



White Stem Negi Onion Variety Trial Preliminary Observations

Jensen Uyeda, Steve Fukuda, Jari Sugano
University of Hawaii at Manoa
College of Tropical Agriculture and Human Resources



Green onion (*Allium fistulosum*) is typically grown in Hawaii for its long dark green leaves and used as a garnish for many dishes. In Japan, green onion is grown for its long white stems rather than its dark green leaves and is called “Negi”, “Naga Negi” (Long Onion), Shiro Negi (White Onion), or “Tokyo Negi”. White stems are used similar to dark green leaves as a garnish but are also used to make soup bases and can be pickled. The average stem length for this type of onion can range from 12-24 inches, typical of whole plant lengths for green onion grown in Hawaii.

This trial looks to evaluate 20 commercially available green onion varieties for its potential production of “Negi” type onions. Plants were evaluated for stem length, bunching potential (# of shoots per seedling), and total plant weight. Plants were seeded into seedling trays on February 2016 at a rate of 10-12 seeds per cell. Seedlings were separated into individual plants and transplanted on March 10, 2016 into furrows at 3 inches between individual plants. Furrows were made using a Honda walk behind tiller with a plow attachment at a depth of 10 inches. Plants were planted in 5 feet long plots for a total of 20 plantlets per plot and replicated 3 times. Rows were spaced at 4 feet to allow for mechanical hilling. Plants were fertilized with 16-16-16 plus minors at a rate of 50lbs per acre and irrigated with drip irrigation. Plants were fertilized with an additional 5lbs of 16-16-16 plus minors prior to hilling events. Plants were hilled every three weeks. 3 individual plants from each plot were harvested on July 8, 2016 (4 months after transplant) and August 11, 2016 (5 months after transplant) and evaluated for stem length, total fresh weight and bunching potential.



Table 1. “Negi” green onion varieties evaluated.

	<u>Variety</u>	<u>Seed Company</u>
1	Tokyo Long White	Botanical Interest
2	White Spear	Johnny's Seed
3	Evergreen Hardy White	Johnny's Seed
4	Nabechan	Johnny's Seed
5	Parade	Johnny's Seed
6	Evergreen White Nebuka	Kitazawa Seed
7	Heshiko	Kitazawa Seed
8	Kyoto Kujo Negi	Kitazawa Seed
9	Ishikura Long Winter	Kitazawa Seed
10	Shimonita Negi	Kitazawa Seed
11	Red Beard	Kitazawa Seed
12	Ishikura Improved	Kitazawa Seed
13	Guardzman	Jung Seed
14	Pride	High Mowing Seed
15	Tokyo Long White	Harris Seed
16	Southport White bunching	Harris Seed
17	Natsuguro	4seasons
18	Feast	Evergreen Seed
19	Green Banner	Seminis
20	Koba	UH Seed Lab

Summary

Overall, majority of the varieties showed potential for “Negi” type green onion production. Ishikura Improved, Pride, White Spear, Feast and Ishikura Long White, Shimonita Negi, Natsuguro, Tokyo Long White HR, Tokyo Long White BI and Nabechan showed a greater potential for commercial “Negi” type green onion production as these varieties showed little to no bunching characteristics shown in Figure 3 and 4. Of these varieties Ishikura Long Winter, Ishikura Improved, Pride, Natsuguro, Feast and Tokyo Long White developed the longest stem lengths at the 5 months after transplanting (Figure 2). Varieties Ishikura Improved and Ishikura Long Winter developed the greatest stem lengths at 4 months after transplant which maybe more desirable. Varieties Red Beard, Guardsman and Green Banner had comparable lengths as the previously mentioned varieties however they showed to have a higher level of bunching which may affect the overall length and diameter of the white stem. Varieties Southport White Bunching, Kyoto Kujo Negi, Evergreen White Nebuka, Evergreen Hardy White, Heshiko and Koba may not be recommended for “Negi” type green onion production as these varieties showed to have very heavy bunching shown in Figure 5 and 6. Future research will look to increase mechanization of planting and harvesting as well as increasing planting depth to maximize stem length.



Figure 1. Average fresh weight for the 20 “Negi” green onion varieties planted on March 2016. Values represent average weights for individual plants.

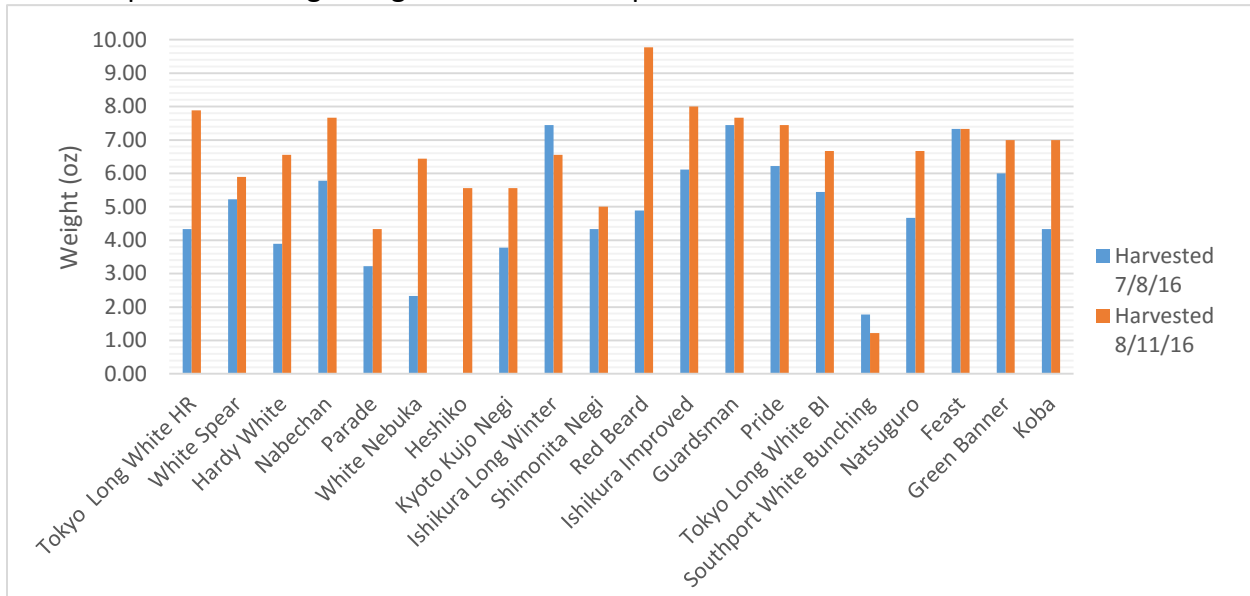


Figure 2. Average Stem length for 20 “Negi” green onion varieties planted on March 2016.

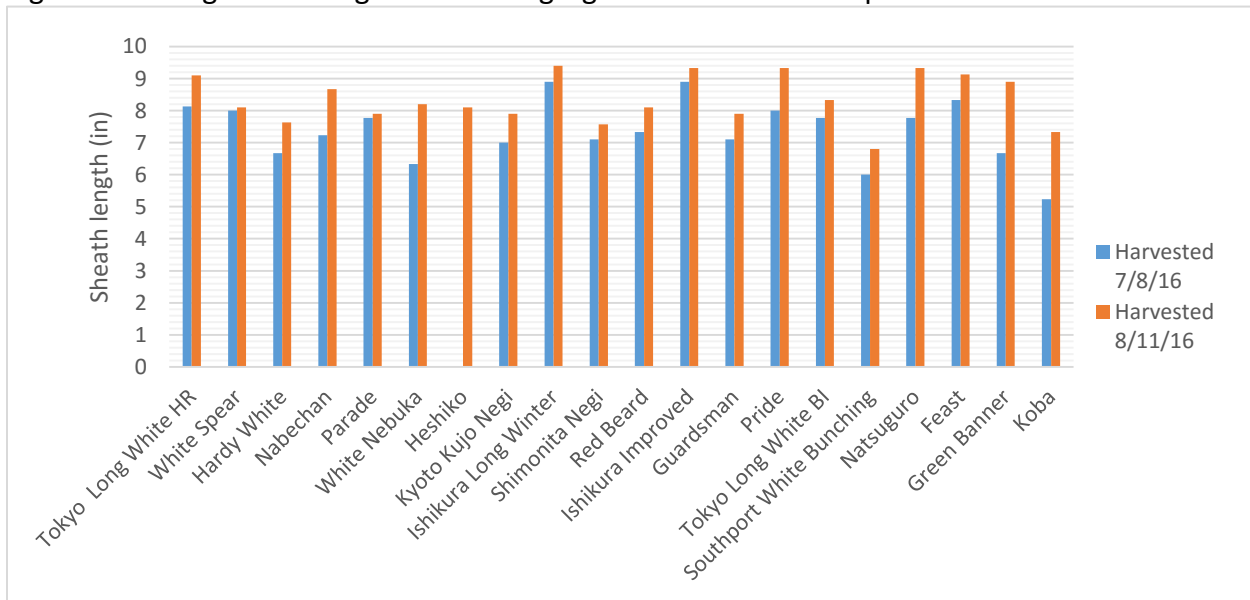




Figure 3. Images of individual plants planted March 2016. Left: Ishikura Improved, Pride, White Spear, Feast and Ishikura Long White harvested on 7/8/16. Right: Ishikura Improved, Pride, White Spear, Feast and Ishikura Long White harvested 8/11/16.



Figure 4. Images of individual plants planted March 2016. Left: Parade, Shimonita Negi, Natsuguro, Tokyo Long White HR and Nabechan harvested on 7/8/16. Right: Parade, Shimonita Negi, Natsuguro, Tokyo Long White HR and Nabechan harvested 8/11/16.



Figure 5. Images of individual plants planted March 2016. Left: Red Beard, Tokyo Long White BI, Guardsman and Green Banner harvested on 7/8/16. Right: Red Beard, Tokyo Long White BI, Guardsman and Green Banner and Heshiko harvested 8/11/16.



Figure 6. Images of individual plants planted March 2016. Left: Southport White Bunching, Kyoto Kujo Negi, Evergreen White Nebuka, Evergreen Hardy White and Koba harvested on 7/8/16. Right: Southport White Bunching, Kyoto Kujo Negi, Evergreen White Nebuka, Evergreen Hardy White and Koba harvested 8/11/16.



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