

Felix Navarro: Chip Processing Variety Progress Report 2016

W5955-1: Long Storage Chipper with Common Scab Resistance

Elite clone from the University of Wisconsin potato breeding program. W5955-1 has a stable resistance to common scab, tested over years and several locations of dedicated common scab evaluations in Wisconsin and Alliston, Canada (Fig. 18). In small scale research plots, W5955-1 also has a longer storage ability compared to Snowden (Fig. 18), likely because tuber sucrose and glucose levels have been consistently lower than Snowden late in the storage season (Figs. 19 and 20). W5955-1 specific gravity has been high, especially in Wisconsin (Fig. 21). US No. 1 yield difference with Snowden have been consistently around 50 cwt/a (Fig. 22). A potential pitfall to watch with this variety is that it tends to produce large tubers and large tubers have an increased risk of hollow heart. We should be adjusting our management to produce smaller size tubers with W5955-1 for best quality. Seeds of W5955-1 will be available in two years for semi-commercial evaluations at the Hancock ARS Storage Research Facility. In the meantime, this is a variety that we highly recommend for on-farm trials by growers and small batches to be fried by processing plants. An additional strength of W5955-1 is a vigorous growth with a quick canopy closure similar to Atlantic and staying greener than Snowden in August.



Fig. 18. Upper panel: W5955-1 tubers and comparison of scab resistance to Snowden. Lower panel: 2014-15 chips (center) vs. corresponding Snowden (center) and Atlantic (right) from the same USPB-SFA trial, Hancock ARS. Processed tubers stored at 48°F and fried on May 8.

WVT/SpudPro: 2012, 2014

USPB-SFA: 2014

Sugar Profile: Also Ontario, 2008-09

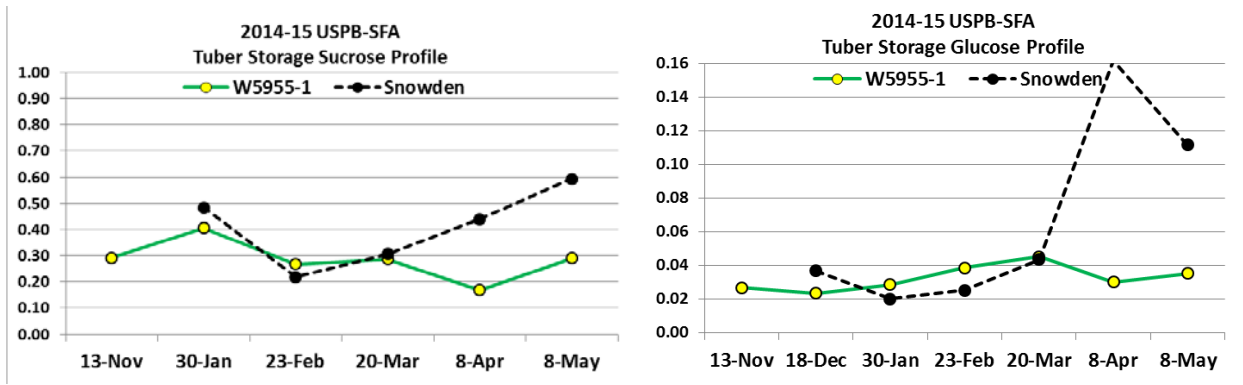


Fig. 19. Sugar profile (sucrose and glucose) for W5955-1 compared to Snowden in the 2014-15 storage seasons. Tubers correspond to samples from the Hancock ARS USPB-SFA trial, stored at 48°F.

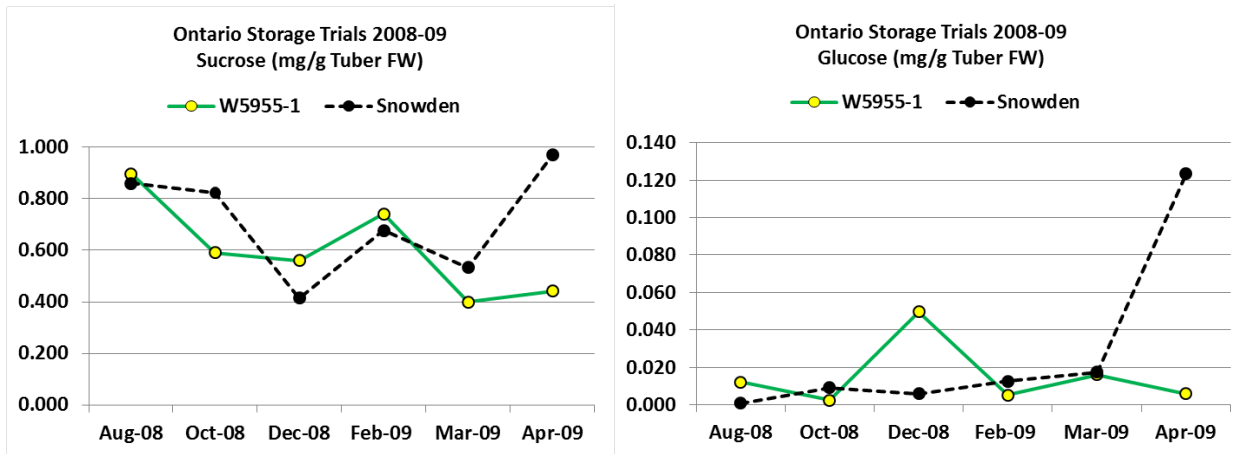


Fig. 20. Sugar profiling (sucrose and glucose) for W5955-1 compared to Snowden in the 2014-15 storage seasons. Tubers correspond to samples from the Ontario Storage trial, stored at 50°F.

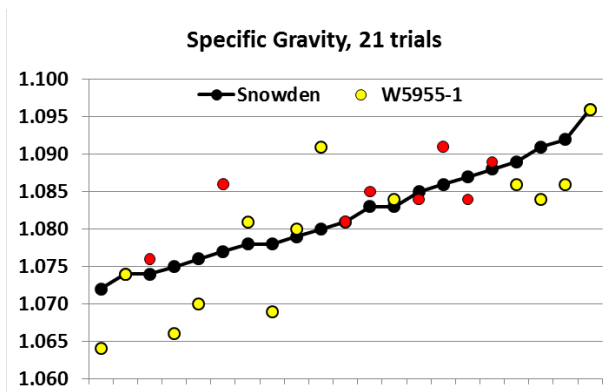


Fig. 21. Specific gravity differences between W5955-1 and Snowden from 24 trials including USPB-SFA and WVT, red dots = WI

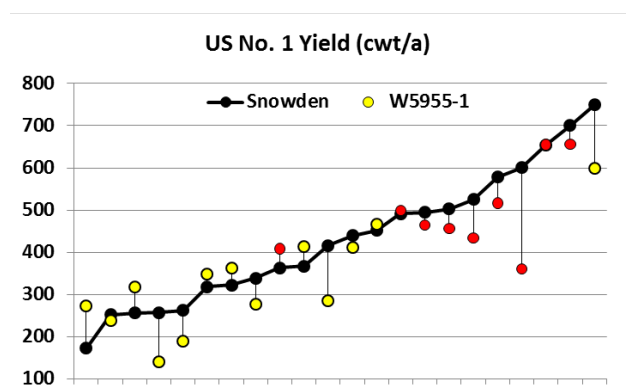
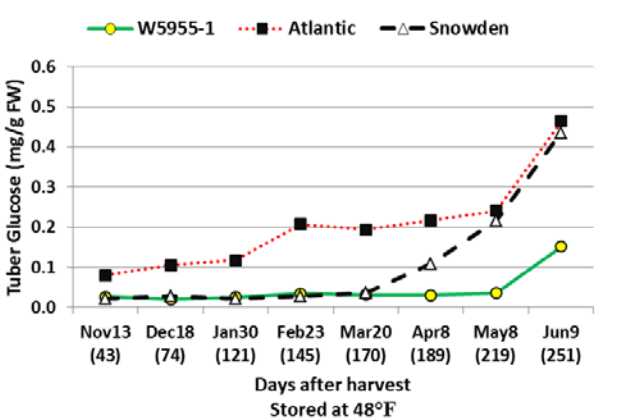
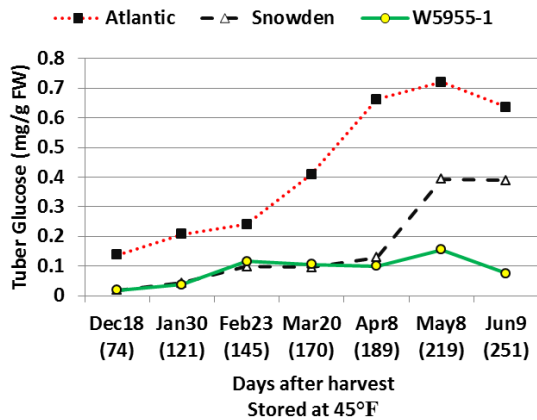
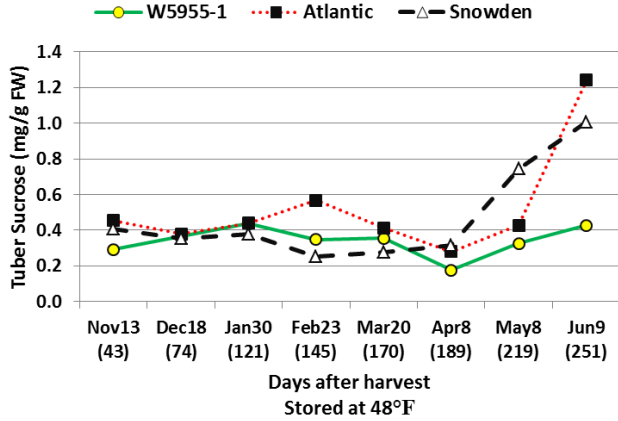
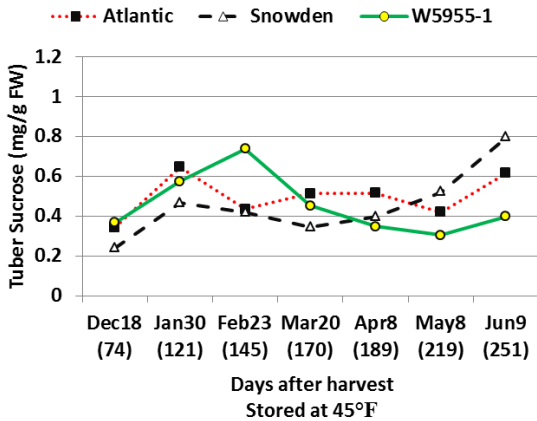


Fig. 22. US No. 1 yield differences (cwt/ha) between W5955-1 and Snowden: 22 trials including USPB-SFA and WVT trials, red dots = WI.

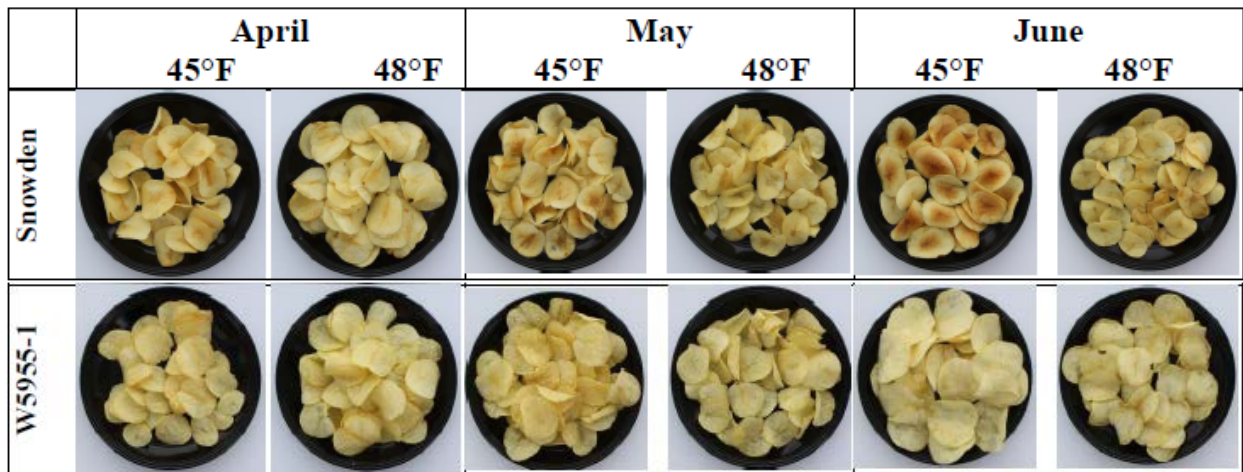
2014-15 Chip Varieties Report

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Thanks for your support!



Long storage potential of common scab tolerant W5955-1 (more details inside)



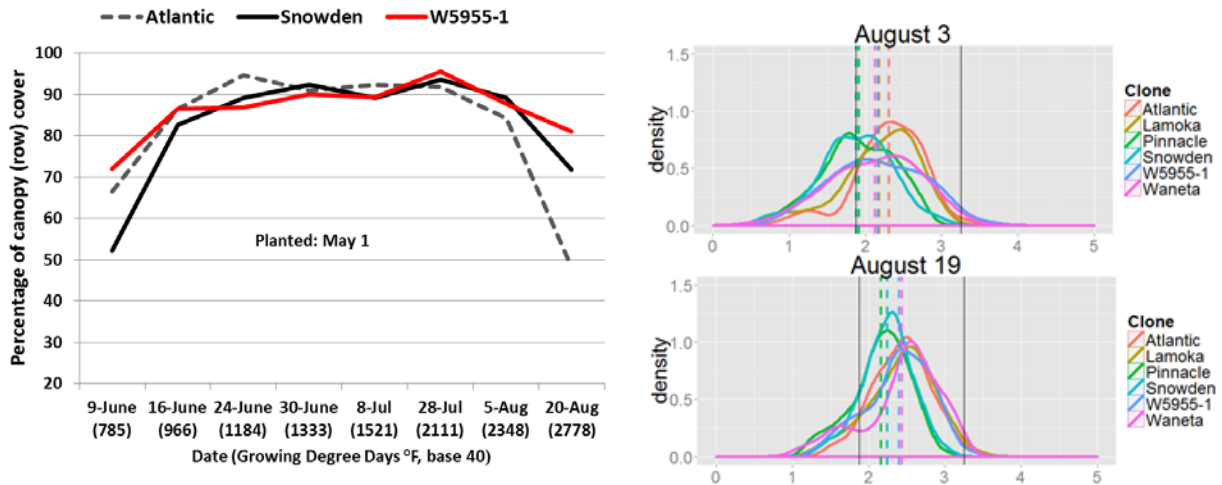


Fig. 23. W5955-1 plant canopy (left hand panel) and tuber development measure as tuber diameter (right hand panel) from 2015 trials at the Hancock Agricultural Research Station

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