

Hybrid Hazelnut

Growth Features:

Tolerates wide range of pH 6.0-8.0. 55% oil content by variety; 10-20% protein; 2-4% minerals. Only need 24" of usable soil to see low-no growth and production decline.

Production and Processing Advantages:

Short duration to good productivity of 6 years. Cracking can be done by sorted batch rather than individually. No immediate post harvest processing; husking can be done at leisure in bulk. Harvested mid-September before most staple crops need to be harvested for winter.

Production and Processing Disadvantages:

Bush form makes management against perennial weeds difficult. Grazing isn't an option except for with hogs. Stems and leaves are preferred deer and rabbit food. Requires sorter to size nuts. Fire managed understory may cause stem dieback. Coppicing requires a lot of work and yields poles that are not that useful in-mass.

Food Features:

High oil content good for pressing; 365F smoke point oil; high oleic acid content. 1:1:4 carb:protein:fat. Oil pressing with shell in the KK20 requires 55+% kernel percent so cracking and picking out some shells before pressing is necessary (I need to test this but this is extrapolated from hickory pressing).

Excels in:

- Hazelnut Butter
- Pairing with persimmon leather and raisins
 - Hazel and shattered persimmon pairing won third place in tastings
- On top of persimmon pudding

Benchmarks for a Good Hazel Bush:

Short-Medium stature: *Less than 10 ft mature on fertile ground*

Low husk ratio: *(In-shell Nut weight) / (Freshly harvested nut in husk weight average when just ripened) Less than 3*

High Kernel Weight: *At least 0.7g average*

Good flavor: *No bitterness to the kernel. Sweet flavor by itself raw.*

Good Fill: *No more than 10% empty nuts even on bad years*

High productivity: *The bush should be loaded*

Low pellicle adhesion: *the kernel should be mostly free of the pellicle*

Great Extraction: *When the nut is cracked, the kernel should have not be crammed in the shell and should fall out freely without picking at the kernel*

Great Threshing: *The nuts should fall free from the husk quite easily. Many should have been released after drying before threshing while in the drying bag. Almost all ripe nuts should have been released after a threshing dance or two.*

Kernel Color: *We should not select for white kernels. I have encountered hazels with distinctly yellow kernels and although this may make fungal issues harder to detect, I believe these will carry more vitamin A.*

Notable Varieties:

See variety list for my recent selections:

Dawn - By Z's

The Beast - 1.16g, 44% kernel. 25% American, 75% Euro. 3-4 nuts/cluster. Pollen Alleles of 8 & 23. Probably hardy in zone 4. 85% fall free of husk at harvest time. Not bud mite resistant in Paul R's experience

Grand Traverse - Euro x Turkish. 1.3g, 40% kernel. Pollen 11 & 25. Matures September

NITKA - 1.1g, 53% Kernel. Mid season pollenZ's Nutty Ridge selection. 2-5 Nuts/cluster.

Central new york ready late Aug/Early Sept. Hardy 4a. Selected as best from 6000 badgerset seedlings

Rush - At hershey's. Almost all hybrids today are a descendant of rush according to Tom Mohlner.

Hand Fats PPAF - Zone 3b, 0.8g, 42% kernel

ShepRosy PPAF - Zone 3b, 0.77g, 42% kernel

Grimo selection - Andrew, Aldara, Marion, Frank, Northern Blais Maybe hardy?

Fred Blenkinship's "Front Door Hazelnut" is very large and good.

Truxton - 5b or warmer

John Gordon - His hazel clones did terrible in MN even in normal winters and are not worth growing in the mid north

Slate and aldera - tall hybrids doing well at Paul R's

Seedlings are planted, then chopped if bad, then stems are layered into gaps from quality seedlings. Culling of 50% or more is recommended.

Table 5. Hazelnuts.

Exhibitor	State	Tree ID or Cultivar	Nut Weight	Kernel Weight	Percent Kernel	Score	Placing
Cecil Farris	MI	89-AR	2.80	1.40	50.00	454.55	1
Cecil Farris	MI	87 BA	3.30	1.40	42.42	424.20	2
Cecil Farris	MI	81 C	2.80	1.40	50.00	416.60	3
R. D. Yoder	OH	Yoder HYB	3.82	1.50	39.27	392.70	4
Cecil Farris	MI	88 BHF	3.00	1.40	46.66	388.83	5
Cecil Farris	MI	89 X	2.80	1.30	46.43	386.92	6
W.J. Schildgren	WA	56	3.30	1.40	42.42	385.64	7
Cecil Farris	MI	88 BN	2.70	1.20	44.44	370.33	8
Cecil Farris	MI	89 J	2.50	1.10	44.00	366.66	9
W.J. Schildgren	WA	00	3.60	1.40	38.89	353.54	10
Cecil Farris	MI	GTO-1	2.98	1.20	40.27	335.58	11
Cecil Farris	MI	89 F	2.40	1.20	50.00	333.33	12
Tucker Hill	PA	English	4.10	1.50	36.59	332.64	13
S. L. Grinnell	MI	185-4-1 H	3.70	1.60	43.24	332.62	14
W.J. Schildgren	WA	32	3.60	1.40	38.89	324.10	15
Cecil Farris	MI	88 NE	2.40	1.00	41.67	320.53	16
S. L. Grinnell	MI	89-15-2 H	2.60	1.00	38.46	320.50	17
W.J. Schildgren	WA	57	4.40	1.40	31.82	318.20	18
W.J. Schildgren	WA	64	3.30	1.20	36.36	303.00	19
W.J. Schildgren	WA	42	4.30	1.40	32.56	296.00	20
Tucker Hill	PA	Duchille	2.80	1.00	35.71	238.06	21
W.J. Schildgren	WA	34	3.60	1.00	27.78	231.50	22
Cyril Bish	NE	Lancaster1	2.60	0.70	26.92	207.00	23
S. L. Grinnell	MI	88-7-1 H	2.70	0.80	29.63	197.53	24
Howard Read		84 Packet	2.50	1.00	30.40	178.82	25
Cecil Farris	MI	E-2	1.50	0.30	20.00	142.85	26
Univ. Nebraska	NE	Meade #1	1.80	0.30	16.66	75.73	27
Univ. Nebraska	NE	Winkler	1.60	0.20	12.50	59.50	28
Univ. Nebraska	NE	Winkler	2.00	0.20	10.00	55.55	29
Univ. Nebraska	NE	Winkler	1.80	0.20	11.10	52.83	30
E.J. Ulrich	OK	C. americana	1.90	0.60	31.58	175.40	1
E.L. Hall	IL	C. americana	3.10	0.60	19.35	107.50	2

Breeding Goals:

Dried nuts should separate from the hulls easily, large nuts, good flavor.

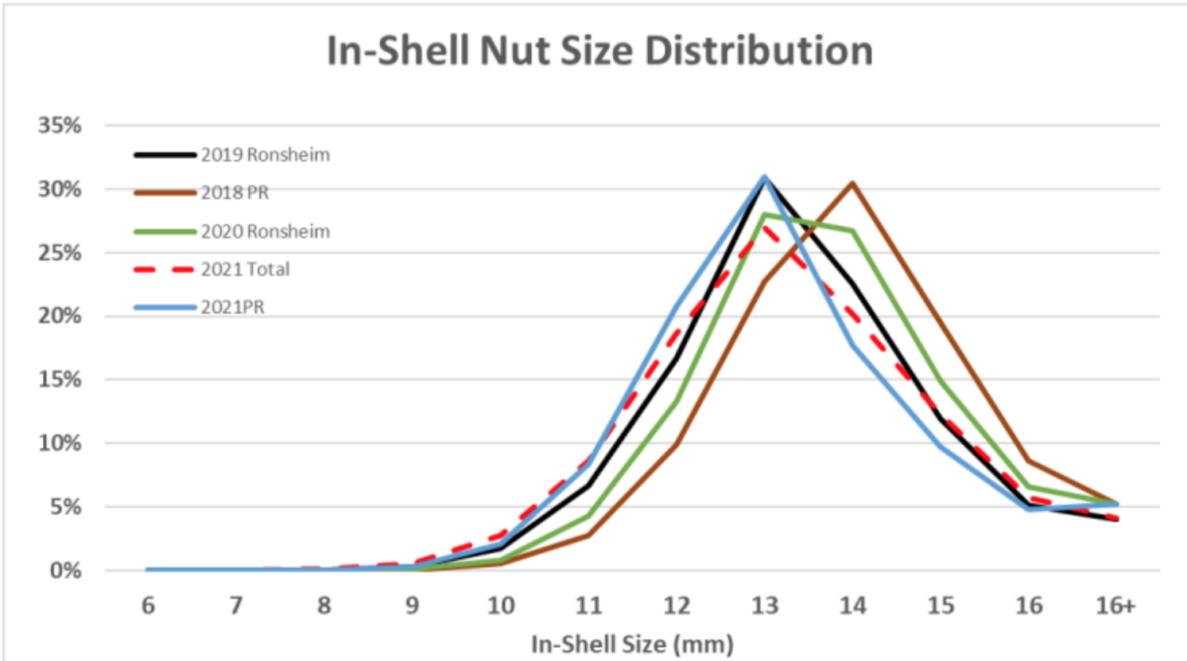
A-Sexual Propagation:

See Mound Layer UMHDI reference on cloned on this website.

Hypocotyl grafting and subsequent layering can be done: Graft to etiolated nut sprouts, callus in light and de-sucker, initiate scion growth in light but plant below soil surface to get fleshy growth in the dark which will later root without rooting hormone; this works well on the same varieties that root well in layering.

General Info:

Nut size distributions from a mostly seedling 2008 badgersett population in WI:



Theoretical Kernel % = 35% for sdlg populations

Actual Kernel % = 30%

Commercial processing yield = 78%

Kernel Split % commercial = 15%

Kernel Loss = 7%

salable kernel percent from in-shell = 23%