strong insecticidal activity, reduced dosage, low toxicity and environmental friendly for controlling rice borer, plant hopper, diamondback moth, beet armyworm, cigarette beetle and cotton bollworm."*
>
> *"1. A composite Fipronil insecticide, characterized in that, the composite insecticide comprises of 0.5~15% of Fipronil and 0.1~10% of emamectin benzoate by weight, and the rest is additives formulated miscible oil, or wettable powder, or miscible oil, or* ***suspending agent****, or micro-emulsion."*
>
> [Emphasis Supplied]

40. Further, claim 8 of CN'627 claims a composition containing, 0.5-15%, Fipronil and 0.1-10% Emamectin Benzoate along with other components. It is important to note that claim 8 clearly claims such a composition in the form of a formulated suspending agent. claim 8 of CN'627 is reproduced hereunder:

> *"8. A composite Fipronil insecticide according to Claim 1, characterized in that, the formulated suspending agent comprises of the following components in percentage by weight:*
> ***Fipronil 0.5~15%, emamectin benzoate 0.1~10%,*** *wetting agent 1%~40%, dispersing agent 0.3~20%, spreading agent 0.1~15%, stabilizer 0.1~30%, synergistic agent 0.5~25%, penetrant 0.1~10%, thickener 0.1~25%, anti-freeze agent 0.05~12%, defoamer*

0.01~5%, PH adjusting agent 0.01~5% and ***water 10~75%.*** *The sum of the components is 100%."*

[Emphasis Supplied]

41. Embodiment 5 of CN'627 in the following table discloses the Fipronil percentage by weight as 3.5% and Emamectin Benzoate at 1.5% by weight. The Embodiment 5 is reproduced as follows:

Components	Percentage by weight
Fipronil	3.5%
Emamectin Benzoate	1.5%
Emulsifying agent	5%
Co-solvent	5%
Stabilizer	2%
Synergistic agent	3%
Organic solvent	60%
Penetrant	18%
Defoamer	1%
PH adjusting agent	1%
The sum of the components is	100%

Prior Art CN101019546 (CN'546):

42. CN'546 similarly discloses a pesticide composition comprising Fipronil (3.5%) and Emamectin Benzoate (1.5%) under Example 5. This reinforces the disclosure of identical concentration ranges as claimed in the present invention. For clarity, Example 5 is reproduced hereunder:

"Exploit Example 5: emamectin benzoate takes up 1.5%, fipronil occupies 3.5%, and other functional adjuvants and organic solvent supplement to 100%."

43. Additionally, at paragraph 6 of page 4 of CN'546 states that the composition can be formulated as emulsifiable oils, microemulsions and aqueous emulsions. The said relevant para is reproduced hereunder:

"The preparation method of the present invention is the same with the preparation methods of mixed pesticides, especially EC(emulsifiable concentrate), micro-emulsion and EW(Emulsion in Water), in the existing technology. These preparation methods shall be deemed as part of the present invention."

This document under example 5 shows that if Emamectin Benzoate and Fipronil is taken with concentration of 1.5% and 3.5% respectively the Co-toxicity Coefficient is maximum which is 146.5511. This cited document at page 8 further discloses that since Co-toxicity Coefficient is more than 100, it can be concluded that there is an obvious synergistic effect. At page 8, the prior art describes that 5% Emamectin Benzoate emulsifiable concentrate - Fipronil shows optimal control effect on the rice leaf rollers. The relevant paragraph is reproduced hereunder:

".....It is thus clear that 5% emamectin benzoate emulsifiable concentrate · fipronil shows optimal control effect on the rice leaf rollers. The above processing pesticides show no sterile reaction during the growth and development stage of the rice. For the area where 5% emamectin benzoate · fipronil emulsifiable concentrate has been applied, the paddy rice grows well with comely leaves, and ears well in later period."

44. Therefore, as discussed above, the abstract as well as claim 1 of CN'627 shows that the composition of 3.5% w/w Fipronil and 1.5% w/w Emamectin Benzoate as claimed in claims 1 to 4 of the subject application is being anticipated by the disclosure of the CN'627, which discloses ***0.5-15% of Fipronil and 0.1-10% of Emamectin Benzoate by weight*** in various solutions. Additionally, the invention under the prior art CN'546 under Example 5 describes the active ingredients Emamectin Benzoate (1.5%) and Fipronil

(3.5%). Therefore, in view of the disclosure of the active ingredients and their concentrations of the present invention in CN'627 and CN'546, it leads to anticipation and makes the present invention not novel under Section 2(1)(j) of the Act. Therefore, this Court is of the view that the objection of lack of novelty is well-reasoned in the impugned order.

45. Therefore, in the light of the cited prior arts CN'627 and CN'546, individually/together, the invention under the subject application is not novel.

46. Accordingly, this Court is of the considered view that the finding of lack of novelty recorded in the impugned order is justified and does not warrant interference.

LACK OF INVENTIVE STEP:

47. The next question which arises for consideration is whether the claimed invention involves an inventive step within the meaning of Section 25(1)(e) and Section 2(1)(ja) of the Act.

48. The impugned order has upheld the objection of lack of inventive step while rejecting the subject application. In order to examine the correctness of the reasoning adopted by the AC on this ground, this Court shall proceed to analyse the cited prior arts forming the basis of the impugned order.

CN101066055A (CN'055)

49. Under claim 1, CN'055 clearly discloses a pesticidal composition comprising Emamectin Benzoate in the range of 0.1 to 5%, with chlorfenapyr or the mixture of any one/ more of compounds Fipronil, Diafenthiuron, beta cypermethrin and cyhalothrin, in varying proportion. CN'055 discloses a pesticidal composition containing 0.2% - 30% Fipronil and 0.1%-5%

Emamectin Benzoate. Under Example 5 as well as claims 1-5, Emamectin Benzoate is mentioned to be 0.5% with Fipronil 5% along with adjuvants. The adjuvants disclosed include emulsifying agents, solvents and synergists. In order to appreciate this aspect, claim 1 of CN'055 is reproduced hereinbelow:

> *"1. A kind of pesticide composition containing emamectin benzoate, it is characterized in that its weight ratio structure is:*
> ***Emamectin Benzoate: 0.1%- 5%,***
> ***Active Ingredient B: 0.2% - 30%,***
> *Synergist: 0.1% - 5%,*
> *Emulsifying agent: 5.0% - 20%,*
> *Solvent: 45% - 90%,*
> *Wherein: The above mentioned active ingredient B can be chlorfenapyr or the mixture of any one or more of the following substances in any ratio: diafenthiuron,* ***fipronil****, beta cypermethrin and cyhalothrin."*
>
> [Emphasis Supplied]

Further, under claim 1 and Table 2 at page 9 of CN'055, it is disclosed that the total amount of adjuvants ranges between 50% to 95% w/w. Table 2 specifically discloses a composition comprising Emamectin Benzoate (0.5%) and Fipronil (5%), demonstrating the control efficiency of 98.62%. However, this Court also notes that the synergist is also used in the abovementioned claims, in Example 5, and in Table 2.

50. Further, at page 4, CN'055 encourages the use of pesticide mixtures in combination with new surface-active agents in order to enhance efficacy and reduce resistance. The relevant paragraph is reproduced hereinbelow:-

> *"Thus, a new type of pesticides mixture with a* ***new surface active agent*** *cannot only play the role of original pesticide types to the greatest extent, but also can greatly reduce the occurrence of pesticide resistance."*
>
> [Emphasis Supplied]

Prior Art CN101151970A (CN'970) :

51. The invention under CN’970 relates to an insecticidal composition for controlling diamondback moth, comprising Fipronil and Emamectin/its derivative Emamectin Benzoate, as active ingredients, wherein the weight ranges from 1:10 to 10:1. The abstract is reproduced hereinbelow:

> *“[57] Abstract*
> *An insecticidal composition for the prevention and control of diamondback moth on cruciferous vegetables, which is characterized in that it contains fipronil and avermectin or their derivatives emamectin benzoate as active components, and the weight ratio of fipronil to avermectin or their derivatives emamectin benzoate is 1 : 10 to 10 : 1.”*

52. The said prior art, under claim 2, specifically claims a composition comprising Fipronil and Emamectin Benzoate in the ratio 1:10 to 10:1. It would be apposite to extract claim 2 hereunder:

> *“The insecticidal composition is characterized in that it contains fipronil and emamectin benzoate as active ingredients, and the weight ratio of fipronil and emamectin benzoate is 1 : 10 to 10 : 1.”*

53. Further, CN’970 under Content of the invention discloses adjuvant in suitable dosage forms including wettable powder, water-soluble powder, pill, tablet, plaster, aqueous suspension, water-dispersible granule and emulsion etc. The relevant paragraph is reproduced hereinbelow:

> *“The insecticidal composition of the invention can be prepared into various suitable pesticide dosage forms, such as wettable powder, water-soluble powder, water dispersible granule, pill, tablet, plaster, suspension agent, emulsion, etc. These preparations can be directly or through the addition of water to form aqueous dispersion in the form of spray, mist, powder spraying, and so on.”*

54. Additionally, it is relevant to note that 2% Emamectin Benzoate and Fipronil microemulsion formulation (Fipronil-1% and Emamectin Benzoate-1%) and 3.3% Emamectin Benzoate and Fipronil microemulsion formulation (Fipronil -0.3% and Emamectin Benzoate-3%) respectively are disclosed under Examples 2 and 3 of CN'970. Under Example 9 and 8, the Control efficiency of these Examples 2 and 3 was found to be 94.16% and 94.13% respectively. It may be pertinent and significant to note that the aforenoted efficiency is higher than what is claimed by the appellant in its patent application. However, this Court also notes that synergists are also used in the examples. The examples are reproduced hereunder:

Examples 8 2% Emamectin Benzoate • Fipronil Microemulsion

Control effect on diamondback moth (example 2 preparation)

Treatment	3 days after spraying		7 days after spraying		Differences	
	Decrease rate (%)	Control effect (%)	Decrease rate (%)	Control effect (%)	0.05	0.01
Example 2 Preparation	94.87	94.85	94.13	94.16	a	A
0.2% emamectin benzoate EC	91.75	91.72	90.69	90.73	ab	A
50g/L fipronil SC	88.38	88.34	86.56	86.62	b	B
CK	0.38	—	-0.44	—	—	—

xamples 2	Preparation of 2% emamectin benzoate • fipronil microemulsion
Emamectin Benzoate	1% (weight)
Fipronil	1% (weight)
Acetone	4% (weight)
500#	8% (weight)
JFC	3% (weight)
Water	83% (weight)

Prior Art CN1911037 (CN'037):

55. As far as the invention under CN'037 is concerned, it pertains to a compound insecticide in respect of the compound insecticide technology for controlling rice stem borer as well as the riceleaf roller. This prior art discloses, under claims 5 and 6, a composite insecticide for controlling rice pests comprising a combination of Fipronil and Emamectin Benzoate, wherein the mass ratio of Fipronil to Emamectin Benzoate ranges from 0.25-10 : 0.01-5. To make this clear, claims 5 and 6 of CN'037 is reproduced hereinbelow:

> *"5. The compound insecticide for controlling rice insects is characterized in that its effective components are (RS) -5-amino-1-(2,6-dichloro-4-trifluoromethyl) -4-trifluoromethylsulfinyl-3-nitrile and 4" - epi-methylamino-4" deoxyavermectin B1 benzoate.*
>
> *6. The compound insecticide for controlling rice insects described in Claim 5 is characterized in that (RS) -5-amino-1- (2,6-dichloro-4-trifluoromethyl) -4-trifluoromethylsulfinyl-3-nitrile and 4-epi-methylamino - 4" deoxyavermectin B1, and the quality to mass ratio of benzoate is 0.25∽10 : 0.01∽5."*

56. It may be significant to note that under the Technical Scheme 3 disclosed under the complete specification of prior art CN'037, the composition of Fipronil and Emamectin Benzoate is disclosed. The mass ratio

of (RS) of these two compounds is 0.25-10:0.01-5. The scheme further discloses that the composition is low-cost, long-term and quick acting, and is capable of improving the control effect and simultaneously delaying the development of insecticide resistance. To understand this better, the Technical Scheme 3 is extracted hereunder:

> *"Scheme 3: the effective components are (RS) - 5-amino-1 - (2,6-dichloro-4-trifluoromethyl) - 4- trifluoromethylsulfuropyrazol-3-nitrile (fipronil) and 4" epi-methylamino-4" deoxyavermectin B1 benzoate (mesaavermectin benzoate).*
> *(RS)-5-amino-1-(2,6-dichloro-4-trifluoromethyl)-4-trifluoromethylsulfinyl-3-nitrile (fipronil) and a mixture of 4" epi-methylamino-4" deoxyavermectin B1 benzoate (emamectin benzoate) to form fluoroavermectin (fipronil and emamectin benzoate) is also low-cost, long-term and quick acting, which can improve the control effect and delay the development of insecticide resistance. The synergistic effect (CO toxicity coefficient) was 414.8.*
> *Among them, the mass ratio of (RS) - 5-amino-1 - (2,6-dichloro-4-difluoromethylphenyl) - 4- trifluoromethylsulfinyl-3-nitrile to 4" -epi-methylamino-4" deoxyavermectin B1 and benzoate is 0.25∽10 : 0.01∽5."*
>
> [Emphasis Supplied]

57. Additionally, at pages 8 and 9, the prior art CN'037 discloses examples of Fipronil-Emamectin Benzoate in suspension concentrate (SC) formulations. The same is extracted hereunder:-

> ***"C. 15% fipronil / abamectin suspension Weigh 90% abamectin physical quantity 5.55kg (5kg), 95% fipronil physical quantity 10.53kg (10kg), adjuvant 10kg, reducing gum 0.3kg, benzoic acid 0.5kg, defoamer 0.5kg, glycol 5kg, water 67.62kg are added into the shear reactor, cut for 30 minutes, and then put into the primary sand mill, then the secondary sand mill, mix in the mixing reactor, carry out the measurement and sub packaging after passing the inspection, obtains the finished product.***

D. 0.36% fipronil / abamectin suspension Weigh 90% abamectin physical quantity 0.11kg (0.1kg), 95% fipronil physical quantity 0.27kg (0.25kg), adjuvant 10kg, reducing gum 0.3kg, benzoic acid 0.5kg, defoamer 0.5kg, glycol 5kg, water 83.32kg are added into the shear reactor, cut for 30 minutes, and then put into the primary sand mill, then the secondary sand mill, mix in the mixing reactor, carry out the measurement and sub packaging after passing the inspection, obtains the finished product.

A. 5.25% fipronil / emamectin benzoate suspension 100kg Weigh 60% emamectin benzoate physical quantity 8.33kg (5kg), 95% fipronil physical quantity 0.27kg (0.25kg), adjuvant 10kg, reducing gum 0.3kg, benzoic acid 0.5kg, defoamer 0.5kg, glycol 5kg, water 75.1kg are added into the shear reactor, cut for 30 minutes, and then put into the primary sand mill, then the secondary sand mill, mix in the mixing reactor, carry out the measurement and sub packaging after passing the inspection, obtains the finished product."

[Emphasis Supplied]

58. Apart from the above, it is also worthwhile to consider that at page 11, the prior art CN'037 also demonstrates the existence of synergism between Fipronil and Emamectin Benzoate. Thus, the appellant's submission in this regard is negated by the existence of the synergism in the prior art, which the appellant claims to have discovered as not known hitherto before. For clarification, page 11 of the prior art is reproduced hereinbelow:

"The test data show that the field control effects of fipronil / phoxim, fipronil / avermectin, ***fipronil / emamectin benzoate*** *and fipronil / chlorpyrifos on chilosuppressalis and rice leaf* ***roller are obviously better than those of the control agents."***

[Emphasis Supplied]

59. As discussed above, it is noted that the prior art CN'037, under its claims 5 and 6, discloses a composite insecticide for controlling rice pests comprising a combination of Fipronil and Emamectin Benzoate, wherein the mass ratio of Fipronil to Emamectin Benzoate is 0.25-10 : 0.01-5. Moreover,

the prior art at page 9 discloses examples of Fipronil-Emamectin Benzoate, suspension concentrate (SC) formulation. At page 11, it also discloses that the field control effect of Fipronil and Emamectin Benzoate is far better than the control agents. In view of the above disclosures, it is difficult to accept the submissions advanced on behalf of the appellant.

Prior Art CN1579160 (CN'160):

60. The invention under CN'160 pertains to a synergistic pesticidal composition of reagent and Emamectin Benzoate. Claim 2 of the prior art CN'160 discloses a synergistic pesticide composition which comprises Fipronil and Emamectin Benzoate, wherein the weight ratio of Fipronil to Emamectin Benzoate is 1-50:1.

61. Claim 4 of this prior art claims that the composition can be used with routine plant protective agents, including suspending agents. In order to appreciate, claim 4 of this document, is reproduced hereinbelow:

> *"The preparation method of this synergistic pesticidal composition is characterized by the possibility to process the pesticide into routine plant protective agents, such as* ***suspending agent****,* ***emulsifiable concentrate, micro-emulsion, wettable powder, granule and etc.****"*

[Emphasis Supplied]

62. It may be pertinent and significant to consider at this stage that the Example 1 in prior art CN'160, which clearly discloses the various pesticidal compositions comprising (i) 5% Fipronil with 1% Emamectin Benzoate; (ii) 3% Fipronil with 0.2% Emamectin Benzoate and (iii) 4% Fipronil along with 0.5% Emamectin Benzoate, where the active ingredients are Fipronil and

Emamectin Benzoate. Furthermore, the abstract and claim 4 of prior art document CN'160 specifically disclose that an insecticide composition can be formulated as a suspension. Particularly, at page 4, the said prior art under consideration discloses the method of preparation of the insecticide composition in the form of a suspension. Thus, it cannot be contended that none of the prior arts disclose that the insecticide composition can be formulated in suspension concentrate form.

63. A closer examination of the prior art CN'160, reveals that the claims under the said document disclose the use of one or more adjuvants in a formulation comprising Fipronil and Emamectin Benzoate. Particularly, the document under claim 4 discloses routine plant protective agents such as suspending agents, emulsifiable concentrate, micro-emulsion, wettable powder, granules etc. Further, CN'160 under its abstract and claim 5 also discloses that the said insecticide composition can be used for preventing/treating forest pests such as rice stem borers, plant hoppers and vegetable aphids. The Example 1 is reproduced hereunder:

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Exploit example 1 presents the example of formulation preparation. While exploit examples 2 and 3 are biological examples.

Exploit Example 1: Example of Formulation Preparation

(a) Suspending Agent

Suspending Agent can be obtained by high shearing of 5% active ingredient (A), 1% active ingredient (B), 10% 8206 as emulsifying agent, 2% ethylene glycol as anti-freezing agent, 0.2% xanthan gum as thickening agent and water.

(b) Emulsifiable Concentrate

Emulsifiable Concentrate can be obtained by mixing 3% active ingredient (A), 0.2% active ingredient (B), 10% 8202 as emulsifying agent, pesticide emulsifier 2000 series and solvent toluene uniformly.

(c) Micro-emulsion

Micro-emulsion can be obtained by mixing 4% active ingredient (A), 0.5% active ingredient (B), 15% emulsifying agent (available emulsifying agents are pesticide emulsifier series and the like), appropriate stabilizing agent, solvent toluene and deionized water uniformly.

Exploit Example 2: The control effect of the mixture of Regent and emamectin benzoate on aphids

Location: Xinyi City, Jiangsu Province | Survey Period: Three days after applying relevant pesticides | Time: Year 2002

Pesticide Name	Application Quantity (g/ hectare)	Pest Index (%)	Control Effect (%)	Expected Control Effect (%)
Regent	15	4.2	73.9	
Emamectin Benzoate	0.5	4.5	25.6	
Emamectin Benzoate	1	3.7	39.0	
Emamectin Benzoate	15	5.6	67.5	
Regent + Emamectin Benzoate	15 + 0.5	4.5	82.5	76.4
Regent + Emamectin Benzoate	15 + 1.5	5.3	93.2	81.5
Regent + Emamectin Benzoate	15 + 15	3.2	98.5	86.5

Conclusion: The control effect of the mixture of imidacloprid and Emamectin Benzoate is better than expected theoretical control effect, this shows that the mixture of imidacloprid and Emamectin Benzoate has synergistic effect.

64. The Complete Specifications of the prior art CN'160 also discusses surface-active agents including anionic and non-ionic surfactants. The relevant para is reproduced hereinbelow:

> *"Available surface active agents are anionic* ***surface active agents*** *and non-ionic surface active agents. Applicable agent can be alkyl sulfate, alkyl sulphonic acid alkali metal salt and amino, sodium dialkyl succinate sulfonate, pesticide adjuvant 2000 #, alkyl naphthalene sulfonate – alkyl polyoxyethylene ether sulfate, fatty acid or fatty acid ester sulfate, alkylphenolethoxylates, fatty alcohol polyoxyethylene ether and so on. Pesticide emulsifier 2000 series, 8202, lignosulfonate, NNO, dispersing agent MF and the like can be taken as examples."*
>
> [Emphasis Supplied]

65. As discussed above, specification of CN'055, the new surface active agent is encouraged to reduce pesticidal resistance. From the disclosure of CN'055 and CN'070 as discussed above, using the teaching of these two prior arts, a person skilled in the art would reach the present invention. Further, it is well established that the concept of water dispersible granules, EC and SC etc. are common/well-known/routinely employed and are conventional forms in the agrochemical industry. Therefore, claim 1 of the present invention is obvious as per the teachings, in view of the cited document CN'970 either alone or in combination with either CN'546, CN'627, CN'055 or common general knowledge. Further, the above discussed disclosure in CN'546 or CN'627 or CN'055 alongwith the disclosure and teachings of CN'037, which discloses the SC and synergy between Fipronil and Emamactin Benzoate, would also render the present invention obvious. Additionally, as discussed above, CN'160 at page 4 of the specification also discloses the SC and therefore, read with above-discussed disclosure in CN'546, CN'627 and CN'055, the present invention would lack inventive step under section 2(1)(ja) of the Act. The present invention also fails to demonstrate any technical advancement or economic significance over the existing knowledge, as required under Section 2(1)(ja) of the Act.

66. Additionally, since all the cited prior art documents primarily discloses the similar products as the subject matter of the present invention and belongs to crop protection formulation. Therefore, the submission of the appellant that there is no common thread between the prior arts cannot be accepted. In ***Sterlite Technologies Ltd. v. HFCL Ltd. 2022 SCC OnLine Del 2895***., this

Court held that when multiple documents disclose substantially similar products to the patented products, then it is a reflection of the state of the art and would not amount to "mosaicing". The relevant para is reproduced hereunder:

> *"20.3 Since only these two documents are being used as prior art at this stage, this Court, at the outset, holds that the Plaintiff's claim of mosaicing lacks merit. The objection of "mosaicing" would normally apply when completely unconnected documents are presented in a combination to defeat the inventive step in the invention. However, the argument of mosaicing cannot be sustained when there are only two documents used as prior art and such documents are interconnected or disclose similar products.* ***When multiple documents are alleged to disclose substantially similar products to the patented product, then the same is a reflection of the state of the art and not "mosaicing".****"*
>
> [Emphasis Supplied]

67. Upon a harmonious and conjoint appreciation of the above discussion, claim 1 of the present application cannot be said to be inventive. The arguments of Mr. Priyam Lizmary Cherian, learned counsel for the appellant, that the learned AC has merely copy-pasted the objections raised by various objections including respondent no.3 may appear to be superficially attractive, however, when viewed in the backdrop of the above observations and analysis, coupled with the fact that the learned AC had indeed examined the lack of inventive step in detail, the said contention is unfounded and is untenable.

68. Further, the objection on the ground of lack of inventive step is well reasoned, as the learned Controller has discussed all the necessary steps mandated by this Court in ***Agriboard International LLC vs. Deputy***

Controller Of Patents And Designs, reported in ***2022 SCC Online Del 940***.

The relevant paragraphs are reproduced hereinbelow:

> *24. In the opinion of this Court, while rejecting an invention for lack of inventive step, the Controller has to consider three elements-*
>
> *• the invention disclosed in the prior art, • the invention disclosed in the application under consideration, and • the manner in which subject invention would be obvious to a person skilled in the art.*
>
> *25. Without a discussion on these three elements, arriving at a bare conclusion that the subject invention is lacking inventive step would not be permissible, unless it is a case where the same is absolutely clear. Section 2(1)(ja) of the Act defines `inventive step' as under:*
>
> *(ja) "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 person skilled in the art.*
>
> *26. Thus, the Controller has to analyse as to what is the existing knowledge and how the person skilled in the art would move from the existing knowledge to the subject invention, captured in the application under consideration. Without such an analysis, the rejection of the patent application under Section 2(1)(ja) of the Act would be contrary to the provision itself. The remaining prior arts which are cited by ld. Counsel having not been considered in the impugned order, the Court does not wish to render any opinion in this regard.*

69. The learned AC has analysed: (i) the prior art, (ii) the subject invention and (iii) the manner in which the invention would be obvious to a Person Skilled in the Art (PSA), thereby satisfying the required three factors.

70. Based on the above reasoning, this Court is of the considered opinion that the learned AC has rightly refused the subject application for lack of novelty under Section 25(1)(b) and Section (2)(1)(j) and lack of inventive

step under Section 25(1)(e) and Section (2)(1)(ja) of the Act. Having rendered the aforesaid opinion, the requirement to examine the objection under Section 3(d) and Section 25(1)(g) of the Act is not necessitated.

71. As a result, the appeal fails and is dismissed as such, though without any order as to costs.

TUSHAR RAO GEDELA
(JUDGE)

APRIL 08, 2026
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