

Interesting New Chestnut Cultivars 2017

J. Michael Nave
michaelnave@Comcast.net

Outline

- 15 new cultivars with possible commercial potential
- Other interesting new cultivars - hybrids
- Other interesting new cultivars - *C. mollisima*
- Other interesting new cultivars - *C. mollisima*-Byron, Georgia
- Underutilized older cultivars

15 new cultivars with commercial potential

Castanea mollissima

1. Jenny
2. Emalyn's Purple
3. Nanjing Special
4. Kyoung
5. Hong Kong
6. Yixian Large
7. YGF
8. Ness
9. Payne
10. Patterson

Castanea sativa/mollissima

1. Yolo Grande (aka Serr)

Complex hybrid

1. Szego

Castanea sativa

1. Boitano (aka Fife)

Castanea sativa/crenata

1. Gillet
2. Bergantz

Jenny - *Castanea mollissima*

Jenny is an open pollinated seedling of the old Ohio cultivar Kintzel. Kintzel is discussed in a 1962 NNGA Nutshell article. Like Kintzel, Jenny is a vigorous tall tree with a very erect growth pattern and unusually large leaves. It does not have the orchard type growth pattern common in many Chinese chestnut trees. The nuts are large and very flavorful - one of our favorite eating nuts. Despite their size, the nuts drop early in the season. Additionally, all nuts drop within a very short period of time once the first nuts start dropping.

NNGA Nutshell, Vol 9, Number 2, Page 8, 1962

"Another New Chestnut", Kintzel, Frank

8

Another New Chestnut???

Frank Kintzel, Maineville, Ohio

In my nut grove in southern Ohio, near Cincinnati, are growing a large number of assorted varieties of grafted trees. Among those the visiting nut enthusiast might see is bearing black walnuts, heartnuts, chestnuts, filberts, almonds, Persian walnuts, and persimmons -- both American and Oriental. There are also a few pecans. Many of my grafted trees, naturally, are regarded very highly. But the one tree closest to my heart happens to be a Chinese chestnut tree, a seedling now bearing its third crop.

My favorite tree is 11 years old, one of 100 seedlings I obtained from the Gold Nursery in West Virginia. It is a hardy specimen of the upright growing type. Early this spring it was heavily pruned for a supply of scions. Most of these scions were used to propagate trees in my own orchard. Samples were sent to Mr. Weaver of Macungie, Penna., also to Dr. McKay for testing at Beltsville, Maryland. A third sample was sent to Winchester, Kentucky. Mr. Weaver reported a number of successful grafts and I now have 16 grafts growing. I think so highly of this un-named find that I plan to use only these scions for all future grafting in my orchard.

The tree is extremely hardy. Although it stands in a frost pocket, it has never suffered any frost damage. The fruit is uniformly large in size, as large as Nanking, 16 green nuts weighing a pound. It is rich and beautiful in color, even when drying. The nut drops absolutely free from what appears to be a rather small burr. It ripens its fruit a few days later than Nanking and quite later than Abundance. What is extremely important, the tree does not drop burrs which are either only partly split open, or completely closed, which is so typical of the Nanking variety. The burrs are uniformly well filled, quite unlike the Abundance which is noted for numerous blank burrs. The flavor is delicious, as sweet as that of Nanking. And its fruit is smooth. There are no deep clefts in the fruit and the bitter pellicle readily peels off when fruit is boiled.

The consistent bearing quality, which is a must for any good variety, has yet to be established in the case of this tree. While it has not as yet set the heavy crops for which the Abundance and the Nanking are noted, its second crop was much heavier than its first one. Careful records will be kept of future crops and reported to the NNGA. The light crop which the tree is bearing this year can be explained by the very heavy and cold rains which fell daily over the entire pollenation period. Also, by the fact that many of my Abundance and Nanking trees have light crops this year, or none at all. It is hoped that this tree will set heavier and heavier crops as it grows older. But even if it does not, neither the Nanking nor the Abundance can produce more fruit. This is explained by the fact that both of these named varieties produce such large numbers of blank burrs, which sap the strength of the trees.

Jenny - *C. mollissima* - 82 grams (16.6 per lb)



Jenny – huge leaves



Emalyn's Purple – *C. mollissima* – 87 grams



Nuts are huge and pubescent with an appearance that is very similar to “Jenny”. Nuts drop mid -season. Nuts have good flavor with a nice level of sweetness. From left to right, 28 grams, 33 grams and 26 grams or 15.6 nuts per lb.

Emalyn's Purple – *Castanea mollissima*



Note the slight purplish tint to the nuts.

Nanjing Special – *Castanea mollissima*



- Nuts drop early continuing into mid-season. Superb flavor, one of the best tasting Chinese chestnuts I've eaten in the US. Only mildly sweet but with a complexity of flavor that is very rare. The tree is an erect grower. The nut color is dull brown and fades quickly and unevenly, so it is not a pretty nut after a few days of storage.

Nanjing Botanical Gardens - 1993



Kyoung – *Castanea mollissima* Kyoung is a true oddity, a sport from the Chinese variety Bess. Bess is not a very productive tree and produces irregularly shaped nuts of variable size. Kyoung on the other hand has regularly shaped nuts with consistent large size. Kyoung nuts also have better flavor. When grafted, Kyoung produces a vigorous and somewhat erect growing tree.



Kyoung - *Castanea mollissima*



Hong Kong - *Castanea mollissima*

The best seedling grown out from a group of nuts from Hong Kong. The nuts peel well and nut flavor is very good with nice sweetness. A favorite of Dr. Ken Hunt when he worked with chestnuts at the University of Missouri. Grafted trees at the University of Missouri show vigorous growth and good productivity of medium to large nuts with no signs of blight. Nut fall is mid-season. Nuts from the original tree are consistently large (~20-22 per lb).

Hong Kong – *Castanea mollissima*



Yixian Large - *Castanea mollissima*

Yixian Large - Produces a very large nut (13-16 per lb) with good flavor. This tree is from a grow-out of large nuts from Yixian, China, in the southern tip of Anhui Province. A grafted tree at the University of Missouri chestnut orchard in New Franklin produced the second largest nuts growing there in 2009. The only tree that produced larger nuts at New Franklin that year was Maraval, a Crenata x Sativa hybrid that produces notoriously large nuts. Yixian Large had 25.5 grams mean nut weight (18 per lb), versus Maraval which had 26.2 grams (17 per lb), Bouche de Betizac (22.8 grams), Marsol (22.6 grams), Marigoule (20.8 grams), Luvall's Monster (19.4 grams), Peach (18.1 grams), and Colossal (15.2 grams).

Yixian Large - *Castanea mollissima*

Photo courtesy of Dr. Hill Craddock, UTC



YGF - *Castanea mollissima*

YGF (Yixian Good Flavor) Produces a very flavorful, medium - large sized nut. The nuts drop over an extended period of time, from early in the season to late in the season. The tree is an erect grower. This tree originated from a grow-out of nuts from the chestnut growing region of Yixian, China, in the southern tip of Anhui Province. YGF has produced some of the larger Chinese nuts grown at the University of Missouri chestnut planting in New Franklin.

YGF size variation - 22.7 per lb & 15.6 per lb



Ness – *Castanea mollissima*

Large nuts with excellent flavor. Tree is small and spreading.



Payne - *Castanea mollissima*

Payne (Byron 3-3) was a tree growing in the old orchard at the Southeastern Fruit and Tree Nut Research Laboratory in Byron, Georgia. That orchard was pushed over in May 2014, but Payne can still be found in various nurseries and test plots. Payne produced the largest chestnuts of almost 300 chestnut trees at Byron. The nuts are very large (~18 per lb) and have good flavor. So far, grafted trees have not reproduced the size of the nuts on the original tree. The nuts drop mid-late season, the 4th week of September in Georgia. The tree is named for entomologist Dr. Jerry Payne who worked at the Byron research station for many years before retiring. He is responsible for the release of the gall wasp predators that eventually curbed the gall wasp infestations in Georgia and Alabama.

Payne trees being trialed in Tennessee

Photo courtesy of Dr. Hill Craddock, UTC.

'Payne'

UTC Chestnut Cultivar Trial Orchard, Oltewah, TN, 1 June 2017



Patterson – medium to large nuts, very sweet, on a spreading orchard type tree that is nonetheless very vigorous. Tree has interesting fat leaves.



Patterson – *Castanea mollissima*



Yolo Grande aka Serr – *C. mollissima/sativa*

Yolo Grande is a tree discovered by University of California Professor Eugene Serr. Dr. Serr was internationally known for his work with walnuts. He and Dr. Harold Forde led the walnut breeding program at the University of California for more than 20 years before Dr. Serr passed away in 1968. It is unknown where he found this chestnut tree, which he labeled as *Castanea mollissima*. He traveled throughout the US, as well as to Europe, Turkey, China and elsewhere, to meet with other nut crop researchers, so he might have found this tree almost anywhere. Despite his identification of the tree as *C. mollissima*, it appears to be a *mollissima/sativa* hybrid. The tree looks European. The nuts look like traditional European marronis, with visible striping as they age, but the nuts are denser than the average European nut as well as being much sweeter. The location of Serr's original tree is unknown. The old U. C. Davis chestnut orchard had a mature graft of Serr's tree until that orchard was pushed over in 2015. A few private collectors have kept this variety alive. The Davis tree was very productive and had very large nuts, in the range of 18-22 per lb. When cooked as a Chinese nut, the nuts have superb texture and flavor. It is unknown whether the tree has any blight resistance.

Yolo Grande aka Serr – *C. mollissima/sativa*

The tree flowers later than my Chinese trees and earlier than my European trees. Nut drop is also in between my Chinese and European trees.



Szego - Crenata/Pumila x Mollissima

Szego is a very complex hybrid, a seedling of the California hybrid Linden, which is predominantly Crenata/Pumila. The pollen parent of Szego may be the Dunstan hybrid chestnut, Revival. Szego is a very vigorous and erect tree. It grafts well on Chinese trees, Chinese hybrids, Japanese hybrids and European hybrids. It is a heavy pollen producer. Nuts are uniformly large (12-16 per lb), but easy peeling and fairly dense, much like a Chinese nut. Nuts are sweet and flavorful, generally with more flavor than pure Chinese nuts. The nuts drop mid season (2-3 weeks after Colossal) and store very well. The tree is resistant to phytophthora root rot. It does have some blight resistance but the extent is not yet known. It has been growing for more than nine years in many blighted areas without noticeable signs of blight. The tree is named after New York NNGA member Al Szego, who worked with many types of hybrid chestnuts before passing away in 1991. Mr. Szego was known for his generosity in providing others with nuts, scion wood and advice.

Szego - Crenata/Pumila x Mollissima



Szego – Crenata/Pumila x Mollissima

120 grams – 11.2 per lb

Very unique looking nuts



Szego flowers



Vigorous Szego grafts

Szego and Hong Kong grafts -15 weeks



Szego graft at end of first growing season



Szego – one year old graft

Nice size and form



Huge leaves



Szego grafts flowering

One year old graft



Three year old graft



Boitano (aka Fife) - *Castanea sativa*

- Boitano (aka Fife) is a pure European chestnut tree planted in Washington state by Italian-American Angelo Boitano. I found the nuts being sold at the Pike Place Market in Seattle years ago. Eventually some chestnut enthusiasts headed by Harvey Correia tracked down the owner of the original tree which is located in Fife, Washington. The nuts are very large (15-18 per lb), very dark - almost black, peel very well, and have very good flavor. The nuts mature in Fife, WA in mid October. The tree does not produce pollen. Although the nuts are very high quality we have yet to see any grafted trees reproduce the size of the original nuts.

Boitano - Castanea sativa



Gillet - *Castanea sativa* x *crenata*

Probably a seedling of the cultivar "Nevada" (which is possibly a seedling of the old French cultivar Comballe), Gillet was planted by Bob Bergantz in a small orchard in the Sierra Nevada foothills. This compact orchard type tree produces pollen and large crops of huge single embryo nuts (10-12 per lb) that peel easily. The nuts drop mid-season (3 weeks after Colossal). They store very well. The nuts drop free from relatively compact burs. The nuts have a basic European chestnut flavor that sweetens with storage. The tree grafts well on almost anything and is extremely vigorous. Seedlings have been very vigorous also. It has survived -27F in Michigan with no damage. It is named after Felix Gillet, the 19th century French born nurseryman who started the Barren Hill Nursery in 1869 in Nevada City, California.

Gillet - nuts from a 16 month old graft



Gillet – large nuts - 210 grams (8.6 per lb)



Gillet - smallest nuts - 112 grams (16.2 per lb)



Gillet nuts – Tree flowered for the 2nd time in late Sept. or early October 2016 - nuts dropped on or before 12-5-16.



Gillet flowering



Gillet grafted on *Castanea mollissima*

6 weeks



3 years



Bergantz - *Castanea sativa* x *crenata*

This is another tree planted by Bob Bergantz in the Sierra Nevada foothills that may also be a seedling of the cultivar "Nevada". This tall tree produces very large nuts (12-14 per lb) that peel easily and have very good flavor. The nuts fall mid-season (2 weeks after Colossal). The tree does not produce pollen. The tree is named after Bob Bergantz, who resided in Oregon and Placerville, California in his later years, before passing away in 2001. Mr. Bergantz popularized the Colossal, Nevada, Linden, and Silverleaf cultivars. He planted hundreds of chestnut trees in California and Oregon and provided hundreds of trees and seed nuts to others.

Bergantz - 260 grams (10.6 per lb)



Bergantz - 40, 42, 42, and 40 grams (11 per lb)



Other interesting new cultivars - hybrids

Castanea sativa/crenata

Torakuri – huge, very tasty nuts that drop very late.

Kaibutsu – huge, very tasty nuts that drop early.

Harrods' seedling – large, very tasty nuts that drop late.

Castanea sativa x mollissima

Nevada x Qing

Castanea crenata x mollissima

Schlarbaum – huge nuts that drop mid-season.

Complex hybrids

Small Surprise/Sweet Surprise – naturalized seedling of Bisalta #3 or Yolo Grande. Easy peeling and extremely tasty nuts.

Pandora - (C. mollissima x C. Sequin) x Burbank Stump Sprout. Medium size nuts with great flavor.

Double Sweet – (C. dentata x c. sativa) x c. mollissima. Very sweet, medium size nuts.

Ace – American, Chinese and European genetics. Easy peeling Chinese type nut with good flavor.

Kaiju – primarily C. crenata. Huge nuts.

Torakuri (Tiger chestnut)



Torakuri - 44, 42, 42 and 40 grams (10.8 per lb)



Kaibutsu (Monster)



Kaibutsu - 144 grams (9.5 per lb)



Kaibutsu



Harrods' seedling - *C. sativa/crenata*

Large, pretty nuts

13.2 per lb



Nevada x Qing - from Harvey Correia



Schlarbaum - *Castanea crenata* x *mollissima*



Schlarbaum - 104 grams (13 per lb)



Schlarbaum bur



Schlarbaum nut stored for 2 years



**Sweet Surprise/Small Surprise - OP seedling of
Bisalta #3 or Yolo Grande. Pollen parent may be Qing.**



**Pandora - (C. mollissima x C. seguinii) x
Burbank Stump Sprout**



**Double Sweet - (C. dentata x c. sativa) x c.
mollisima**



Ace – complex hybrid



Kaiju (strange beast)

The meanest looking burs I've ever seen.

Large nuts peel well and have good flavor.



Other interesting new cultivars - *C. mollissima*

YuYu - seedling of Chinese cultivar Yu

Yixian Orange - seedling grown out from nuts from Yixian, China

Burnt Umber - seedling of Chinese cultivar Duanza

Liddington seedling – second generation Sleeping Giant seedling

Brown Sugar – seedling of Dunstan Revival. Very vigorous. Pollen parent was probably Qing.

Shing - seedling grown out from nuts from Yixian, China. Very vigorous tree. May be a sibling of Yixian Large.

Liu Liu Dwarf #1 - seedling of "Jiandingyouli" (Sharp top oily)

Liu Liu Dwarf #2 - Probable seedling of "Jiujiazhong" (Nine families)

Red ABC - seedling of Nanjing Botanical Garden's "Honglizi" (Red chestnut). Very vigorous tree.

YuYu - 72 grams (18.9 per lb)



Yixian Orange



Burnt Umber - 67 grams (20.4 per lb)



Liddington seedling - 107 Grams (25.5 per lb)



Brown Sugar - 68 grams (20 per lb)



Red ABC



Other interesting trees - Byron, Georgia

USDA Southeastern Fruit and Tree Nut Research Laboratory - *Castanea mollissima* trees:

Older orchard - pushed over May 2014

Rows are numbered north to south. Individual trees are numbered west to east

Kintzel (Byron 1-1 and 1-2)

Schuncke (Byron 1-7) – very sweet nuts

Nye (Byron 1-13)

Boneham (Byron 1-16)

Rose - (Byron 1-20) – smaller tree with high quality nuts

Shexian (Byron 1-21)

Yunnan (Byron 1-26)

Viani (Byron 2-8)

Kunming (Byron 2-25)

Big Red (Byron 3-18) – large, red, somewhat flattened, nuts with good flavor

Shandong (Byron 4-2) – huge nuts with good flavor

Jiangsu (Byron 4-4)

Jinling (Byron 4-18) – seedling of Nanking with better nuts

Younger orchard - pushed over by 2002

Musella (Byron 40) – heavily productive tree, medium size very dense nuts

LaGrange (Byron 43) – heavily productive tree, medium size very dense nuts

Byron (Byron 67) – large nuts

Perry (Byron 93) – good looking tree with good productivity and good quality medium – large nuts

Underutilized or little known older cultivars

Complex hybrids

Luvall's Monster - (*C. crenata* x *C. dentata*) x *C. mollissima* tree with large nuts grown by the late Verne Luvall in Galesburg, Illinois.

Linden – A predominantly *C. crenata* x *C. pumila* hybrid growing in an orchard in Linden, California. The female parent of Szego.

Burbank Stump Sprout – Was one of the few remaining trees bred by Luther Burbank. This tree was growing in a senior citizens community next to the old Luther Burbank Gold Ridge Farm in Sebastopol, California but has now been cut down. There are perhaps a dozen other remaining Burbank trees in this same area but this tree had the best quality nuts. I still have small grafts of it.

C. mollissima

Kintzel (Byron 1-1 and Byron 1-2) – Tree discovered by NNGA member Frank Kintzel of Cincinnati, OH.

W.C. – Named for W. C. Donoho of Louisville, KY, a member of the Kentucky Nut Growers Association. Large dark nuts that are sweet and store well. Tree may be a sibling to Qing. Nuts look very similar to Qing, have similar size and similar sweetness – may even be sweeter. Tree is more vigorous than Qing and may graft more easily.

C. sativa x *C. crenata*

Bisalta #2 – an Italian cultivar rarely grown in the US, better than the more common Bisalta #3.

C. sativa at the USDA, ARS, National Clonal Germplasm Repository, Davis CA 95616

Marrone Comballe - from France

Marrone di Chiusa Pesio - from Italy

Marrone di Marradi - from Italy

De Coppi Marrone - from Australia, but may be the Italian cultivar Marrone di Val di Susa.

Underutilized cultivars - Luvall's Monster



Underutilized cultivars - Linden – *C. crenata/pumila*



Underutilized cultivars – Burbank Stump Sprout

The best remaining Burbank tree at his old farm in Sebastopol until cut down a few years ago because it was dropping too many nuts.



W.C. (left) vs Qing – siblings?



Underutilized cultivars – Bisalta #2



Nurseries that may stock some of these cultivars

- **Burnt Ridge Nursery**
432 Burnt Ridge Road, Onalaska, WA 98570 (360) 985-2873
- **Empire Chestnut Company**
3276 Empire Rd SW, Carrollton, OH 44615 (330) 627-3181
- **Forrest Keeling Nursery**
88 Forrest Keeling Lane, Elsberry, MO 63343 (573) 898-5571
- **Rolling River Nursery**
PO Box 332, Orleans, CA 95556 (530) 627-3120
- **Washington Chestnut Company**
6160 Everson Goshen Rd., Everson, WA 98247 (360) 966-7158

Anny's Summer Red Chestnut



New Korean red chestnut Jahong

HortScience 49(12):1590–1594 2014

'Jahong': A New Indigenous Korean Chestnut Cultivar with Reddish Burrs

Mahn-Sik Kim, Un Lee, and Young Park¹
¹Department of Forest Genetic Resources, Korea Forest Research Institute,
38, Oryong-dong, Goseong-si, Gyeongsang-do, Korea

Additional index words: *Castanea coccinea*, *Castanea*, 'Jahong', nut characteristics, nutlet size

The 'Jahong' chestnut (*Castanea coccinea* Nutt.) & *C. sativa* (L.) var. *orientalis* (L.) Miller cultivar was developed from natural hybrid chestnuts found in the Korean Forest Research Institute (KFRI) in developing cultivars with desirable nut characteristics such as high resistance, easy peeling, and a hard burr in 2005. The cultivar was first selected from a natural population in 2003, and the performance and heredity were investigated from 2004 to 2007. 'Jahong' is a medium-growing cultivar with nutlets free from burr from any three cotyledons between the left and mid major bud-eyes, with an average nut weight of 10.0 g. The nutlet size is 10.0 mm × 10.0 mm × 10.0 mm, which is 1.5 times higher than those of commercial cultivars. 'Jahong' is a suitable cultivar for either raw nut or nutting because nutlet characteristics are high, including the higher than those of commercial cultivars. 'Jahong' is also suitable as a precursor for the improvement of nut quality such as resistance and peeling intensity.

Index

The 'Jahong' (*Castanea coccinea* Nutt.) & *C. sativa* (L.) var. *orientalis* (L.) Miller chestnut was selected in 2003 from indigenous natural hybrid chestnuts found in the Korean Forest Research Institute (KFRI) in developing cultivars for its superior nut quality and resistant chestnut burr. Since 2007, the cultivar has produced several times the yield per hectare compared to the existing major and late harvest cultivars in chestnut high altitude.

Development and Performance

The indigenous population and natural hybrid chestnuts were first found for candidates for developing cultivars in 2003 from 2003 to 25 regions of the province in the Republic of Korea. After screening, the tree with red-burr chestnuts has superior nut quality and resistance to chestnut blight and anthracnose. Long-term performance evaluation of the cultivar was first propagated in the experiment station

Received 09 September 2014; July 2014. Accepted for publication 11 October 2014.
This article reports results for different nut characteristics.

1590

in the Department of the KFRI in 2003. We investigated morphological characteristics such as burr, chestnut burr, resistance to blight and pest/disease characteristics such as leaf blight, fire blight, and so on during 4 to 8 years. The chestnuts are characterized by a high resistance (10% or greater) and a hard burr.

The 'Jahong' chestnut was first selected in 2003 from a natural population in 2003, and the performance and heredity were investigated from 2004 to 2007. 'Jahong' is a medium-growing cultivar with nutlets free from burr from any three cotyledons between the left and mid major bud-eyes, with an average nut weight of 10.0 g. The nutlet size is 10.0 mm × 10.0 mm × 10.0 mm, which is 1.5 times higher than those of commercial cultivars. 'Jahong' is a suitable cultivar for either raw nut or nutting because nutlet characteristics are high, including the higher than those of commercial cultivars. 'Jahong' is also suitable as a precursor for the improvement of nut quality such as resistance and peeling intensity.

in the Department of the KFRI in 2003. We investigated morphological characteristics such as burr, chestnut burr, resistance to blight and pest/disease characteristics such as leaf blight, fire blight, and so on during 4 to 8 years. The chestnuts are characterized by a high resistance (10% or greater) and a hard burr. The chestnut was first selected in 2003 from a natural population in 2003, and the performance and heredity were investigated from 2004 to 2007. 'Jahong' is a medium-growing cultivar with nutlets free from burr from any three cotyledons between the left and mid major bud-eyes, with an average nut weight of 10.0 g. The nutlet size is 10.0 mm × 10.0 mm × 10.0 mm, which is 1.5 times higher than those of commercial cultivars. 'Jahong' is a suitable cultivar for either raw nut or nutting because nutlet characteristics are high, including the higher than those of commercial cultivars. 'Jahong' is also suitable as a precursor for the improvement of nut quality such as resistance and peeling intensity.

Index

The 'Jahong' (*Castanea coccinea* Nutt.) & *C. sativa* (L.) var. *orientalis* (L.) Miller chestnut was selected in 2003 from indigenous natural hybrid chestnuts found in the Korean Forest Research Institute (KFRI) in developing cultivars for its superior nut quality and resistant chestnut burr. Since 2007, the cultivar has produced several times the yield per hectare compared to the existing major and late harvest cultivars in chestnut high altitude.

Development and Performance

The indigenous population and natural hybrid chestnuts were first found for candidates for developing cultivars in 2003 from 2003 to 25 regions of the province in the Republic of Korea. After screening, the tree with red-burr chestnuts has superior nut quality and resistance to chestnut blight and anthracnose. Long-term performance evaluation of the cultivar was first propagated in the experiment station

Received 09 September 2014; July 2014. Accepted for publication 11 October 2014.
This article reports results for different nut characteristics.

1590

HortScience 49(12):1590–1594 2014



Fig. 1. Performance of 'Jahong' and production of red-burr chestnuts.