



Evaluation of Performance & Yield of Irish Potato Varieties for North Louisiana

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Introduction:

Irish potatoes come in many shapes, sizes, colors, textures & flavors, and are a staple of any nutritious, healthy eating lifestyle. They can also be very easy to grow & quite productive. This study was established to evaluate how well Irish potatoes perform in North Louisiana, in the hopes to encourage more people to add this crop to their spring and fall gardens.

Objective:

Determine performance and yield of several types & varieties of Irish potatoes grown in North Louisiana.

Materials & Methods:

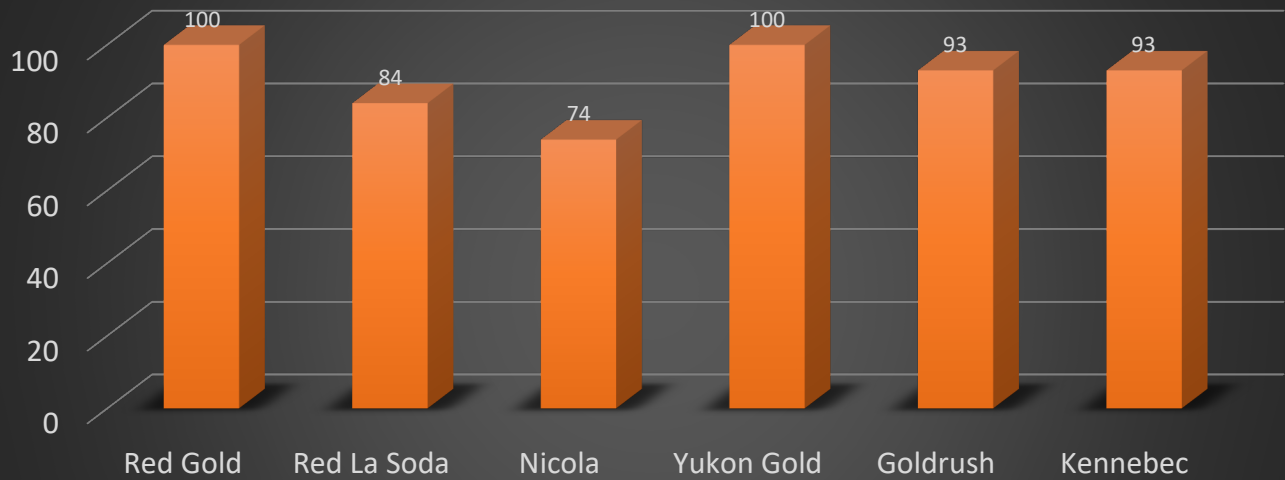
The trial area was established in the Sheep Pasture at the Northeast Research Station in St. Joseph, La. Potato varieties were selected according to 3 subgroups: red, yellow, & russet. 2 varieties were selected for each subgroup, 1 standard and 1 comparison. The seed potato was ordered from Gurneys and planted as it was received (some were on back order and came after the recommended planting date). The seed potatoes were cut into 1" pieces and stored in a cool, dry, dark place for 1-3 DBP to allow flesh to scar over. Seed pieces were planted at a depth of 4" and spaced 12" apart on tilled wide beds 6.33' x 30'. 12-5-7 fertilizer was incorporated at planting and applied side dressed on 4-21-21. Satellite Hydrocap was applied at 2 pt/A after planting as a pre-emergent for weeds. Roundup Powermax was applied as a spot treatment on 5-3-21. Potatoes were harvested on 6-11-21 and then counted, graded, and weighed. No major damage, rot or irregularities were observed. Data was collected and put into table and chart form to illustrate how each variety performed according to # of roots, lbs. of yield, maturity, and late planting.

Recommended planting date for Irish potatoes in North LA: 2/15-3/10

DTM-Days to maturity

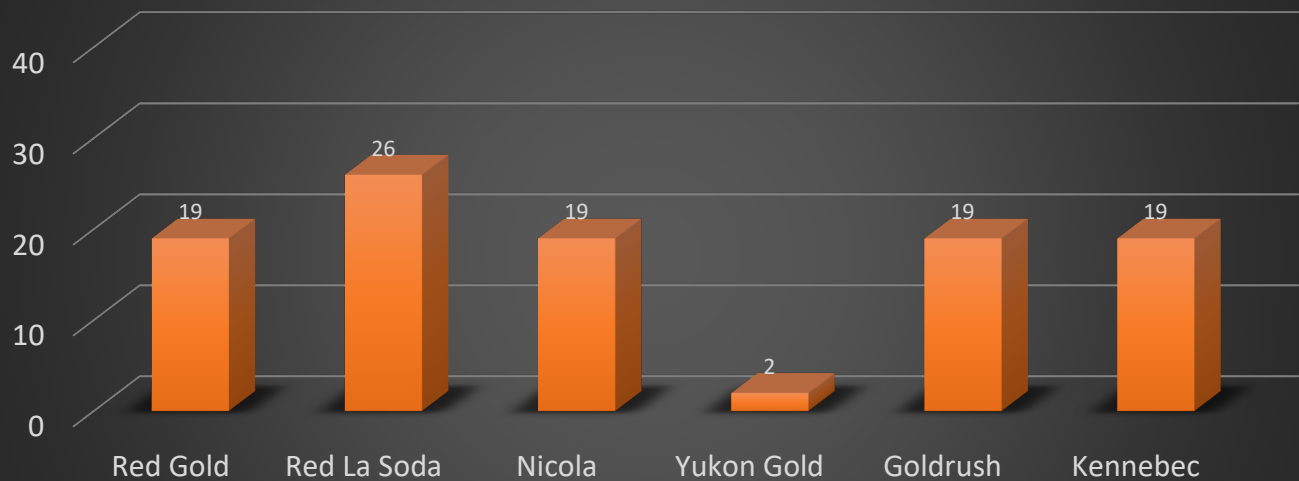
Type:	Variety:	Late planting (# of days)	% maturity @ harvest	Total # of Roots	Total Yield lb/30' row	% of Total Roots		% of Total Yield	
						Marketable	Canners	Marketable	Canners
RED	Red Gold 70 DTM	19	100	80	13.25	25	75	34	66
	Red La Soda 80-100 DTM	26	84	31	2.54	0	100	0	100
YELLOW	Nicola 100-130 DTM	19	74	210	7.792	1	99	5	95
	Yukon Gold 60-80 DTM	2	100	96	18.476	33	67	50	50
RUSSET	Goldrush 80-100 DTM	19	93	102	7.954	5	95	13	87
	Kennebec 80-100 DTM	19	93	58	4.088	7	93	18	82

% Maturity at harvest



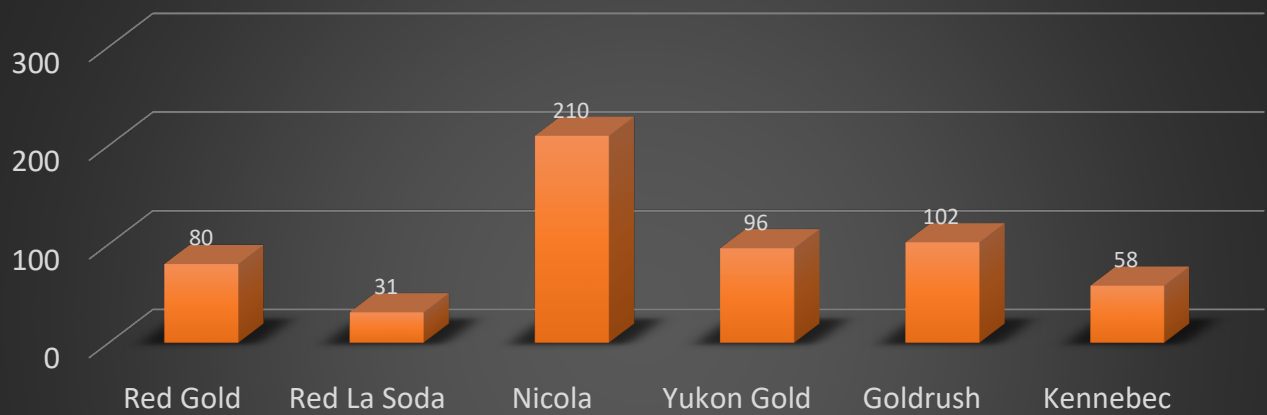
- Yukon Gold and Red Gold were both harvested at full maturity, followed closely by the russet types at 93%.
- Nicola was harvested the earliest at 74% maturity followed by Red La Soda.

Days beyond recommended planting date



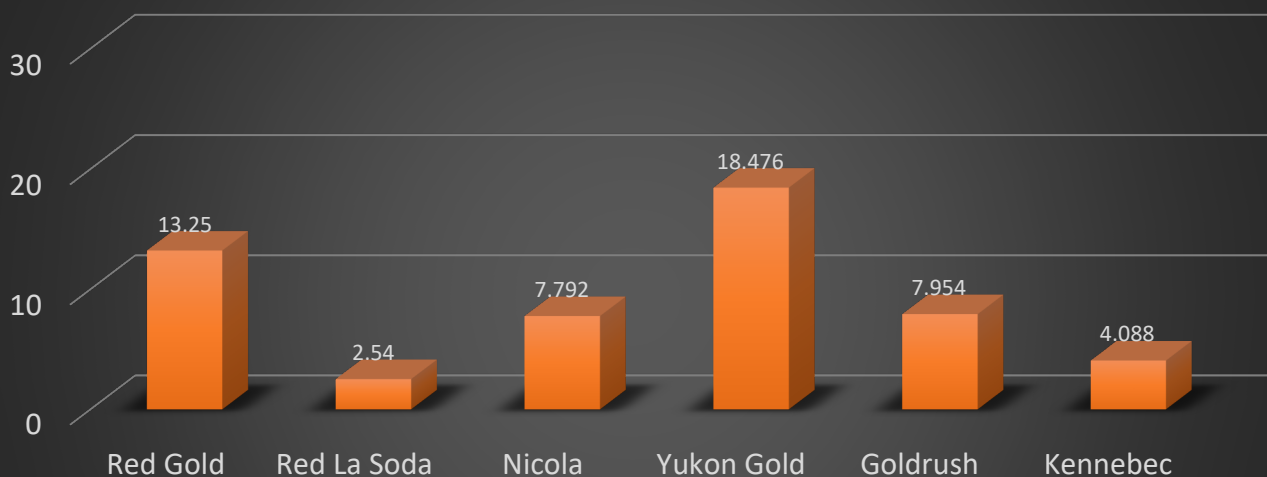
- Yukon Gold was planted relatively on-time, followed by Goldrush, Kennebec & Red Gold all planted nearly 3 weeks past the recommended date.
- Red La Soda was planted the latest, at nearly 1 month past the recommended date for potatoes in North LA.

Total # of Roots



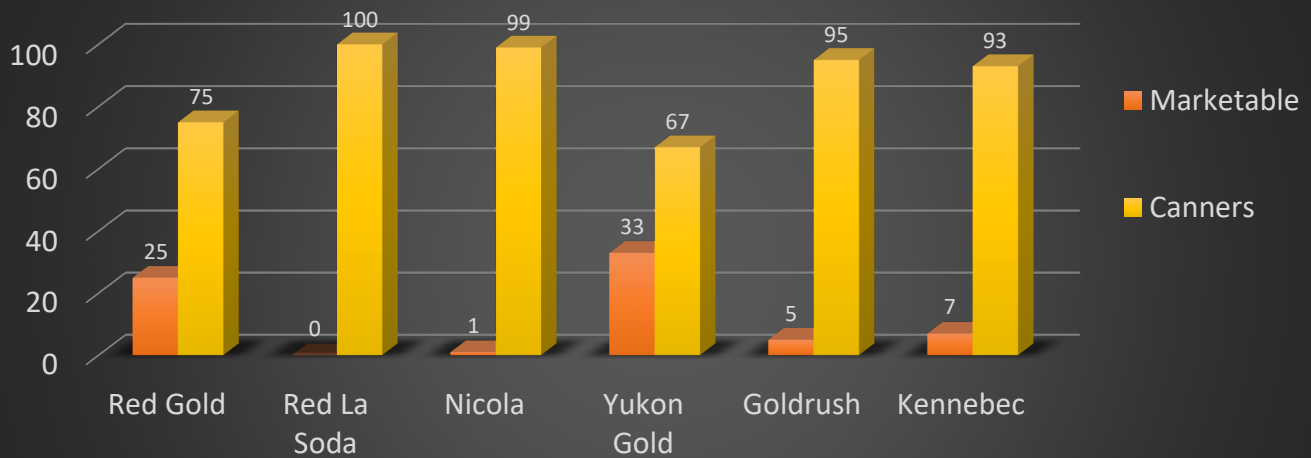
- Nicola produced the most harvestable roots despite being planted late and harvested early. Goldrush, Yukon Gold & Red Gold were comparable 2nds.
- Red La Soda yielded the least # of roots (31) followed by Kennebec (58).

Total Yield (lb/30')



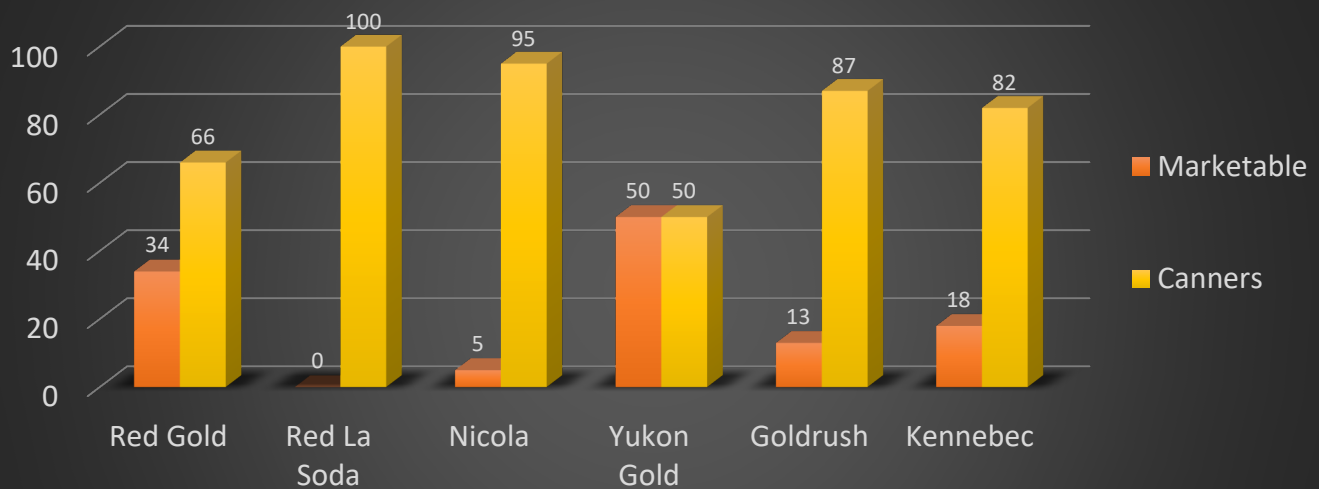
- Yukon Gold yielded the most lbs. of roots (18.4) followed by Red Gold (13.2)
- Red La Soda had the lowest yield with 2.54 lbs. of roots followed by Kennebec at 4.08.

% of Total Roots



- Yukon Gold produced the most marketable roots at 33% of its total, followed by Red Gold (25%).
- All varieties produced more canner roots than marketable; Yukon had the best ratio of canner to marketable roots followed by Red Gold.

% of Total Yield



- Half of Yukon Gold's lb of roots were made up of marketable roots, followed by Red Gold at 34%.
- All varieties produced more lbs of canners than marketables, however Yukon Gold had the best ratio of canner to marketable lbs followed by Red Gold.

Conclusion:

Best Overall: Yukon Gold (followed by Red Gold & Goldrush respectively)

Best yellow: Yukon Gold

Best red: Red Gold

Best russet: Goldrush

Yukon Gold ranked highest in all categories except total number of roots (96 vs. 210 in Nicola), making it the best overall performing variety in this test. Red Gold was a close second, ranking just behind Yukon in all categories with comparable numbers.

Yukon Gold was the best performing yellow potato, ranking better than Nicola in all categories except total number of roots.

Yukon Gold was the most mature at harvest and planted the most 'on-time'. These 2 factors directly contributed to the above conclusions.

Red Gold was the best performing red potato, ranking significantly higher than Red La Soda in all categories. However, Red Gold was harvested at full maturity, whereas Red La Soda was harvested at 83% maturity. This was due to Red La Soda's late planting date and deteriorating conditions in the field at the time of harvest. More research is needed to rightfully compare the 2 red varieties.

Goldrush was the best performing russet potato, ranking higher than Kennebec in number of roots and total lbs. of harvested roots, but was very comparable in all other categories. More research is needed to determine the value of these varieties for north La.

The yellow potato group was the only subgroup in which the standard outperformed the comparison. In both the Red and the Russet groups, the comparison was the highest yielding variety. More research is needed to determine the productivity of these comparison treatments where late planting and early harvesting are not such contributing factors.

Nicola was an interesting variety in that it was harvested at the lowest maturity level 74% yet yielded the highest number of harvestable roots (210). Nicola had the highest DTM range (100-130) but could not be allowed to fully mature due to deteriorating conditions in the field. Nicola was also planted relatively late (19 days past the recommended threshold). Nicola was specifically selected as a comparison treatment for its low glycemic characteristic. More research is needed to determine the productivity of this variety for those interested in growing this variety to supplement their diabetic and/or ketogenic diets.

In this trial, maturity and late planting were directly relevant contributing factors to potato yield. Where planted in a timely manner and allowed to fully mature, the most yield was observed. It's important to plant according to the recommended dates and harvest at full maturity to achieve the highest productivity of your potato crop.





