RubyRush™ – New Apple Cultivar Release from Rutgers University and Adams County Nursery

Jon Clements[1], Win Cowgill[2], Megan Muehlbauer[3]

[1]University of Massachusetts
[2]Professor Emeritus, Rutgers University, Win Enterprises International, LLC.
[3]Rutgers New Jersey Agricultural Experiment Station, Rutgers University

RubyRush (NJ150 Cv.) tested as DW18-206 is a new scab-resistant apple variety recently introduced by Adams County Nursery (ACN).

From their 2020 ACN catalog "A new release from the apple breeding program at Rutgers University/New Jersey Agricultural Experiment Station (NJAES). This selection is a GoldRush x Enterprise cross selected for its scab-resistant traits. Both GoldRush x Enterprise are from the famous Purdue, Rutgers, Univ. of Illinois (PRI) apple disease resistant breeding program, https://www.hort.purdue.edu/newcrop/pri/default.html RubyRush™ exhibits excellent resistance to fire blight and cedar apple rust. The fruit is juicy and aromatic with a desirable crisp texture. The tree is vigorous and should be thinned to avoid biennial bearing. Trees available spring 2022. (Currently out of stock.)"

RubyRush was evaluated as DW18-206 in cooperation with Rutgers University and ACN at two locations in Massachusetts (Tougas Family Farm in Northboro, MA, and UMass Cold Spring Orchard in Belchertown) and one location in New Jersey (Rutgers Snyder Research and Extension Farm, Pittstown, NJ) beginning in 2011. A total of 24 lab and field observations for DW18-206 were entered into our apple testers database(s) http://appletesters.net, beginning in 2014 and ending in

Table 1. RubyRush fruit characteristic values.

Fruit Characteristic	Starch Index	Soluble Solids (%)	Firmness (lb.)	Fruit Weight (g)	Diameter (in)	Red Color (%)
Average Value	4.8	13	16.4	277	3.4	75

Table 2. RubyRush tree habit characteristics.

Tree Characteristic	Tree Vigor	Crop Load	Tree Habit	Branching	Pre-Harvest Drop
Average Observation	Precocious	Medium	Upright	Medium	None

2021. Below are some of our observation summaries for RubyRush. Note that the range of observations can be a result of tree age, crop load, harvest timing, and individual preference.

RubyRush Observations

- Dates harvested: ranged from 23 September to 18 October. In Northern NJ the best harvest date is around October 1, in Massachusetts October 5 is closer to optimal harvest date.
- Tree vigor: medium-strong (very)
- Branching: medium-strong
- Tree habit: upright-spreading
- Biennial bearing: none noted
- Crop load: medium-heavy
- Maturity period: middle-late
- Pre-harvest drop: none-nil-few
- Fruit ground color: green-light green-yellow
- Fruit over-color: 65-90%
- Color pattern: solid-blush
- Lenticels: somewhat conspicuous
- Fruit symmetry: elliptical-globose
- Russet coverage: <5%
- Russet region: minimal stem, some net on side
- Russet texture: fine
- Cracking: absent
- Fruit size: medium large
- Fruit diameter: 3.25 to 3.65 inches
- Fruit weight: 240 to 340 grams
- Fruit firmness: 18-21 lbs.
- Soluble solids (Brix): 11.4 to 14.5
- Flesh browning: none to faint
- Starch Index (SI): 3-8
- Flesh color: green-white-cream-yellow
- Flesh texture: soft-fine-medium-crisp-melting
- Flavor: tart-sweet-fruity
- Skin thickness: somewhat thick
- Skin greasiness: dry to slightly greasy
- Eating quality: good when harvested at optimum
- Attractiveness: very good
- Overall quality: good-very good

Summary

RubyRush trees are vigorous and upright growing (Figure 1), but eventually spreading with crop load, especially on more dwarfing rootstocks. Cropping can be heavy with biennial bearing if not adequately thinned. Harvest period is early late season, no sooner than October 1, with a two-week picking window and little drop. RubyRush fruit are large and very attractive with a bright pink-red solid color blush covering 75% of the surface. Background color will change from green to green-yellow with maturity. Flesh is fine-medium textured and quite firm with a tart-sweet flavor. Water-core can be an issue in some years. Eating quality is generally good, maybe very good, but does not have the 'snap" of a Honeycrisp or GoldRush.

Figure 1. RubyRush tree on M.7 rootstock at the UMass Cold Spring Orchard, 16 October 2018. Note high tree vigor.

Our overall feeling about RubyRush is it will not compete with Honeycrisp for consumer preference as to eating quality, however, for U-pick it is very attractive and large-fruited. It should not be stored for long term sales.

Organic production note

As a scab-and disease resistant apple it is one of the best we have observed for quality. Having cedar apple rust and fire blight resistance as well it may be very desirable for organic production. RubyRush does blend the attributes of Enterprise (thick skin, large size, red skin)

and GoldRush (sweeter flavor, firmness) quite nicely. We'd describe it as a red-blush Enterprise but sweeter.

One interesting note is that Enterprise in one of the parents of CosmicCrisp (WA 38) apple crossed with HoneyCrisp.

ACNursery Catalog 2021-2022
https://www.acnursery.com/

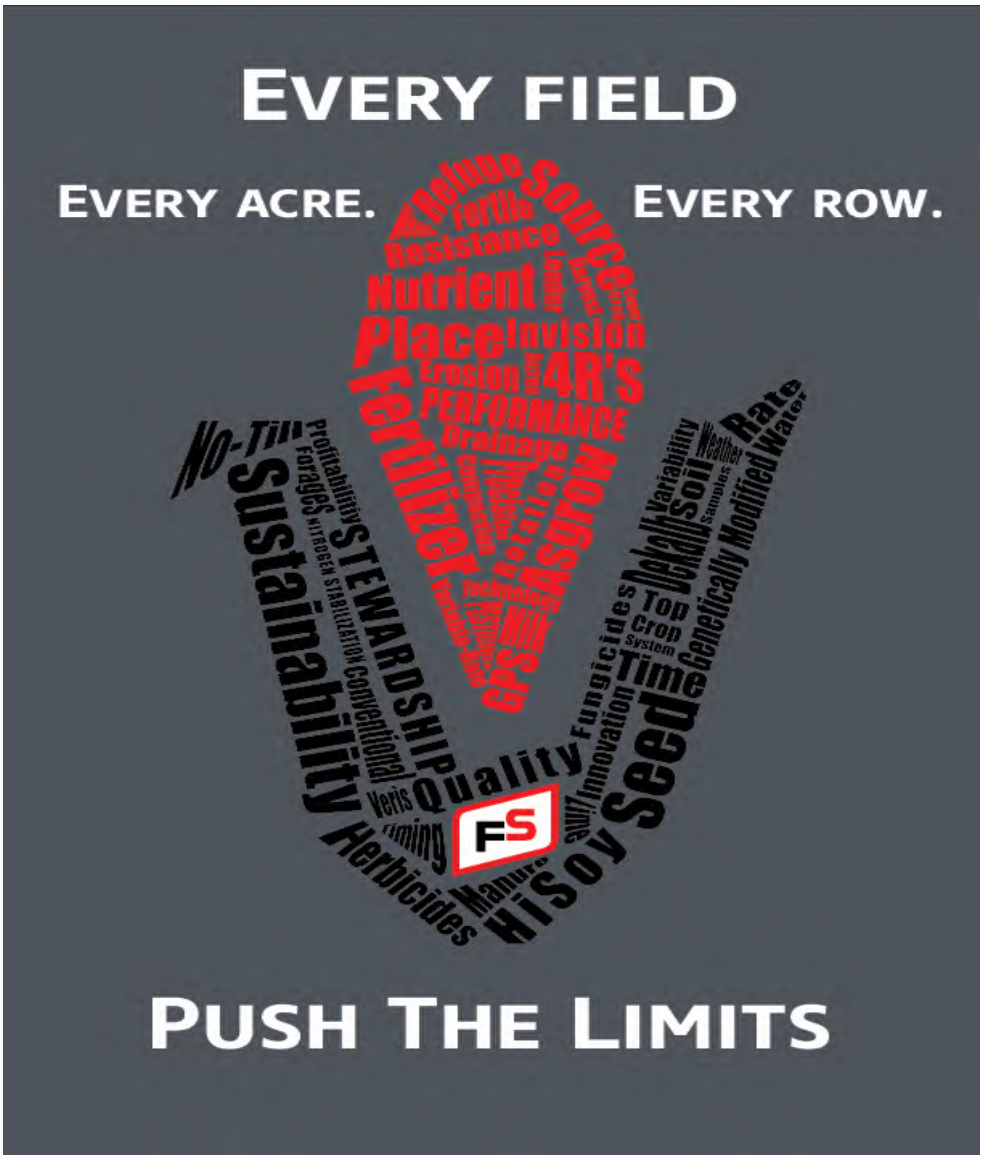
'GoldRush' Apple (Co-op 38)
HortScience 29(7):827-828. 1994.
https://www.hort.purdue.edu/newcrop/pri/coop38-3.html
PRI 2750-6 = (Co-op 17 (PRI 1689-100) x Golden Delicious) (Crosby et al. 1993) Introduced as 'GoldRush' (Crosby et al. 1994) U.S. Plant Patent No. 9,392.

(Enterprise Apple' (Co-op 30)
https://www.hort.purdue.edu/newcrop/pri/coop30.html
(PRI 2693-1 = PRI 1661-2 x PRI 1661-1) (Korban et al. 1990) Introduced as 'Enterprise' in 1993; U.S. Plant Patent No. 9,193

Figure 2. RubyRush apple at UMass Cold Spring Orchard, 30 September 2021.

Figure 3. RubyRush - UMass Cold Spring Orchard.

Figure 4. RubyRush - Rutgers Sndyer Research and Extension Farm.



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