

RosBREED

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Cultivar Corner

COSMIC CRISP™ APPLE RELEASED AS WA 38

**Inventors: Kate Evans and Bruce Barritt,
Washington State University**

Kate Evans, RosBREED apple breeding team member, answers some questions about this new cultivar, released in 2013.



What are the unique features of Cosmic Crisp™?

Cosmic Crisp™ fruit is firm, sweet, tangy, crisp, and very juicy, with dark red skin. The name is inspired by lenticels on the skin that look like tiny starbursts. It is very productive under Washington conditions, with a compressed mid-season harvest period. It retains its high quality in extended storage and is not afflicted by physiological disorders.

How long did it take to develop this cultivar?

The original cross was made in 1997, and it took 16 years to release. Our pre-commercialization evaluation was intensive, taking time and resources, but convinced us that we would meet the expectations of our industry stakeholders.

What is the pedigree of Cosmic Crisp™?

Enterprise × Honeycrisp, Bruce was aiming to combine the textural qualities of Honeycrisp with the highly colored appearance of Enterprise.

What did those parents contribute to Cosmic Crisp™?

Cosmic Crisp™ inherited its crisp, juicy texture from Honeycrisp, yet thankfully not many of its production difficulties. It did not inherit the scab resistance from Enterprise originally derived from the wild species, *Malus floribunda*, but the high-desert climate of central Washington negates this need as apple scab is not prevalent. Interestingly, it has very slow-to-brown flesh as well, a characteristic not observed in either parent.

What was it about Cosmic Crisp™ that motivated you to select it from so many other potential releases?

Initially, the breeding team was concerned about the very dark shade of red the skin can produce in cooler production areas and that the apple was a little too tart. It has always looked distinctive— a very positive trait for the marketplace! Knowing proper harvest timing was initially a challenge, but we have that sorted out. Further, the higher level of acidity is not an issue, and in fact, Cosmic Crisp™ regularly outscores Honeycrisp in consumer preference tests, especially for fruit coming from extended storage.



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

RosBREED is a Coordinated Agriculture Project composed of a multi-state, multi-institution, and multi-disciplinary team of scientists dedicated to the accelerated genetic improvement of U.S. rosaceous crops using diagnostic DNA tools. This project is funded through the USDA-NIFA Specialty Crop Research Initiative by a combination of federal and matching funds.

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