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REPORT

Technical Panel on Phytosanitary Treatments (TPPT)

**Virtual meeting
28 February 2024**

IPPC Secretariat

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1. Opening of the meeting

1.1 Welcome by the IPPC Secretariat

- [1] The IPPC Secretariat (hereafter referred to as “the secretariat”) welcomed all participants to the first virtual Technical Panel on Phytosanitary Treatments (TPPT) meeting of 2024. All TPPT members and Steward attended the meeting.

2. Meeting arrangements

- [2] The TPPT *proposed* that secretariat runs the meeting, *elected* Peter Leach as rapporteur and *adopted* the agenda (Appendix 1).

3. Administrative matters

- [3] The documents list (Appendix 2) and the participants list (Appendix 3) had been made available to the TPPT before the meeting.

4. ISPM 15 treatment testing process

4.1 Discuss and recommend whether the process for testing new treatments for ISPM 15 should be included in the IPPC framework

- [4] In November 2023 the SC invited the TPPT to advise the SC on whether the criteria for treatments for wood packaging material should be included in the IPPC Framework, and if so, advise of the best location within the Framework for inclusion.

- [5] It was noted that some of the concerns received through the first round of consultation in 2011 queried what the impact would be to existing treatments which have not gone through such rigorous requirements, if the process was to be added as an annex to ISPM 15. It was noted that the treatments using methyl bromide and heat would meet the requirements outlined in the process. Microwave treatment is also akin to heat, and the sulfuryl fluoride treatment went through an equivalent process, therefore the existing treatments should not be affected by these new requirements.

- [6] It was also noted there is a desire from treatment developers to have a framework around the requirements for treatments developed for ISPM 15.

- [7] The TPPT:

(1) *Agreed* that the criteria, once developed, should be included in the IPPC Framework.

4.2 Determine the best location within the IPPC framework to place the description of the process for testing new treatments for ISPM 15, including the pros and cons of each option and the rationale for the preferred option.

- [8] Following the agreement of the TPPT to include the criteria in the IPPC Framework, the options to include the criteria as an annex to ISPM 15 or 28, the Guidelines for Wood Packaging Material (GWPM), or in the IPPC Standard Setting Procedures Manual were considered.

- [9] When considering the inclusion of the criteria as an annex, one member noted that the treatments in ISPM 15 are not as well documented as those in ISPM 28, and ISPM 15 is not as clear as to the data available to support the treatments. Therefore, inclusion in ISPM 28 may be more appropriate, and this could then be referenced in ISPM 15. It was also noted that if an annex is to be considered, ISPM 28 may be appropriate, as the hosts may be broader than wood packaging.

- [10] It was noted that if the criteria are annexed to an ISPM, it will significantly restrict the TPPT’s ability to consider and accept treatments submitted which may not necessarily align with the criteria but are proven to be effective. The need for and advantage of the criteria to be included as part of an ISPM was

questioned, as there are existing guidelines for conducting other research in places outside of an annex, such as the PMRG guidelines.

- [11] Members acknowledged that if annexed to an ISPM, any effective alternative treatments provided could not be accepted and any required changes to the annex would take significant time, which may limit the adoption of treatments that were tested otherwise. Therefore, other options, such as inclusion of the criteria in a guideline document, or procedures for the IPPC, were considered.
- [12] One member suggested that the process for testing new treatments for ISPM 15 could be included in the GWPM, with the treatment schedule to be annexed to ISPM 15. This was suggested since fruit, which has a high consumption purpose and is covered by ISPM 28, usually has a phytosanitary certificate issued by the exporting country after treatment and is usually consumed within a short time. Whereas wood packaging materials treated by the treatment schedule may be used repeatedly internationally, so it may be appropriate to deal with this as an annex to ISPM 15.
- [13] TPPT members recognised that wherever the criteria are included, it must be easily and publicly accessible. Some members felt that the guideline document is difficult to find, and if included in this document, would then need to be link in ISPM 15 for effective visibility.
- [14] It was highlighted that inclusion in the IPPC Procedures Manual may be an effective solution. The secretariat advised that the Procedures Manual is revised as needed, with an annual review, and put to the SC for approval, therefore providing flexibility should any changes to the criteria be required. Whilst the manual does not carry the weight of a guide or an ISPM, this would not affect the evaluation process.
- [15] Ultimately treatments will be submitted to the TPPT for assessment, therefore it was seen as logical that the process be included in the TPPT Process of the Procedures Manual, with this also being publicly available and easily accessible.
- [16] The TPPT also recommended that the SC consider this advice when deciding whether to proceed with convening an EWG based on the specification on the revision of ISPM 15 (*Regulation of wood packaging material in international trade*): Criteria for treatments for wood packaging material in international trade (2006-010) or alternatively consider engaging a different group to develop such criteria.
- [17] It was agreed that once developed, the criteria for treatments for wood packaging material would be most appropriately included in the Procedures Manual, under the TPPT Process.
- [18] The TPPT:
- (1) *recommended* that once developed, criteria for treatments for wood packaging material be included in the Standard Setting Procedures Manual, under the TPPT Process.

5. Methyl iodide fumigation registration status

5.1 Discuss contacting the submitter of Methyl iodide fumigation of *Carposina sasakii* on *Malus × domestica* (2023-006) to request an update on registration status

- [19] In October 2023, the TPPT agreed to request information from the Ozone Secretariat on whether this active ingredient is registered for use in fresh commodities worldwide.
- [20] The secretariat requested this information with the Ozone Secretariat providing reference to the registration status in Japan.
- [21] Takashi KAWAI elaborated on this information and provided an update on the registration status of Methyl iodide in Japan, noting that it is currently registered for use on imported chestnuts, as well as wood and wood packaging materials.
- [22] It was advised that a company (Methyl iodide registration holder) has applied for a new registration to an authorized examination body for the use of Methyl iodide for fresh vegetables such as broccoli and asparagus, as a Methyl bromide alternative for treatments in import plant quarantine. In March 2022,

the Ministry of Health, Labor and Welfare consulted the Cabinet Office, Food Safety Commission for the food health impact assessment of the application of the new registration to establish maximum residue limits. To assess the application, the Technical Committee of Pesticide was held twice in April and August 2022, with the committee deciding to request the applicant to submit additional information.

- [23] Additional information was submitted to the Food Safety Commission in November 2023, and the evaluation is continuing. Once the evaluation is complete the maximum residue level will be established by the Ministry of Health, Labor and Welfare. Following this, the Japanese Ministry of Agriculture, Fisheries and Forestry will establish the standard for the use of this chemical. It is estimated that it will take at least one year for the registration to be completed.
- [24] The TPPT agreed, that in light of this information, the evaluation be put on hold until new information is available.
- [25] The TPPT:
- (2) *agreed* that the treatment evaluation be put on hold until new information is available regarding the registration of use in the country of submission.
 - (3) *requested* Takashi KAWAI to provide an update on the registration status at the next face to face meeting.

6. Updates from treatment leads

6.1 Discussion on generic treatments (PT 1-3 possibly superseded by PT 39)

- [26] At the TPPT meeting held in October 2023, the TPPT agreed to propose to the SC to revoke PTs 1 and 2, to be superseded by PT 39. It was also agreed to defer a decision to revoke PT 3 (irradiation treatment for *Anastrepha serpentina*) until further data from the research used to support PT 3 was obtained, as the treatment rate of PT 3 (100 Gy) is higher than that of PT 39 (70 Gy).
- [27] Further dosimetry data was sought from the research used to support the phytosanitary irradiation treatment for *Anastrepha serpentina*. However, the manuscript's authors from Bustos et al. (2004) advised that although the article was published in 2004, the research was carried out in the laboratories of the Moscamed Program in 1988 to 1989, and the data recorded in laboratory notebooks are not accessible now. The authors did note however, that the dose of 100 Gy was used in their confirmatory tests because previous work proposed minimum radiation doses ranging from 150 to 300 Gy. After accessing the results, the authors found prevention of adult emergence at doses much lower than 100 Gy.
- [28] It was highlighted that *Anastrepha serpentina* was the most radiosensitive species compared to *Anastrepha ludens* (PT 1), *Anastrepha obliqua* (PT 2), and *Ceratitis capitata* (Bustos et al., 2004; Appendix 1). While third instars of *Anastrepha serpentina* irradiated with a dose as low as 2 Gy emerged as potential sterile adults (no egg eclosion).
- [29] Further referenced was previous discussion paper (15_TPPT_2023_Oct) which mentions tests conducted using a nominal dose of 60 Gy supported an irradiation treatment of 70 Gy for *Anastrepha ludens* (Hallman and Martinez, 2001). Because two studies (Hallman and Worley, 1999; Bustos et al., 2004) showed that *Anastrepha obliqua* was more radiosensitive than *Anastrepha ludens*, a dose of 70 Gy for *Anastrepha obliqua* was justified. Based on Bustos et al. (2004), it was noted that this same reasoning could justify revoking PT 3 and using the generic dose (70 Gy) as a phytosanitary irradiation treatment for *Anastrepha serpentina*.
- [30] The TPPT agreed that the higher efficacy would not be required for international trade, given the lower level of the risk presented by this particular species (*Anastrepha serpentina*).
- [31] The TPPT agreed to recommend that the SC revoke PTs 1-3, taking into consideration the additional information obtained regarding PT 3, as outlined in meeting paper (06_TPPT_2024_Feb).

[32] The TPPT:

(4) *recommended* the SC revoke PTs 1, 2 and 3, to be superseded by PT 39.

6.2 Update on Irradiation treatment for *Aspidiotus destructor* (2021-029)

[33] The TPPT discussed the treatment at their 2023 October meeting and noted that the control mortality in the paper of Khan at al. (2016) was not clearly addressed and decided to request information regarding the control mortality, which life stage it refers to and whether the endpoint of the treatment is the prevention of the F1 generation (egg laying) or egg hatch.

[34] The treatment lead was requested to follow up with Khan to clarify the concerns around control mortality and the endpoint, before progressing the treatment evaluation further.

[35] The treatment lead, Guoping ZHAN, noted communication from Khan advising that there were some troubles accessing the original data for the experiment. However, data found in chapter 7 of doctoral thesis Salahuddin B. 2016 [Salahuddin B. 2016. Baseline study of coconut scale, *Aspidiotus destructor* Signoret (Hemiptera: Diaspididae) and its management on mango (*Mangifera indica* L.). Ph.D. Thesis, Department of Entomology, Faculty of Agriculture, Gomal University, Dera Ismail Khan, Pakistan.] provides figures which may address the questions posed by the TPPT.

[36] Salahuddin conducted the irradiation treatment and served as the second author of the paper Khan at al. (2016), therefore it was suggested that this thesis be included as a reference in the draft treatment document.

[37] The TPPT also requested that Scott MYERS follow up with Peter Follett to seek further information to assist in addressing the questions around control mortality.

[38] The TPPT:

(5) *requested* the treatment lead continue the evaluation with the new information and report for further discussion at the next TPPT meeting.

(6) *requested* Scott MYERS to follow up with Peter Follett regarding control mortality and report for further discussion at the next TPPT meeting.

6.3 Vapour heat treatment for *Planococcus lilacinus* (2021-028)

[39] The TPPT considered the draft response provided by Michael ORMSBY to comment 41, which questioned if the time frame of 4-6 hours was sufficient to allow the test insects to successfully infest, or attach to, the dragon fruit.

[40] Guoping ZHAN advised of previous experience testing irradiation treatments where adult females were used, and after several days most of the insects were not attached to the fruit. Therefore, it would be beneficial to contact the submitter to clarify that the female had indeed become attached to the fruit.

[41] Regarding concerns raised through the comments in relation to the age of the colony, the TPPT considered information in the procedure manual, on page 118, stating that the age of the colony should not affect the tolerance of the pest to heat, cold or irradiation, unless there is scientific literature to prove otherwise. Currently the TPPT is not aware of any published papers noting that the age of the colony affects the tolerance, and it could be considered to expanded this beyond fruit fly in the procedure manual.

[42] It was noted that some changes to the text were proposed by the editor, which were further discussed in agenda item 8.2.

[43] The TPPT:

(7) *requested* Michael ORMSBY to approach the submitter to specifically confirm that the 4–6-hour period was sufficient for the females to attach to the fruit, and report at the next meeting.

6.4 Efficacy calculation method and publication (Wright et.al 2023)

- [44] At its October 2023 meeting the TPPT agreed to invite the SC to note changes to the working procedures to the TPPT, pending the publication of the paper underpinning the calculation method (Wright *et.al* 2024).
- [45] It was confirmed that the paper has been published, therefore the changes to replace formula 1 and 2 can be drafted, as agreed to at the last face to face TPPT meeting.
- [46] The TPPT update for SC May will also include these changes to inform the SC of the proposed changes. The secretariat will look to update the Procedures Manual once agreement is received from the SC on the proposed changes. The revised Procedure Manual will then be released in the usual revision process.
- [47] It was noted that as there has been a change to the calculations, the Phytosanitary Measures Research Group (PMRG) guideline should be updated to include this formula. The TPPT agreed that Peter LEACH will draft the changes for provision to the TPPT members for review and approval.
- [48] The TPPT:
- (8) *recommended* that the SC review and approve the proposed changes to the Procedure Manual.
 - (9) *agreed* that Peter LEACH will draft the changes to the PMRG guideline and circulate to TPPT members for review and approval.

7. Next TPPT face to face meeting

7.1 Determine date and venue of 2024 TPPT face-to-face meeting

- [49] The secretariat noted the proposed dates for the next TPPT face-to-face meeting in June and October 2024.
- [50] The secretariat also noted that the secretariat is available to support the upcoming IFQRG meeting, to be held in Rome, in 2024.
- [51] The TPPT:
- (10) *agreed* the secretariat will provide information to TPPT members regarding arrangements for the 2024 face-to-face meeting.
 - (11) *agreed* the secretariat will liaise with Meghan NOSEWORTHY and continue with arrangements for IFQRG 2024.

8. Any other business

8.1 Discuss new phytosanitary treatment proposal and assign treatment lead

- [52] The secretariat advised the TPPT of a new treatment submission received for Vapour heat (hot steam) treatment of coniferous bark for the elimination of *Bursaphelenchus xylophilus*.
- [53] The submission was received in 2024 from Portugal, in response to the ongoing call for treatments.
- [54] The TPPT acknowledged the new submission and Scott MYERS was accepted as the treatment lead.
- [55] The secretariat will assign Scott MYERS as the treatment lead and progress in line with agreed procedures.
- [56] The TPPT:
- (12) *agreed* that Scott MYERS will be the treatment lead for this submission.

8.2 Discuss draft PT editor comments

- [57] The TPPT reviewed irradiation treatment proposals 2023-033, 2023-034 and 2023-035 at their October 2023 meeting and recommended to the SC to approve the draft irradiation treatments for consultation.

- [58] During editing of the draft treatments, the secretariat questioned the text in the “treatment scope” and “target regulated article” sections. During the October 2023 meeting, the TPPT chose not to specify these details within the draft treatment documents.
- [59] After consideration on re-instating reference to fruits, vegetables and ornamental plants in the draft PTs, the TPPT decided to revert to keep these references as the treatments relate to surface pests. As such, the treatment will not be used on the surface, rather the target commodity. This will also keep consistency with other previously adopted PTs for external pests, including PT 45 and 19. Hence, ‘irradiation of fruits and vegetables at’ and ‘All fruits, vegetables and ornamental plants that are hosts of’ were agreed to be reinstated respectively to the “treatment scope” and “target regulated article” sections of these treatments.
- [60] The TPPT agreed to invite the SC to review the draft treatments to approve for consultation in 2024.
- [61] Following considerations around the use of the terms host and commodity, it was agreed that the TPPT will further consider the annotated template for draft PTs at the next TPPT meeting to ensure consistency in the wording of the scope and target commodities.
- [62] The TPPT:
- (13) *agreed* to reinstate the references to fruits, vegetables and ornamental plants in the treatment scope and target regulated articles of draft PTs 2023-033, 2023-034 and 2023-035.
 - (14) *agreed* to invite the SC to approve the draft treatments for consultation in 2024.
 - (15) *agreed* to review the annotated draft PT template at the next TPPT meeting regarding consistency in the wording of the scope.

9. Close of the meeting

- [63] The secretariat thanked all participants for their contributions and closed the meeting.

Appendix 1: Agenda

AGENDA ITEM		DOCUMENT NO.	PRESENTER
1.	Opening of the meeting		
	Welcome by the IPPC Secretariat		SHAMILOV
2.	Meeting Arrangements		
	<ul style="list-style-type: none"> - Election of the Chairperson - Election of the Rapporteur - Adoption of the Agenda 	01_TPPT_2024_Feb	SHAMILOV
3.	Administrative Matters		
	<ul style="list-style-type: none"> - Documents List - Participants List 	02_TPPT_2024_Feb 03_TPPT_2024_Feb	STIRLING STIRLING
4.	ISPM 15 treatment testing process		
4.1	Discuss and recommend whether the process for testing new treatments for ISPM 15 should be included in the IPPC framework.	04_TPPT_2024_Feb	ALL
4.2	Determine the best location within the IPPC framework to place the description of the process for testing new treatments for ISPM 15, including the pros and cons of each option and the rationale for the preferred option.	04_TPPT_2024_Feb	ALL
5.	Methyl iodide fumigation registration status		
5.1	Discuss contacting the submitter of Methyl iodide fumigation of <i>Carposina sasakii</i> on <i>Malus x domestica</i> (2023-006) to request an update on registration status	05_TPPT_2024_Feb 08_TPPT_2024_Feb	SHAMILOV/ KAWAI
6.	Updates from treatment leads		TREATMENT LEADS
6.1	Discussion on generic treatments (PT 1-3 possibly superseded by PT 39)	06_TPPT_2024_Feb 15_TPPT_2023_Oct	DIAS DE CASTRO
6.2	Update on Irradiation treatment for <i>Aspidiotus destructor</i> (2021-029)	-	ZHAN/MYERS
6.3	Vapour heat treatment for <i>Planococcus lilacinus</i> (2021-028)	09_TPPT_2024_Feb 10_TPPT_2024_Feb	ORMSBY
6.4	Efficacy calculation method and publication (Wright et.al 2023).	07_TPPT_2024_Feb	LEACH
7.	Next TPPT face to face meeting		
7.1	Determine date and venue of 2024 TPPT face to face meeting		SHAMILOV/ALL
8.	Other business		SHAMILOV/ALL
8.1	Discuss new phytosanitary treatment proposal and assign treatment lead: <ul style="list-style-type: none"> • Vapour heat (hot steam) treatment of coniferous bark for the elimination of <i>Bursaphelenchus xylophilus</i> 		
8.2	Discuss draft PT editor comments	11_TPPT_2024_Feb	
9.	Close of the meeting		SHAMILOV

Appendix 2: Documents list

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	DATE POSTED / DISTRIBUTED
01_TPPT_2024_Feb	02	Provisional agenda	21/02/2024
02_TPPT_2024_Feb	03	Document List	21/02/2024
03_TPPT_2024_Feb	03	Participants List	21/02/2024
04_TPPT_2024_Feb	4.1 & 4.2	Process for testing new treatments for ISPM 15	21/02/2024
05_TPPT_2024_Feb	5.1	Methyl iodide fumigation Ozone Secretariat communication	21/02/2024
06_TPPT_2024_Feb	6.1	PT 1-3 possibly superseded by PT 39	21/02/2024
07_TPPT_2024_Feb	6.4	Statistical methods for estimating infestation rates (Wright et. al 2023)	21/02/2024
08_TPPT_2024_Feb	5.1	Registration update of Methyl iodide in Japan	21/02/2024
09_TPPT_2024_Feb	6.3	Compiled comments for 2023 First Consultation: 2021-028_Draft_PT_VHTPlanococcus - Steward's comment	23/02/2024
10_TPPT_2024_Feb	6.3	DRAFT ANNEX TO ISPM 28: Vapour heat treatment for Planococcus lilacinus (2021-028)	23/02/2024
11_TPPT_2024_Feb	8.2	Editing of PTs and Considerations for Target Regulated Articles and Treatment Scope in Irradiation Treatment	27/02/2024
15_TPPT_2023_Oct	6.1	Oct Adopted PTs 2023-06-12	21/02/2024

Appendix 3: Participants list

	Participant role & Expertise	Name, mailing, address, telephone	Email address	Term begins	Term ends
	Steward	Mr David OPATOWSKI Head, Plant Biosecurity, Plant Protection and Inspection Services (PPIS), P.O.Box 78,Bet Dagan, 50250 ISRAEL Tel: 972-(0)3-9681518 Mob.: 972-(0)506-241885	dopatowski@yahoo.com ; davido@moag.gov.il ;		
	Member Chemical Fumigation Temperature Modified atmosphere	Mr Michael ORMSBY Principle Advisor – Office of the Chief Biosecurity Officer Ministry for Primary Industries P.O Box 2526, Wellington, 6011 NEW ZEALAND Tel: +64 4 894 0486	michael.ormsby@mpi.govt.nz ;	October 2020 (3 rd term)	2025
	Member Fumigation Temperature	Mr Eduardo WILLINK Estación Experimental Agroindustrial Obispo Colombres, P.O.Box 9, Las Talitas (4101) Tucumán ARGENTINA Tel: +54 381-4521010 +54-381 154692512	ewillink@arnet.com.ar ; eduwillink@gmail.com	October 2020 (3 rd term)	2025
	Member Fumigation Temperature	Mr Scott MYERS USDA APHIS 1398 W Truck Rd., Buzzards Bay, MA, USA Tel: 508-563-0959	scott.w.myers@aphis.usda.gov ;	May 2023 (3 rd term)	2028
	Member Irradiation Fumigation Temperature	Mr Daojian YU Shenzhen Customs District, P. R. China, GACC 1011, Fuqiang Road, Shenzhen, 518045,Guangdong, CHINA Tel: +86-755-82117990	yudj_2002@aliyun.com	May 2019 (2 nd term)	2024
	Member Irradiation Temperature	Mr Toshiyuki DOHINO Disinfestation Technology Section, Research Center Yokohama Plant Protection Station Ministry of Agriculture, Forestry and Fisheries (MAFF) 1-16-10, Shin-yamashita, Naka-ku, Yokohama 231-0801 JAPAN Tel: +81 45 622 8893 Fax: +81 45 621 7560	toshiyuki_dohino100@maff.go.jp ;	October 2020 (2 nd term)	2025

	Participant role & Expertise	Name, mailing, address, telephone	Email address	Term begins	Term ends
	Member Irradiation Temperature	Ms Vanessa Simoes Dias DE CASTRO Entomologist Insect Pest Control Section Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture International Atomic Energy Agency Vienna International Centre, PO Box 100, 1400 Vienna IAEA Telephone number: +43 (1) 2600-27418 Fax: +43 (1) 26007 27418	V.Dias-De-Castro@iaea.org;	May 2023 (1 st term)	2028
	Member Irradiation Temperature Chemical Fumigation	Mr Peter Llewellyn LEACH Senior Principle Entomologist and Market Access Focus Team Leader, Agri-Science Queensland, Department of Agriculture Fisheries (DAF) 21 Redden St. Portsmith, Queensland 4870 AUSTRALIA Tel: +61 408077752	peter.leach@daf.qld.gov.au	January 2019 (1 st term)	2024
	Member Temperature	Ms Meghan NOSEWORTHY Research Manager – Entomology and Phytosanitary Research Canada/ Natural Resources Canada – Canadian Forest Service Address: 506 West Burnside Road, Victoria, BC, V8Z 1M5 CANADA Telephone number: 250 298 2354	Meghan.noseworthy@nrccan.gc.ca;	April 2022 (1 st term)	2027
	Member Irradiation, Fumigation, Temperature, Modified Atmosphere	Mr Guoping ZHAN Professor Chinese Academy of Inspection and Quarantine (CAIQ), P. R. China Address: No. A3, Gaobeidian Bei Lu, Chaoyang District, Beijing, 100123, CHINA Telephone number: +86 136 1119 2153	zhangp@caiq.org.cn ; zhgp136@126.com;	April 2022 (1 st term)	2027

	Participant role & Expertise	Name, mailing, address, telephone	Email address	Term begins	Term ends
	Member Fumigation Temperature	Mr Takashi KAWAI Senior researcher, Disinfestation Technology Section, Research Division, Yokohama Plant Protection Station, MAFF Japan / Ministry of Agriculture, Forestry and Fisheries (MAFF) Address: 1-16-10, Shin-yamashita, Naka-ku, Yokohama 231-0801, JAPAN Telephone number:(+81) 45 622 8893	takashi_kawai660@maff.go.jp;	April 2022 (1 st term)	2027
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