

Green Crackers in Delhi: Between Eco-Friendly Promise and Pollution Reality

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GREEN CRACKERS



Green Crackers Latest News

- Recently, the Supreme Court signalled it may partially relax the firecracker ban in Delhi-NCR “on a trial basis,” seeking to balance environmental concerns and public sentiment — similar to its **2018 Arjun Gopal judgment**, which had allowed only low-emission ‘green crackers’.
- The case, which began in 2015 with a plea by three infants seeking protection from Delhi’s toxic air, has evolved into a decade-long legal battle over the right to breathe clean air.
- Despite court orders, enforcement has been weak, and violations persist, worsening air quality each festive season.

A Decade of Judicial Action on Firecrackers: 2015-2025

- The firecracker litigation began in 2015, when a petition by three infants sought protection from Delhi’s toxic air.

- In **October 2018**, the SC delivered a landmark ruling, banning conventional firecrackers and permitting only “green” variants developed by CSIR, with fixed time slots for bursting them.
- In **November 2020**, the **National Green Tribunal (NGT)** imposed an **“absolute ban”** on all firecrackers during the **Diwali season** in the **NCR** and other **highly polluted cities**, expanding restrictions beyond the SC’s earlier framework.

Annual Enforcement and Year-Round Ban (2021-2023)

- Since 2021, the Delhi Pollution Control Committee (DPCC) has regularly banned the sale and use of firecrackers from September through winter each year.
- In 2023, following Supreme Court directions, Delhi extended the prohibition to a year-round ban to control persistent air pollution.

Supreme Court’s Latest Observations (2024-2025)

- In April 2024, the SC observed that a short-term ban around Diwali would not be effective and no relaxation for green crackers should be given without clear evidence of environmental benefit.
- Later, in September 2025, while reviewing pleas to modify the ban, the Court allowed certified manufacturers to produce green crackers, but prohibited their sale in Delhi-NCR until further orders.

About Green Crackers

- Green crackers are **eco-friendly fireworks** developed by the Council of Scientific & Industrial Research – National Environmental Engineering Research Institute (CSIR-NEERI) to reduce harmful emissions and air pollution.
- These crackers are made with smaller shells, reduced raw material use, elimination of ash, and dust-suppressant additives, which help **curb smoke and particulate emissions**.
- While combustion-based fireworks can never be entirely pollution-free, **green crackers release 30-40% fewer pollutants than traditional ones**.
- They do not contain toxic substances such as barium nitrate, arsenic, or lead, and instead use alternative formulations that reduce smoke, particulate matter, and noise levels.

Variants Developed by CSIR-NEERI

- Introduced in **2018**, CSIR-NEERI created three key variants:
 - **SWAS (Safe Water Releaser)**
 - **STAR (Safe Thermite Cracker)**
 - **SAFAL (Safe Minimal Aluminium)**
- These versions **eliminate potassium nitrate and sulphur**, helping cut **gas and dust emissions** significantly while maintaining festive brightness and sound within safer limits.

Concerns and Risks Surrounding Green Crackers

- According to CSIR-NEERI, green crackers emit lower levels of nitrous oxide and sulphur dioxide compared to traditional fireworks.
- However, a 2022 Delhi Technological University study found that **they still release high concentrations of ultra-fine particles** — even more harmful than PM2.5 and PM10, posing serious health risks.

Identification and Regulation

- Certified green crackers carry the **CSIR-NEERI green logo** and **encrypted QR codes for authenticity**.
- Only companies approved by NEERI and the Petroleum and Explosives Safety Organisation (PESO) can manufacture them, and licensed vendors are authorised to sell these products.
- Each cracker is traceable to its manufacturer through the QR code.
- Despite the regulatory framework, Delhi lacks essential infrastructure — including testing labs, certification mechanisms, and inspection facilities — to ensure compliance.
- Experts warn that no facility currently exists to verify if the crackers being sold are truly “green.”
- Moreover, the QR verification system, designed to prevent counterfeiting, has been cloned by unlicensed manufacturers, leading to widespread circulation of **fake “green” crackers**.

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