

Variety Performance in On-Farm Organic Trials, 2011-2012

YOU ARE THE BEST VARIETY TRIALER FOR **YOUR** FARM – READ THIS TO UNDERSTAND WHY:

These results are drawn from organic on-farm trials in Wisconsin. Trials were run on 6 farms in 2011 and 7 farms in 2012. These farms were in different regions of Wisconsin, and differed for many factors including soil type, cropping history, and crop management. *Some varieties deviated from the average performance shown below, on certain farms.*

The first set of tables show total and marketable yield (in cwt/A = hundred- weight per acre. Hundred-weight = 100 pounds). Please refer to the “Significance Group (marketable yield)” column. The letters in the Significance Group column show which varieties performed significantly differently for marketable yield, ON AVERAGE. If varieties are followed by the same letter, they did not differ significantly on average. You can only compare marketable yields within the same group – the same market class, grown in the same year. We defined a significant difference (statistically) as meaning that we would expect to see this difference 19 times out of 20 ($\alpha = 0.05$). So – your results may not be the same as those found here, but we hope that this will help you to choose a “short list” of varieties to try out on your farm. Happy trialing!

The second set of tables show the major causes for tubers to be culled, for each variety, in 2012. Use this as a guide to which varieties have significant problems with particular surface defects. The figures shown are the *percentage* of plots for which a given tuber defect was a major cause of culling. For most varieties, there were 13 plots total (across 7 farms).

If you would like to be involved in continuing variety trials on your farm, or just to stay in touch and hear about our work, please send an email to rkgenger@wisc.edu. Or visit us at <http://labs.russell.wisc.edu/organic-seed-potato/>

G(R)O(W) POTATOES!

Class	Year	Variety	Total yield (cwt/A)	Marketable yield (cwt/A)	Signif. Group (marketable yield)
Red	2011	Chieftain	375.4	274.1	A
		Red Maria	281.5	222.5	AB
		Reddale	305.8	221.3	AB
		Colorado Rose	217.7	170.0	BC
		Dark Red Norland	190.7	161.3	BC
		Rio Colorado	269.3	185.7	BC
		Sangre	259.1	189.4	BC
		Desiree	194.8	131.8	c
		NorDonna	145.6	125.3	c
		Chieftain	231.9	115.2	a
Red	2012	Dark Red Norland	173.9	108.7	a
		Colorado Rose	122.4	84.0	ab
		Desiree	134.6	77.5	ab
		Red Maria	157.7	90.2	ab
		Redsen	142.0	94.5	ab
		Sangre	131.3	67.3	ab
		Red Gold	75.1	44.2	bc
		Red Sunset	42.6	0.0	c

Class	Year	Variety	Total yield (cwt/A)	Marketable yield (cwt/A)	Signif. Group (marketable yield)		
Yellow	2011	Keuka Gold	258.1	207.6	A		
		Satina	228.6	189.7	AB		
		Bintje	271.4	181.3	ABC		
		German Butterball	185.2	164.0	ABC		
		Daisy Gold	166.4	138.6	BC		
		Yukon Gem	162.6	143.6	BC		
		Yukon Gold	165.6	121.3	c		
		Yellow	2012	Spartan Splash	184.7	154.5	a
				Satina	197.9	135.8	ab
				Anuschka	138.6	107.7	abc
German Butterball	145.4			111.0	abc		
Allegria	193.0	98.2	abcd				
Bintje	183.9	89.7	bcd				
Keuka Gold	162.5	93.1	bcd				
Yukon Gold	126.4	78.5	cd				
Cherokee	83.9	42.0	de				
Sieglinde	46.2	18.0	e				

Class	Year	Variety	Total yield (cwt/A)	Marketable yield (cwt/A)	Signif. Group (marketable yield)
Fingerling	2011	Papa Cacho	182.6	124.5	A
		Red Thumb	179.5	135.2	A
		French Fingerling	183.7	115.4	AB
		Austrian Crescent	125.8	87.6	BC
		Russian Banana	101.3	71.1	CD
		Rose Finn Apple	73.2	45.9	D
Fingerling	2012	Red Thumb	130.9	102.0	a
		Papa Cacho	120.6	74.4	ab
		Russian Banana	82.2	59.5	b
		French Fingerling	78.1	43.7	bc
		Rose Finn Apple	41.2	13.7	c

Class	Year	Variety	Total yield (cwt/A)	Marketable yield (cwt/A)	Signif. Group (marketable yield)
Specialty	2011	Adirondack Blue	183.9	148.0	A
		Adirondack Red	200.0	145.1	A
		Caribe	244.9	164.1	A
		Purple Majesty	137.2	102.0	A
		Purple Viking	175.1	128.1	A
Specialty	2012	Adirondack Blue	170.9	116.5	a
		Adirondack Red	143.2	69.3	ab
		Caribe	184.5	84.1	ab
		Purple Majesty	164.5	97.8	ab
		Purple Viking	113.9	62.2	b

Class	Year	Variety	Total yield (cwt/A)	Marketable yield (cwt/A)	Signif. Group (marketable yield)
Russet	2011	Freedom Russet	305.1	259.3	A
		Goldrush	192.5	168.8	B
Russet	2012	Freedom Russet	215.1	145.7	a
		Goldrush	165.9	119.2	ab
		Canela	129.3	92.0	bc
		Premier Russet	125.1	70.2	c

Class	Year	Variety	Total yield (cwt/A)	Marketable yield (cwt/A)	Signif. Group (marketable yield)
White	2011	Green Mountain	347.1	252.6	A
		Kennebec	335.2	250.9	A
		Langlade	306.3	247.6	A
		Irish Cobbler	175.4	128.6	B
		Superior	132.4	119.5	B
White	2012	Langlade	239.2	179.2	a
		Kennebec	219.2	124.5	b
		Superior	154.1	118.9	b
		Green Mountain	203.5	90.9	bc
		Irish Cobbler	149.2	80.3	c

Major cull causes

	Variety	Common scab	Black scurf	Silver scurf	Green ends	Growth Cracks	Shape	Skin set	Size	Soft rot
RED	Chieftain	50%	50%	50%	0%	8%	42%	33%	0%	14%
	Colorado Rose	42%	50%	42%	0%	0%	25%	8%	0%	14%
	Dark Red Norland	42%	17%	83%	8%	8%	33%	8%	0%	0%
	Desiree	73%	27%	27%	0%	0%	64%	36%	0%	17%
	Red Gold	42%	92%	8%	0%	0%	25%	0%	0%	0%
	Redsen	92%	25%	42%	0%	58%	17%	8%	0%	0%
	Red Maria	92%	25%	0%	8%	50%	0%	33%	0%	0%
	Sangre	42%	50%	58%	0%	17%	33%	33%	0%	14%
	Anuschka	50%	58%	33%	17%	0%	42%	0%	0%	0%
	Bintje	67%	75%	0%	0%	8%	83%	33%	42%	43%
YELLOW	Cherokee	75%	0%	0%	8%	0%	58%	0%	33%	14%
	German Butterball	33%	75%	0%	8%	0%	50%	0%	0%	0%
	Keuka Gold	83%	33%	0%	8%	17%	25%	17%	0%	14%
	Sieglinde	22%	33%	0%	0%	0%	11%	0%	0%	29%
	Satina	75%	50%	0%	8%	0%	42%	33%	0%	14%
	Spartan Splash	8%	25%	8%	8%	0%	50%	17%	0%	29%
	Yukon Gold	92%	33%	0%	8%	0%	0%	0%	0%	0%
FINGERLING	French Fingerling	33%	75%	0%	0%	42%	8%	33%	0%	0%
	Papa Cacho	64%	0%	9%	55%	0%	55%	0%	0%	83%
	Russian Banana	42%	100%	0%	75%	0%	8%	0%	0%	0%
	Rose Finn Apple	17%	100%	0%	8%	0%	100%	0%	0%	0%
	Red Thumb	33%	25%	42%	8%	0%	33%	0%	0%	0%

Major cull causes

	Variety	Common scab	Black scurf	Silver scurf	Green ends	Growth Cracks	Shape	Skin set	Size	Soft rot
SPECIALTY	Adirondack Blue	17%	17%	92%	0%	0%	50%	0%	0%	14%
	Adirondack Red	92%	33%	92%	8%	0%	33%	0%	0%	14%
	Caribe	42%	17%	67%	0%	25%	17%	0%	0%	0%
	Purple Majesty	42%	17%	92%	0%	8%	42%	25%	0%	0%
	Purple Viking	42%	25%	50%	0%	50%	0%	33%	0%	14%
RUSSET	Canela	17%	42%	0%	0%	0%	58%	33%	8%	14%
	Freedom Russet	17%	8%	0%	0%	17%	92%	33%	17%	14%
	Goldrush	0%	17%	0%	0%	0%	92%	0%	25%	14%
	Premier Russet	25%	0%	42%	0%	17%	92%	33%	0%	0%
WHITE	Green Mountain	100%	17%	0%	25%	0%	58%	33%	0%	0%
	Irish Cobbler	67%	25%	25%	0%	0%	83%	33%	0%	14%
	Kennebec	83%	17%	8%	67%	25%	50%	33%	0%	0%
	Langlade	33%	25%	0%	42%	8%	50%	33%	0%	0%
	Superior	58%	50%	0%	0%	25%	50%	0%	0%	0%