

# Breaking Barriers, Bridging Continents: NRCP Intervention in Indian Pomegranate Export to USA - A Success Story



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### ***Correct Citation***

Gaikwad N. N., Giri N.A., Marathe R. A. (2024). Breaking Barriers, Bridging Continents: NRCP Intervention in Indian Pomegranate Export to USA - A Success Story. Tech folder/NRCP/2024/01, ICAR-NRCP, Solapur, pp: 1-8.

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### **Printed**

September 2024

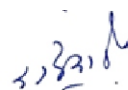
## ***Director's Message...***

*The India has been blessed with varied agro climatic conditions which provide a unique opportunity for export of various agricultural and horticultural commodities from India. Owing to its health benefits and nutraceutical value, pomegranate has acquired a special place in*



**Dr. R. A. Marathe**  
(Director)

*horticultural export basket. The Indian pomegranate export has been growing steadily at the rate of 20% per annum. The research efforts has opened up the economical export opportunity in premium markets of USA, Europe and Australia to Indian pomegranate exporters. The Indian pomegranate exporters will now be more competitive vis-à-vis their counterparts. This will enhance Indian forex earning. The higher profits on Indian pomegranate export to the premium markets will certainly transcend to the pomegranate growers. I congratulate the team of scientist from ICAR-NRC on Pomegranate, Solapur for their efforts in development of sea protocol through static trial for export of pomegranate to USA. I also complement the lead taken on the issue by the APEDA, Min. of Commerce and Industry, GOI, and team efforts by innovative exporter INI farms, Maharashtra State Agricultural Marketing Board, Govt. of Maharashtra, Directorate of plant protection, quarantine & storage (DAC, GOI).*

A handwritten signature in blue ink, appearing to read 'R. A. Marathe', is positioned above the typed name.

*Director,  
ICAR, NRCP,  
Solapur*

## **Breaking Barriers, Bridging Continents: NRCP Intervention in Indian Pomegranate Export to USA - A Success Story**

In the fiscal period 2022-23, India's agricultural exports reached USD 53.1 billion. Some major exports include fresh fruits and processed vegetables, both registering more than 20% growth than last year. India is leading pomegranate producer in the world with 0.276 million ha area under pomegranate cultivation and production of 3.184 MMT in year 2022-23 (DoA&FW, MoA&FW, GOI). In 2023-24, 71,625 metric tonne of pomegranate worth 56.7 million rupees was exported. Only 2.27 % of the total Indian pomegranate production has been exported in year 2022-23. Thus, there is huge scope for increasing export of Indian pomegranate. India has favourable climatic conditions for the pomegranate production and capable of its export throughout the year. The major export destinations for Indian pomegranate were United Arab Emirates (UAE), Bangladesh, Nepal, Netherlands, Saudi Arabia, Sri Lanka, Thailand, Bahrain, Oman. However, an export to premium markets like Europe and USA which is meagre at present but fetches higher forex earning. This shows that besides traditional export destinations there is huge scope for the pomegranate export to newer and premium markets. The USA is the premium market for the Indian pomegranates.

The Indian pomegranate export to USA has been guided by the Operational Work Plan (OWP), jointly developed by the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), and the National Plant Protection Organization (NPPO) of India which is signed in Sep. 2006 and Addendum to Operational Work Plan for Import of Pomegranate intended for irradiation in India signed in May 2012. The pomegranate export to the USA has been halted in 2018. This has resulted in to the loss of premium export destination. APEDA has taken lead to open up this premium market for Indian pomegranates. In doing so a plan has been chalked out to start with trial air shipment followed by static trial.

### **Trial Air Shipment**

ICAR-National Research Centre on Pomegranate (NRCP), Solapur; APEDA, New Delhi, National Plant Protection Organization (NPPO), New Delhi; Maharashtra State Agriculture Marketing Board (MSAMB), Government of Maharashtra and INI Farms Pvt. Ltd. joined hands for the successful trial shipment of irradiated pomegranate fruits from India to USA.

By following the operational work plan and the addendum, the pomegranate fruits were subjected to the post-harvest treatments and irradiation at the Export Facility Centre, APMC, Vashi of MSAMB. The pomegranate fruits were procured from the ANARNET registered grower (Reg. No. MH1209178102) followed by pre-cooling, storage at INI farms pack house, transportation of fruits in reefer van to Export Facility Centre, APMC, Vashi, Mumbai. Here sorting, grading, crown cleaning with brushes and air guns, mite wash with surfactant, second wash (sodium hypochlorite 100 ppm), normal water wash, surface and crown drying, packaging in CFB boxes and irradiation (400 G) of minimum absorbed dose to pomegranate fruits were carried out before air shipment. The virtual flag off ceremony was conducted on 27.07.2023 by the Sh. Abhishek Dev, Chairman APEDA, Dr. Rajiv A. Marathe, Director, ICAR-NRC on Pomegranate, Dr. J. P. Singh National Plant Protection Advisor, and other dignitaries were also present. The consignment was received in good condition by the importer in USA.





*Inspection of fruits before air shipment and flag off of the trial air shipment*

### **Static Storage Trials:**

One of the lot from irradiated pomegranate fruits for the trial air shipment and control samples were transported to ICAR-NRCP laboratory for static storage trials. An experiment was planned and the packaged pomegranate fruits were stored at MAP (modified atmospheric packaging) and non-MAP conditions. The treatments were T1: Irradiation + MAP, T2: Irradiation + Non-MAP T3: Non-Irradiation + Non-MAP, T4: Non-Irradiation + MAP with 3 replicates and storage at  $5 \pm 1$  °C. The storage duration was planned for 8 weeks and the observation frequency was 1 week. The physical, biochemical and sensory quality attributes of the pomegranate fruits were studied during the storage. The parameters studied included Physiological Loss in Weight (%), Aril Color ( $a^*$ ), Aril Texture (N), Aril TSS ( $^{\circ}$ Brix), Total Phenols (mg GAE/L), Antioxidant activity (%), Total Anthocyanin (mg cyanidin/100 mL) and Sensory Quality. It has been concluded that the irradiated fruits either with MAP or Non MAP can be stored at  $5 \pm 1^{\circ}\text{C}$  up to 8 weeks and were sensorially acceptable too.



**Irradiated MAP**

**Irradiated non-MAP**

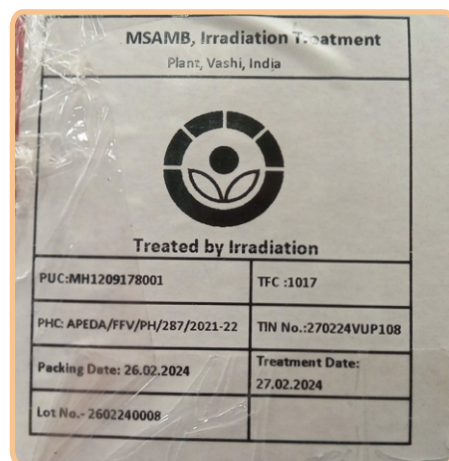
**Non-Irradiated  
non-MAP**

**Non-Irradiated  
MAP**

*Appearance of the pomegranate at the end of 8<sup>th</sup> week of the storage*

## Trial Sea Shipment

Although the trial air shipment was a great success. The costs of the air freight makes it very difficult for the Indian exporters to be competitive in US markets as the competitor countries are shipping via sea. Further, the adoption of the sea route is challenging as the ships have to voyage long distance for irradiated fruits. Based on successful storage trials of irradiated pomegranate for the 8 weeks at ICAR-NRCP, Solapur. APEDA has supported the sea shipment by the INI farms. Sea shipment of 12.60 MT of irradiated pomegranate fruits was flagged off by the Add. Secretary, Ministry of Commerce & Industries and Chairman APEDA on 28<sup>th</sup> February 2024. This sea shipment of the irradiated pomegranate fruits has reached destination in 50 days crossing more than 20000 km to USA in highly acceptable condition. This has reduced the transportation cost by approximately 1/3<sup>rd</sup> as compared to air freight. The success of this trial shipment through sea will open up the opportunity of the export not only to the premium markets of the USA but also to the other long distant markets while remaining competitive with international counterparts.



*The flag off ceremony of sea shipment on 28.02.2024 and quality of fruits received at USA through Sea shipment*



# Media Coverage...

**First Commercial Trial Shipment of Sangola Pomegranates to the US via Sea**

APEDA, Ministry of Commerce & Industry, Government of India, has successfully flagged off its first commercial trial shipment of Sangola pomegranates to the US via sea. The shipment, comprising 4,200 boxes (12.4 tons), was shipped from Sangola, Maharashtra, to the US via sea. This is a significant milestone for India's agricultural exports, as Sangola pomegranates are one of the largest producers of pomegranates in the world and are also now among the top pomegranate exporting countries in the world.

The shipment was flagged off by the Minister of Agriculture, Government of India, Shri. Nara Chandrababu Naidu, in the presence of the Minister of Commerce, Government of India, Shri. Bhupendra Patel, and the Minister of Agriculture, Government of Maharashtra, Shri. Anant Shinde. The shipment was also flagged off by the Minister of Agriculture, Government of India, Shri. Nara Chandrababu Naidu, in the presence of the Minister of Commerce, Government of India, Shri. Bhupendra Patel, and the Minister of Agriculture, Government of Maharashtra, Shri. Anant Shinde.

**A significant moment in India's agricultural exports, as Indian pomegranates set sail for the US shores travelling over 20,000+ kms. This is a collaborative effort of #APEDA, MSAMB, @Kimagye\_INL, US Consulate, RQPS - MoA&FW, NRC (@Solapur).**

10:28 PM - Feb 28, 2024

24 Reply Copy Link

Read 1 reply

**अमेरिका के लिए स्वाद और सेहत का उपहार, भारत से खाना हूए रसदार अनार।**

10:18 PM - Feb 28, 2024

9.4K Reply Copy Link

Read 131 replies

**India starts shipping pomegranates to US through sea route**

By Jai P. Singh, part of the Agriculture Group has shipped its first container of Sangola pomegranates to the United States through the sea route. Travelling nearly 20,000 kms, this is the longest distance travelled by any Indian fruit in the world, the company said.

Pomegranate shipment through the sea route is the result of close coordination between APEDA, Ministry of Commerce and Industry, Ministry of Agriculture (Govt of Maharashtra), Maharashtra State Agricultural Marketing Board (MSAMB), United States Department of Agriculture (USDA), APEDA, Pomegranate National Research Center (PNRC) and Jai Farms. The export-oriented venture initiated from farm registration, testing & monitoring, at pre-shipment, development of sea product, stable trials for shelf life assessment and post-harvest treatment, the company said.

The container consignment of 12.4 tonnes of Sangola pomegranates was flagged off by Piyush Aggarwal, Additional Secretary, Ministry of Commerce and Industry (Govt. of India), APEDA, at MSAMB's Irradiation Facility Centre in Sangli (Dist. Mumbai) on Wednesday.

India is the world's largest producer of pomegranates, with over 2.75 lakh hectares of land under cultivation. During the fiscal year 2022-23, the country exported over 60,000 tonnes of pomegranates to US, the Netherlands, Oman, Bahrain and others.

The successful export of pomegranates to the US opens up a new opportunity for Indian pomegranate farmers and exporters and will open doors to other high-value markets like Australia.

Piyush Aggarwal, Additional Secretary, Ministry of Commerce, said: "This is a huge opportunity for exports for the Indian agriculture industry. India's unique agro-climatic conditions, combined with the sea strategy, at Jai Farms and our ability to grow produce around the year give us a unique advantage in the global fruit trade. Such initiatives are connecting Indian farmers to the world and the self-sufficient growth with parties as global consumers will get the opportunity to enjoy Indian produce and as a result, Indian farmers will prosper with the help of access to global markets. This initiative is a great start and a harbinger to the growing India-US relations."

Abhishek Des, Chairman, APEDA, said: "This export from India has been growing steadily over the last few years. We are seeing 25 per cent year-on-year growth in fruit, but exports and pomegranate alone is growing at 35 per cent year-on-year and has the potential to grow further in the coming years. This initiative is a commendable effort from the producer side, the exporter and the buyer. We are grateful to the efforts of the officials who helped us in preparing the right produce. We also developed sea products which have helped us build a 10-day shelf life of the product and preserve its quality. With the success of this first commercial sea trial shipment of pomegranates to the US, we are hopeful that it will open up many more opportunities for Indian exports to the US."

Piyush Aggarwal, CEO, Jai Farms, said: "We are proud to be the pioneer in shipping pomegranates to the US. This initiative is part of the continuous efforts of the entire Jai Farms team that has helped put the Indian Farmer on the world map by making great quality Indian food available overseas."

Minister of Commerce, Shri. Piyush Goyal, said: "This is a landmark day for India-US trade as this consignment of pomegranates commences its journey via a 17-day journey by sea. This initiative is also a demonstration of the growing bilateral relations and trust between the two countries."

**APEDA facilitates India's first commercial trial shipment of Sangola pomegranates to the US via sea**

Posted On: 01 MAR 2024 2:10PM by PIB Mumbai

Mumbai, 1 March 2024

On 28th February, 2024, India successfully flagged off its first commercial trial shipment of Pomegranates to the US via sea under the aegis of Agriculture Processed Food Products Export Development Authority (APEDA) by Jai Farms from JFC facility, MSAMB, Sangli (Dist. Mumbai), Shri. Piyush Aggarwal, Additional Secretary, Ministry of Commerce & Industry and Shri. Abhishek Des, Chairman, APEDA, flagged off the Pomegranate shipment comprising of 4,200 boxes (12.4 tons).

The ceremony was graced by dignitaries from the Maharashtra State Agricultural Marketing Board (MSAMB), Regional Plant Quarantine Station (RQPS-MoA&FW), State Agriculture Department (Govt of Maharashtra), NRC Pomegranate, US Consulate and Jai Farms.

Last year, APEDA successfully carried out an air shipment of Pomegranates with irradiation treatment and static trial in association with ICAR-NRC Pomegranate Solapur as technical partner. Based on the successful result of the static trial, APEDA aimed for a successful sign off for this consignment via sea opening trade relations to potential markets for Indian Pomegranates. India, one of the largest Producers of Pomegranates in the World and is also now among to be amongst the top Pomegranate exporting countries in the World. India is a key player growing in the EU, Middle East and Asian Markets.

## Pomegranates from Maha exported by sea to USA for first time

By HT Correspondent

Mar 04, 2024 10:34 PM IST

The fruit exported by sea to the USA was sourced from ANARNET-registered farmers from Sangola in Maharashtra



Last year, the APEDA carried out an air shipment of pomegranates with irradiation treatment and static trial in association with ICAR-NRC Pomegranate Solapur as technical partner. (HT PHOTO)

PUNE: For the first time, pomegranates grown in



हर कदम, हर डगर  
किसानों का हमसफर  
भारतीय कृषि अनुसंधान परिषद

*Agrisearch with a human touch*



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