Data in Brief 55 (2024) 110684

Contents lists available at ScienceDirect

Data in Brief

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Data Article

Dataset describing the influence of preharvest gibberellic acid application on fruiting behavior, yield and fruit biochemical properties of rambutan (*Nephelium lappaceum* L.)

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ARTICLE INFO

Article history:
Received 31 May 2024
Revised 18 June 2024
Accepted 20 June 2024
Available online 29 June 2024

Dataset link: Dataset describing the influence of preharvest gibberellic acid application on fruiting behavior, yield and fruit biochemical properties of rambutan (Nephelium lappaceum L.) (Original data)

Keywords:
Rambutan (*Nephelium lappaceum* L.)
Fruit yield
Postharvest quality
Shelf life
Plant growth regulator

ABSTRACT

Rambutan (*Nephelium lappaceum* L.), an exotic non-climacteric tropical fruit in Bangladesh, has got wide acceptance to consumers as well as growers due to its attractive appearance, taste and nutrition, but the demerits of inadequate fruiting and yield as well as low edible properties at the farmers field requires to be addressed. Hence, an experiment was performed with gibberellic acid (GA_3) and the obtained dataset demonstrates how GA_3 application augmented the fruit set and retention, fruit yield and post-harvest biochemical properties of rambutan. Gibberellic acid was sprayed at seven various concentrations from 0 ppm (control) to 500 ppm at the mature panicles (inflorescence) during the pre-flowering and the early fruiting stages (three weeks after fruit set). The study was conducted in two sequential growing years (2020 and 2021) following a randomized complete block design (RCBD). Results revealed that 200–300 ppm doses had superiority over the lower (50–100 ppm) and higher (400–500 ppm) doses for promot-

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https://doi.org/10.1016/j.dib.2024.110684

ing the fruit yield and quality. More specifically, fruit set and retention, fruit size and weight, pulp weight and thickness, pulp:peel ratio, edible portion and fruit yield as well as total soluble solids and total sugars contents in fruit were exhibited the best at 300 ppm being consonant with 200 ppm at majority cases, whereas GA_3 doses from 200 ppm to 500 ppm performed similarly to enhance fruit physico-chemical qualities and shelf life of rambutan. Control treatment along with 50 ppm gibberellic acid dose demonstrated inferior results for yield and fruit quality promotion of rambutan. Thus, use of plant growth regulator at appropriate dose and time is imperative to rambutan improvement.

Specifications Table

Subject	Agricultural Science: Horticulture
Specific subject area	Fruit Farming, Plant Growth Regulation, Horticultural Production
Type of data	Tables and Figures
Data collection	During the two successive growing seasons (2021 and 2022), the experiment was conducted with rambutan var. BARI Rambutan-1 (released from Bangladesh Agricultural Research Institute) on which seven various doses of gibberellic acid namely 0 (control), 50, 100, 200, 300, 400 and 500 ppm were sprayed at the panicles during two distinct growth stages such as the pre-flowering stage and the early fruit growth stage. Data were recorded on fruit set/panicle, fruit retention/panicle, fruit retention percentage, individual fruit weight (g), fruit yield/panicle (g), fruit length (g) and breadth (g), pulp weight (g) and thickness (cm), peel weight (g) and thickness (cm), pulp to peel ratio, seed weight (g), length (cm), breadth (cm) and thickness (cm), edible portion (%), total soluble solids (%), titratable acidity (%), total sugars (%) and shelf life (d) of rambutan.
Data source location	The experimental site was located at the middle of Madhupur Tract (Agro-ecological Zone 28) of Bangladesh. The field was under the Pomology Division of Bangladesh Agricultural Research Institute (BARI). Geographically the orchard had its position at 23.99°N latitude and 90.41°E longitude having an approximate elevation of 8.4 m above the mean sea level.
Data accessibility	Repository name: Mendeley Data Data identification number: 10.17632/y25mff549s.2 Direct URL to data: https://data.mendeley.com/datasets/y25mff549s/2
Related research article	A.S.M.M. Uddin, J. Gomasta, M.T. Islam, M. Islam, E. Kayesh, M.R. Karim, Gibberellic Acid Spray Modulates Fruiting, Yield, Quality, and Shelf Life of Rambutan (Nephelium lappaceum L.), Journal of Horticultural Research, 32 (1) (2024) 51-66. https://doi.org/10.2478/johr-2024-0004

1. Value of the Data

- As noticed from the dataset that out of six gibberellic acid doses from 50 ppm to 500 ppm and control (no GA_3), spraying of 200 and 300 ppm displayed supremacy over other doses on fruiting, yield and fruit quality in rambutan. Lower (< 200 ppm) and higher (> 400 ppm) doses including control (no GA_3 application) had inferior results with respect to yield and fruit quality parameters of rambutan. Thus this dataset provides clear, actionable guidelines for rambutan farmers on the optimal GA_3 doses (200–300 ppm) to maximize fruit yield and quality. In addition, knowing the effective dose helps farmers avoid overuse or underuse of GA_3, saving costs on unnecessary applications and minimizing environmental impact.

- Researchers can also exploit the data to validate existing theories or develop new hypotheses related to the use of GA_3 in horticulture, particularly in tropical fruit production. The dataset provides a valuable foundation for further studies on plant growth regulators and their effects on other crops.
- Entrepreneurs can develop and market GA_3-based products tailored for rambutan cultivation, emphasizing the proven efficacy of the 200–300 ppm doses. Enhanced fruit quality and extended shelf life can lead to the development of new value-added products, such as high-quality fresh rambutan or processed goods, expanding market opportunities.
- Furthermore, policymakers can use the findings to formulate guidelines and recommendations for the use of plant growth regulators in fruit cultivation, ensuring sustainable and profitable agricultural practices. Establishing safe and effective use standards for GA_3 in horticulture to ensure the well-being of consumers and the environment.
- Overall, the dataset is instrumental in enhancing rambutan production efficiency and quality, contributing to the economic viability and sustainability of the fruit farming industry. It provides a science-based approach to optimize the use of plant growth regulators, ensuring better outcomes for all stakeholders involved in the rambutan supply chain.

2. Background

Meeting the nutritional needs of a growing global population is a critical issue highlighted in the Sustainable Development Goals (SDGs). Fruits are essential in this regard, providing a rich source of health-enhancing vitamins (such as C, A, B1, B6, B9, and E), minerals, dietary fibers, and phytochemicals, including various beneficial secondary metabolites [1]. Rambutan (*Nephelium lappaceum* L.), a tropical fruit tree native to Southeast Asia, is valued for its juicy and sweet arils encased in a hairy rind and contains considerable amount of vitamins and minerals [2,3]. However, its cultivation faces challenges such as irregular fruit setting, inconsistent yields, and variable fruit quality, which impact its marketability and profitability [4]. Gibberellic acid (GA_3), a plant growth regulator known for its role in promoting cell elongation, seed germination, flowering, and fruit development, has been extensively used in horticulture to enhance these aspects in various crops [5,6]. Studies have shown that GA_3 application can improve fruit setting by enhancing pollen viability, facilitating ovule fertilization, and reducing flower drop, potentially inducing parthenocarpy under suboptimal conditions [7,8]. Improved fruit set directly translates to higher yields, as evidenced in other fruit crops where GA_3 application increases the number and size of fruits. In terms of fruit quality, gibberellins can enhance attributes such as size, sweetness, texture, color, and nutritional content by promoting cell enlargement and division, increasing sugar accumulation, and delaying senescence [9–11]. For rambutan, initial studies and analogous research in related fruits suggest GA_3 can lead to larger, sweeter, and more visually appealing fruits [12,13]. By leveraging GA_3's capabilities, rambutan growers can enhance productivity and fruit marketability, contributing to the sustainable development of the rambutan industry. Therefore, by collecting and explaining the comprehensive information on GA_3 mediated yield and fruit quality enhancement in rambutan, the dataset intents to formulate an evidence-based recommendation for sustainable rambutan production to supply the nutritive and delicious fruits to the consumers.

3. Data Description

The present dataset displays the efficacy of gibberellic acid (GA_3) at six concentrations viz., 50, 100, 200, 300, 400 and 500 ppm besides control (no GA_3) on fruit setting and retention, fruit size and yield, edible portion, post-harvest qualities and shelf life of rambutan. Results indicated that all the 21 studied yield and quality parameters variables except fruit length varied significantly ($p < 0.05$) due to GA_3 application (Table 1). However, Table 2 exhibits that GA_3 at

Table 1
ANOVA table showing the mean square values of different yield and fruit quality parameters of Rambutan as influenced by GA_3 treatment.

SV	DF	Parameters observed																			
		FST	FRN	FRP	FWT	FYP	FLN	FDM	PWT	PTK	PLW	PLK	PPR	SWT	SLN	SDM	STK	EDP	TSS	TAT	TSG	SLF
GA_3 dose	6	962.71*	19.85**	2.43**	62.50**	77,175.5*	0.09ns	0.20*	60.23**	0.03**	0.93ns	0.009**	0.12**	0.30**	0.19**	0.05**	0.07**	58.19**	3.18*	0.006**	0.37**	6.32**
Error	12	203.22	0.82	0.10	6.42	2749.9	0.14	0.05	3.17	0.001	1.56	0.0008	0.007	0.04	0.03	0.006	0.006	2.24	0.78	0.0005	0.04	0.58
Total	20																					

Here, SV: Sources of variation, DF: degrees of freedom, FST: Fruit set/panicle, FRN: fruit retained/panicle, FRP: Fruit retention percentage, FWT: Individual fruit weight, FYP: Yield/panicle, FLN: Fruit length, FDM: Fruit diameter, PWT: Pulp weight, PTK: Pulp thickness, PLW: Peel weight, PLK: Peel thickness, PPR: Pulp to peel ratio, SWT: Seed weight, SLN: Seed length, SDM: Seed diameter, STK: Seed thickness, EDP: Edible portion, TSS: Total soluble solids, TAT: Titratable acidity, TSG: Total sugars and SLF: Shelf life.

Table 2
Pre-harvest gibberellic acid spray influencing the yield and quality of rambutan var. *BARI Rambutan-1*[x].

GA_3 dose	Fruits set panicle^{-1}	Fruits retained panicle^{-1}	% fruit retention	Fruit retention over control (%)	Single fruit weight (g)	Yield panicle^{-1} (g)	Yield increase over control (%)	Fruit length (cm)	Fruit breadth (g)	Pulp weight (g)	Pulp thickness (cm)	Peel weight (g)	Peel thickness (cm)	Pulp : peel ratio
Control (0 ppm)	175.00 ± 8.74d	5.23 ± 0.23e	2.99 ± 0.05d	nd	42.30 ± 1.73b	220.87 ± 8.43e	nd	4.70 ± 0.25	3.93 ± 0.13c	19.30 ± 0.68c	0.50 ± 0.03c	19.80 ± 1.15	0.32 ± 0.02a	0.98 ± 0.03c
50 ppm	190.23 ± 12.83cd	8.63 ± 0.45cd	4.55 ± 0.12c	52.01	45.20 ± 1.32b	389.16 ± 10.77d	176.19	5.10 ± 0.21	4.10 ± 0.06bc	22.50 ± 0.72b	0.60 ± 0.00b	20.10 ± 0.57	0.27 ± 0.02ab	1.12 ± 0.01c
100 ppm	204.33 ± 10.95a-c	9.53 ± 0.43c	4.67 ± 0.11bc	56.09	51.50 ± 1.27a	492.06 ± 34.39c	126.44	5.10 ± 0.26	4.40 ± 0.15ab	28.13 ± 1.39a	0.75 ± 0.03a	20.87 ± 0.30	0.18 ± 0.02cd	1.35 ± 0.08b
200 ppm	218.40 ± 6.35ab	11.40 ± 0.72b	5.21 ± 0.18b	74.07	53.60 ± 0.61a	610.16 ± 231.26b	130.94	5.20 ± 0.20	4.27 ± 0.15a-c	30.87 ± 0.88a	0.72 ± 0.02a	20.40 ± 0.46	0.17 ± 0.02d	1.52 ± 0.07a
300 ppm	223.20 ± 6.82a	13.17 ± 0.64a	5.90 ± 0.18a	96.99	54.13 ± 2.445a	713.96 ± 56.87a	110.82	5.23 ± 0.18	4.57 ± 0.13a	31.30 ± 1.63a	0.75 ± 0.03a	20.48 ± 0.80	0.17 ± 0.02d	1.53 ± 0.02a
400 ppm	194.60 ± 6.91b-d	8.47 ± 0.64cd	4.34 ± 0.18c	44.97	52.67 ± 1.68a	444.25 ± 24.34cd	62.22	5.07 ± 0.18	4.67 ± 0.12a	28.80 ± 1.11a	0.77 ± 0.03a	21.50 ± 0.64	0.23 ± 0.02bc	1.34 ± 0.03b
500 ppm	182.70 ± 10.05cd	7.63 ± 0.66d	4.18 ± 0.32c	39.82	51.87 ± 0.85a	395.71 ± 34.41d	89.07	5.03 ± 0.15	4.27 ± 0.09a-c	28.73 ± 0.90a	0.63 ± 0.03b	20.80 ± 0.61	0.22 ± 0.02b-d	1.38 ± 0.06ab
CV (%)	7.17	9.88	6.83	nd	5.05	11.24	nd	7.50	5.32	6.57	5.80	6.08	12.72	6.48
LS	*	**	**	nd	**	**	nd	ns	*	**	**	Ns	**	**

(*continued on next page*)

Table 2 (*continued*)

GA_3 dose	Seed weight (g)	Seed length (cm)	Seed diameter (cm)	Seed thickness (cm)	Seed size reduction from control (%)	Edible portion (%)	Edible portion increase over control (%)	Shelf life (day)	Total soluble solids (%)	Titratable acidity (%)	Total sugar (%)
Control (0 ppm)	3.20 ± 0.12a	2.83 ± 0.09a	1.77 ± 0.03a	1.17 ± 0.03a	nd	45.65 ± 0.45d	nd	7.53 ± 0.35c	16.40 ± 0.38b	0.48 ± 0.01a	3.45 ± 0.15c
50 ppm	2.60 ± 0.06b	2.57 ± 0.12ab	1.70 ± 0.06a	0.87 ± 0.07bc	−18.75	49.77 ± 0.24c	9.03	9.70 ± 0.32b	16.83 ± 0.73b	0.48 ± 0.02a	3.87 ± 0.14b
100 ppm	2.50 ± 0.10b	2.47 ± 0.09bc	1.50 ± 0.06bc	0.87 ± 0.03bc	−21.88	54.56 ± 1.39b	19.52	10.90 ± 0.44ab	17.67 ± 0.33ab	0.46 ± 0.01a	4.12 ± 0.13ab
200 ppm	2.33 ± 0.09b	2.23 ± 0.09cd	1.43 ± 0.03c	0.73 ± 0.03c	−27.08	57.57 ± 1.19a	26.12	11.43 ± 0.50a	18.83 ± 0.17a	0.46 ± 0.02a	4.21 ± 0.11ab
300 ppm	2.33 ± 0.19b	2.03 ± 0.03d	1.43 ± 0.03c	0.77 ± 0.07c	−27.50	57.79 ± 0.52a	26.59	11.40 ± 0.38a	19.00 ± 0.58a	0.44 ± 0.02ab	4.42 ± 0.10a
400 ppm	2.37 ± 0.12b	2.43 ± 0.15bc	1.63 ± 0.03ab	0.73 ± 0.03c	−26.04	54.67 ± 0.63b	19.75	11.10 ± 0.66a	17.17 ± 0.60b	0.36 ± 0.01c	4.45 ± 0.10a
500 ppm	2.35 ± 0.14b	2.40 ± 0.06bc	1.53 ± 0.03bc	0.92 ± 0.02b	−26.56	55.38 ± 1.14ab	21.32	11.50 ± 0.15a	16.77 ± 0.79b	0.41 ± 0.01b	4.26 ± 0.07a
CV (%)	8.38	6.85	4.88	8.72	nd	2.79	nd	7.26	5.03		
Level of significance	**	**	**	**	nd	**	nd	**	*		

Values are means ± standard errors of three independent replications. Different letters within the column indicate statistically significant differences among the treatments according to Least Significance Difference test at $p < 0.05$. nd: not determined, LS: Level of significance, * and **: significant at 5 % and 1 % level of probability, respectively, ns: non-significant.
[X] **Source:** Uddin et al. [13].

a concentration of 300 ppm demonstrated significant contribution in augmenting the fruiting, yield and fruit biochemical properties. In short, maximum fruit set (223.20/panicle), retention (13.17/panicle; 5.90 %) and yield (713.96 g/panicle) was accounted in 300 ppm treatment having statistical consistency with 200 ppm dose. Besides enhancing the fruit size (from 42.30 g to 54.13 g) and pulp weight (from 19.30 g to 31.30 g), GA_3 significantly reduced the seed weight of rambutan by 27.50 % in 300 ppm compared to control. Consequently, fruit edible portion got increased by 26.59 % over control. Again, shelf-life of rambutan was extended upto four-days (from 7.53 to 11.50 days) after GA_3 treatment. Besides, TSS (19.00 %) and total sugars (4.45 %) also got enhanced after GA_3 application (Table 2).

Observations revealed that the seven treatments separated into two major groups based on their influence in regulating the fruiting, yield and fruit biochemical properties of rambutan. In cluster-1, control treatment (no GA_3 application) followed by 50 ppm dose accounted for the lowest fruit set (FST) and retention (FRN), fruit retention percentage (FRP), individual fruit weight (FWT), fruit length (FLN) and diameter (FDM), pulp weight (PWT) and thickness (PTK), pulp to peel ratio (PPR), edible portion (EDP), total soluble solids (TSS), total sugars (TSG) and shelf life (SLF) of rambutan. Contrarily, the same treatment group produced fruits with larger seeds, heavier peels and greater titratable acidity (TAT) content (Fig. 1) leading to inferior fruit quality. In the second cluster, 200 and 300 ppm are in juxtaposition and demonstrated superiority for fruit set and retention, fruit size and weight, pulp weight and thickness, pulp to peel ratio, edible portion and fruit yield as well as TSS and total sugars contents at 300 ppm having statistical consistency with 200 ppm dose for majority cases. Comparatively reduced seed weight (SWT), length (SLN), diameter (SDM) and thickness (STK) were also noted in these two treatments (Fig. 1).

It was further examined that strong to weak positive and negative correlations were existed among the 21 studied variables as a function of GA_3 application in rambutan (Fig. 2). Among the yield and yield contributing traits, fruit set, fruit retention, fruit size and weight, pulp weight and thickness, yield, edible portion, TSS and titratable acidity had moderate to strong positive correlations, whereas these traits had negative relationships with seed and peel qualities which elucidate that GA_3 application significantly enhanced the fruit physical and biochemical qualities.

Meanwhile, in the PCA biplot (Fig. 3), the treatments 300 and 200 ppm get positioned distinctly at the right of PC1 explaining their superiority in augmenting the fruit yield and quality of rambutan. In contrast, 0 ppm dose has its place at the very left in terms of PC1 which means that this treatment had too low contribution on yield and fruit quality traits of rambutan. The treatment 100 ppm closely followed the 0 ppm. Other treatments grab their places at the centre of PC1 and PC2. Thus, the treatments can be ranked as 300 ppm > 200 ppm > 100 ppm > 400 ppm > 500 ppm > 50 ppm > 0 ppm with respect to yield and fruit physicochemical properties of rambutan (Fig. 3).

4. Experimental Design, Materials and Methods

4.1. Study location and weather features

Over the consecutive crop years of 2020 and 2021, research on the enhancement of rambutan using gibberellic acid was carried out at the Fruit Research Farm of the Pomology Division, Horticulture Research Centre, under the Bangladesh Agricultural Research Institute (BARI). This orchard is situated in the central region of the Madhupur Tract in Bangladesh, at geographic coordinate 23.99°N latitude and 90.41°E longitude, with an elevation of 8.4 m above sea level. The area experiences moderate to heavy rainfall, high humidity, and high temperatures from April to September, while from October to March, there is no rainfall, and the humidity and temperatures range from low to moderate (Supplementary Fig. 1). The soil in this location is primarily Grey Silty Clay, acidic, with low organic matter content and varying mineral levels [14].

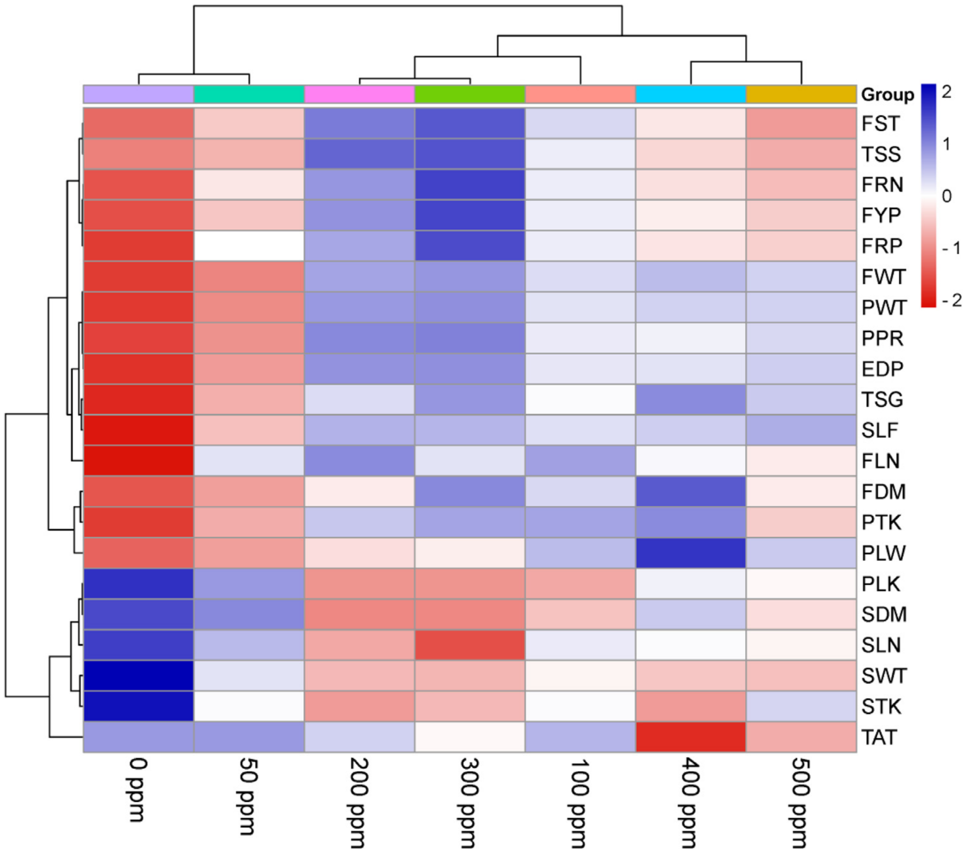

Fig. 1. Cluster heatmap displaying the relative position of seven GA_3 treatments as a function of their ability to induce the yield and quality attributes of rambutan. Here, FST: Fruit set/panicle, FRN: fruit retained/panicle, FRP: Fruit retention percentage, FWT: Individual fruit weight, FYP: Yield/panicle, FLN: Fruit length, FDM: Fruit diameter, PWT: Pulp weight, PTK: Pulp thickness, PLW: Peel weight, PLK: Peel thickness, PPR: Pulp to peel ratio, SWT: Seed weight, SLN: Seed length, SDM: Seed diameter, STK: Seed thickness, EDP: Edible portion, TSS: Total soluble solids, TAT: Titratable acidity, TSG: Total sugars and SLF: Shelf life.

4.2. Treatment, layout and design

To achieve the objectives, the experiment was implemented in a randomized complete block design (RCBD) with three replications, incorporating seven treatments including a control group. The treatments involved gibberellic acid (GA_3) at six different concentrations: 50, 100, 200, 300, 400 and 500 ppm, alongside a control (no GA_3). The treatment solutions were prepared immediately before the scheduled spraying following standard procedure [13]. In each treatment replication, ten panicles were randomly selected and sprayed with the prepared GA_3 solutions. Spraying occurred at the early flowering stage (Stage 611; [15]), when 10 % of the floral buds on the panicle began to bloom. In 2021, flowering started in the third week of February, and spraying was performed on March 5th. In 2022, flowering began in early February, with spraying on February 27th. A total of 210 panicles were sprayed every year. A second application of the same PGR dose was performed on the same panicles at the early fruiting stage, thirty days after the first spray, on April 5th and March 28th in 2021 and 2022, respectively. Regular maintenance activities such as fertilization, irrigation, netting, and pest control were conducted as and when necessary.

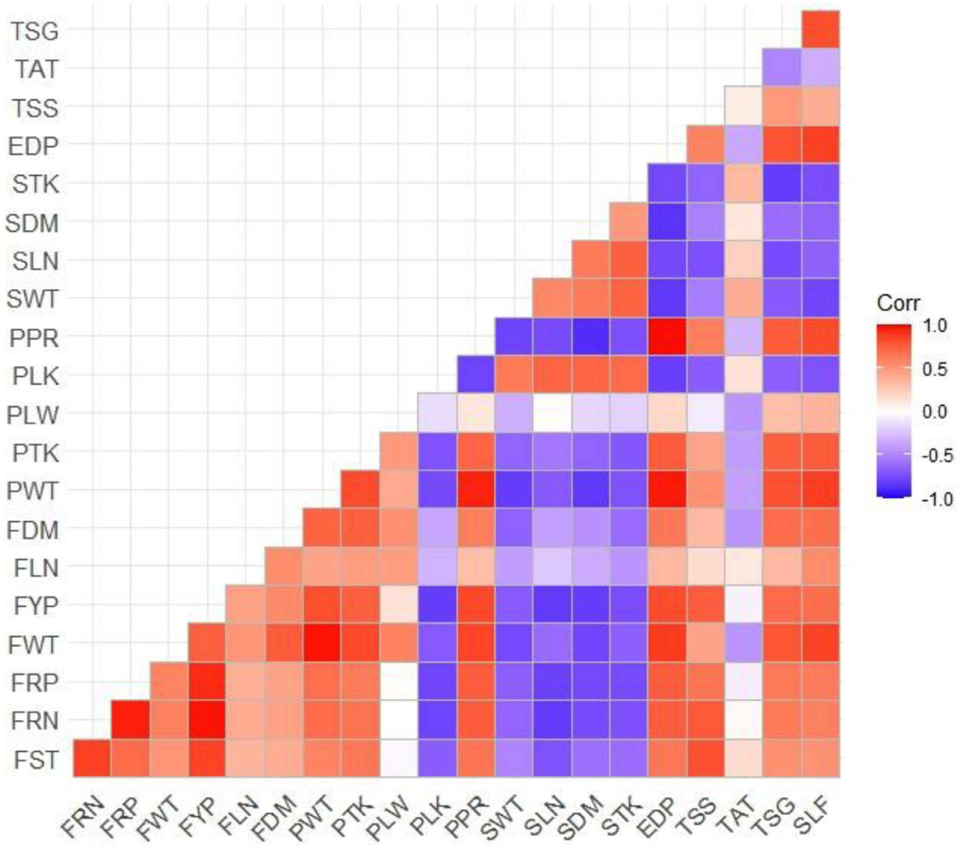

Fig. 2. Correlation matrix showing the pattern and degree of relationship among the yield and quality traits of rambutan as a function of GA3 treatment. Here, FST: Fruit set/panicle, FRN: fruit retained/panicle, FRP: Fruit retention percentage, FWT: Individual fruit weight, FYP: Yield/panicle, FLN: Fruit length, FDM: Fruit diameter, PWT: Pulp weight, PTK: Pulp thickness, PLW: Peel weight, PLK: Peel thickness, PPR: Pulp to peel ratio, SWT: Seed weight, SLN: Seed length, SDM: Seed diameter, STK: Seed thickness, EDP: Edible portion, TSS: Total soluble solids, TAT: Titratable acidity, TSG: Total sugars and SLF: Shelf life.

4.3. Parameters studied

Following the application of GA_3, the panicles were monitored and the fruit set per panicle was recorded. Upon ripening, the fruits were harvested in July. The total number of fruits per panicle was counted, and the average number of fruits retained per panicle in each treatment replication was noted, with the percent fruit retention calculated. Immediately after harvest, the fruits were taken to the laboratory where ten randomly selected fruits from each replication were weighed and measured for size (length and breadth) and fruit yield per panicle was calculated by multiplying the individual fruit weight with the number of fruits retained per panicle. Each of the ten fruits was then cut perpendicularly to separate the pulp, skin, and seeds, which were weighed and measured for thickness, and size (length, breadth, thickness). Additionally, total soluble solids (TSS), titratable acidity, and total sugar contents of the fruit pulp were measured following standard protocols [16–18]. The edible portion of the rambutan fruits was calculated by dividing the pulp weight by the fruit weight. Furthermore, fruits were kept at room temperature (27±2 ºC) in the laboratory to record the shelf life. Detailed are described in previously published manuscript [13].

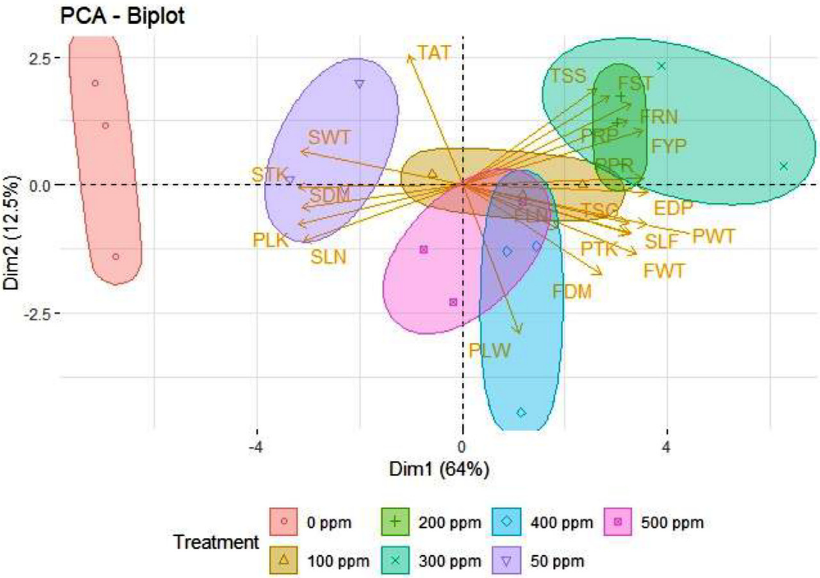

Fig. 3. Principal component analysis (PCA) representing the performance of pre-harvest GA_3 treatments on influencing the yield and quality attributes of rambutan. Eclipses with varied colors denote different treatments in PCA-Biplot. Here, FST: Fruit set/panicle, FRN: fruit retained/panicle, FRP: Fruit retention percentage, FWT: Individual fruit weight, FYP: Yield/panicle, FLN: Fruit length, FDM: Fruit diameter, PWT: Pulp weight, PTK: Pulp thickness, PLW: Peel weight, PLK: Peel thickness, PPR: Pulp to peel ratio, SWT: Seed weight, SLN: Seed length, SDM: Seed diameter, STK: Seed thickness, EDP: Edible portion, TSS: Total soluble solids, TAT: Titratable acidity, TSG: Total sugars and SLF: Shelf life.

4.4. Statistical analysis and interpretation

After performing one-way analysis of variance, the data were subject to mean separation by treatments with Fisher's LSD at the 5 % level of significance ($p < 0.05$). In addition, correlation matrix, cluster heatmap and principal component analysis were employed to note the interrelationships among the studied parameters and investigate more insight of the treatment effects on rambutan yield and qualities. Statistical software 'R' (version 4.2.0) was used to analyze and vizualize the data.

Limitations

The dataset exhibits the comprehensive data on yield and fruit biochemical attributes of rambutan as influenced by pre-harvest gibberellic acid application, but it lacks information on physiological and metabolic changes in fruits as well as source-sink relation for fruit yield and quality improvement of rambutan upon applying plant growth regulator.

Ethics Statement

This research did not involve any treatments or observations involving animals or humans. All authors have reviewed and adhered to the ethical guidelines for publication in Data in Brief. Additionally, the study fulfills all publication requirements.

Data Availability

Dataset describing the influence of preharvest gibberellic acid application on fruiting behavior, yield and fruit biochemical properties of rambutan (Nephelium lappaceum L.) (Original data) (Mendeley Data).

CRediT Author Statement

Joydeb Gomasta: Conceptualization, Methodology, Investigation, Writing – original draft, Writing – review & editing; **A. S. M. Mesbah Uddin:** Conceptualization, Methodology, Writing – review & editing, Supervision, Project administration; **Emrul Kayesh:** Formal analysis, Data curation, Visualization; **Monirul Islam:** Data curation, Writing – review & editing; **Mohammad Amdadul Haque:** Writing – original draft, Visualization; **Ashraful Alam:** Writing – review & editing; **Md. Torikul Islam:** Data curation, Writing – review & editing.

Acknowledgments

The authors acknowledge the Pomology Division, Horticulture Research Centre, BARI, Gazipur 1701, Bangladesh for rendering physical and logistic supports.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary Materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.dib.2024.110684.

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