Size of Blackjon Apple

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In 1947, Director V. R. Gardner of the Michigan Agricultural Experiment Station corresponded with the author in regard to the fruit size of Blackjon, a color sport of Jonathan. In Michigan, Gardner found the Blackjon to be smaller than Jonathan and other Jonathan color sports. Whether this small size is inherent in the sport or is due to nurseries propagating a small fruited color sport and distributing it as Blackjon is not known. Following the correspondence, the author secured scion wood of Blackjon from eight Illinois growers. (All of the growers had not secured their trees from the nursery that had first distributed the variety). The eight lots along with one lot from the Horticulture Orchard at Urbana, were all top-worked in a single old tree at Urbana. The aim is to bring the scion pieces from the nine sources into fruiting on a single tree and single rootstock so as to better determine if Blackjon from different sources varies in size. To date none of the scion pieces has fruited. This brief statement has been presented in regard to Blackjon to encourage growers who have the variety to observe its size and for a better understanding of the data presented hereafter.

In 1949 data was secured on the size of Blackjon in comparison with Jonared and Jonathan (Anderson No. 1 strain). A record of the total yield (picked and dropped fruit), and the percentages of fruit in three size classes are presented in the accompanying table, along with the rootstock. when known. The records in the first three lines at the top of the table are from trees which were purchased from the three nurseries that selected, propagated and first distributed the varieties. The rootstocks of these trees are not known. The Blackjon trees were planted in 1932 and the other two varieties in 1939. Since these trees were from the nurseries which selected them it is safe to assume they are true to name and represent the given variety in all its different characteristics. The records in the remainder of the table are from trees in the apple stock orchard. Each tree of each variety in this planting was top-worked in 1943 and 1944 on a known clonal rootstock. The scion wood for top-working was taken from the three varieties listed in lines 1, 2 and 3 of the table. Parentages of the lettered and numbered rootstocks in the table are: Lot 30=*Malus floribunda* selfed; Lot C= *Malus prunifolia var. x M. niedzwetzkyana x M. niedzwetzkyana;* Lots 15, 16 and 18, each O.P.S. *Malus niedzwetzkyana.*

*Now at Villa Ridge, Illinois.

Referring to the table it will be seen that Blackjon consistently had a lower percentage of fruit in the 2-5/8-up class than did Jonared and Jonathan. With the older trees secured from the nurseries, lines 1, 2, and 3, the difference is not so great, 84.5 per cent compared with 93.5 and 93.1 per cent. These percentages are somewhat misleading because with Blackjon few of the fruits in the 2-5/8-up class were much larger than 2-5/8 inches whereas with Jonared and Jonathan the fruit averaged well over 2-5/8 inches with many measuring more than three inches. This is reflected in the number of fruits in a bushel of 48 pounds; thus Blackjon averaged 162 fruits per 48 pounds, Jonared 136 and Jonathan 138. When worked on clonal rootstock the Blackjon continued to have a smaller percentage of fruit in the 2-5/8-up class, lines 4 to 20. With Blackjon on each of the clonal stocks few of the fruits measured much over 2-5/8 inches, whereas with Jonared and Jonathan it was not uncommon to find fruits three or more inches in di-

Table—Showing total yield and percentages of fruit by weight in three size classes

Variety and sport	Rootstock worked on	Total yield	Percentage of fruit by weight 0 - 2-3/8	2-3/8 - 2-5/8	2-5/8 - up
Blackjon	Unknown	1460[1]	2.5	13.0	84.5
Jonared	Unknown	491	0.5	6.0	93.5
Jonathan	Unknown	617	0.5	6.4	93.1
Blackjon	Virginia Crab	560	7.1	27.8	65.1
Jonared	Virginia Crab	313	1.4	6.5	92.1
Blackjon	Lot 30	148	18.9	43.4	37.7
Jonared	Lot 30	250	0.2	3.0	96.8
Jonathan	Lot 30	285	0.9	6.3	92.8
Blackjon	Lot 15	53	10.3	28.0	61.7
Jonared	Lot 15	124	0.5	4.0	95.5
Jonathan	Lot 15	155	0.4	9.3	90.3
Blackjon	Lot C	3	100.0	.0	.0
Jonared	Lot C	77	8.2	35.1	56.7
Jonathan	Lot C	81	4.4	23.9	71.7
Blackjon	Lot 16	65	23.1	45.4	31.5
Jonared	Lot 16	167	1.9	9.5	88.6
Jonathan	Lot 16	73	4.8	19.7	75.5
Blackjon	Lot 18	66	9.2	29.7	61.1
Jonared	Lot 18	84	6.6	16.2	77.2
Jonathan	Lot 18	217	1.8	13.8	84.4

[1] Yield from two trees

ameter. With the five clonal stocks, namely, 30, 15, C, 16 18, the Blackjon averaged 160 fruits in 48 pounds while Jonared averaged 133 fruits and Jonathan 138 fruits. Jonared and Jonathan each had a lower percentage of fruit in the smmaller size class, 0-2-3/8, than did Blackjon.

The smaller size of Blackjon cannot be attributed to overloaded trees. crop. In this connection, the crops from trees worked on rootstock Lot 16 can be cited. Each of the three trees on this rootstock are large enough to mature a crop of 8 to 10 bushels. On None of the Blackjon, Jonared or Jonathan trees were carrying an excess this rootstock Blackjon had a yield of only 65 pounds with the fruit in the 2-/8-up class running 156 to 48 pounds while Jonared and Jonathan in the same class averaged 133 and 113 fruits to 48 pounds.

The data shows that under the soil and climatic conditions prevailing at Urbana the fruit of Blackjon averages smaller than fruits from Jonared and Jonathan (Anderson No. 1 strain). Since the fruit of Blackjon continued to be smaller when the variety was topworked on six different clonal rootstocks it appears highly probable that the small size is inherent in Blackjon.

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Variety "Roundups" Helpful

Dear Mr. McDaniel:

. . . It has occurred to me that brief reports from many sections of the country should be collected and all published at one time on the various new fruit varieties. This might be quite helpful. We have such information on the Waite pear, several strawberry varieties and of course many grapes.

N. H. LOOMIS
U. S. Horticultural Field Station,
Meridian, Mississippi

Filberts in New England

Dear Sir:

I have Jones hybrid and Barcelona filberts (both self-sterile). The semi-wild ones (seedlings of Winkler variety) sold by Snyder Brothers of Center Point, Iowa do not grow 6 feet tall. They grow so slowly it is almost hopeless to get them to grow to the catkin-bearing stage. The University of New Hampshire had the same trouble, but their semi-wild *did* get big enough so the Jones hybrid loaded. I hope to get pollinating ones.

HERBERT L. PALMER
Pittsfield, Maine