

Asparagus Cultivar Evaluation

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Introduction

The asparagus cultivar trial was initiated in 1995 to evaluate the growing number of new hybrids for yield potential and suitability to Iowa growing conditions. The trial consists of a replicated planting at the Muscatine Island Research Farm, Fruitland, Iowa (southeast Iowa), and observational plantings on ISU Research Farms at Kanawha (north central), Lewis (southwest), and Sutherland (northwest). The Fruitland trial location provided a coarse sandy soil with supplemental irrigation. Conversely, all of the observational plantings were located on fine-textured loamy soils and relied on rainfall for moisture. Standard cultural practices were followed at all sites. At harvest, spears were snapped-off at ground level when they were 8" to 12" tall and were trimmed to an 8" length before grading and weighing. Data presented are of marketable yield only. The trial evaluates eleven all-male hybrids including *Gijnlim*, *Greenwich*, and the 'Jersey' cultivars. *Apollo*, *Atlas*, *Grande*, and *U.C. 157* are standard (dioecious) hybrids with both male and female plants. *Mary Washington* and *Purple Passion* are open pollinated cultivars.

Results and Discussion

Table 1 presents a cultivar performance summary from all locations for the years 1998–2002. *Jersey Supreme*, *Atlas*, *Grande*,

Jersey Gem, *UC 157 F1*, *Jersey Giant*, and *Jersey Deluxe* have consistently recorded high yields. The following cultivars were noted to occasionally have 'open' or 'rough' spear tips during harvest: *Gijnlim*, *Greenwich*, *Jersey Jewel*, *Jersey Gem*, and *Jersey Deluxe*. *Purple Passion* and *Grande* produced some of the largest average spear weights while *Mary Washington*, *UC 157*, and *Gijnlim* produced the smallest average spear weights. *Purple Passion* tended to produce fewer but bigger spears than the other cultivars.

Based on yield potential and spear quality, I would recommend the all-male hybrids *Jersey Supreme* and *Jersey Giant* for new Iowa plantings. *Jersey General*, *Jersey King*, and *Jersey Knight* have also shown good spear quality but lesser yield potential. *Grande* and *Atlas* should be considered as alternatives to *UC 157 F1* because of their plant vigor and larger more uniform spear size. But, note that they are dioecious hybrids, and the plantings will contain both male and female plants and have the associated volunteer asparagus seedling problem. *Purple Passion*, with its rather unique large purple spears, is well suited for specialty or niche markets.

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**Table 1. Asparagus cultivar yield summary for Fruitland, Kanawha, Lewis, and Sutherland.
Average annual marketable yield from five seasons: 1998–2002.**

Cultivar	Avg spear Wt - grams	Fruitland lbs/acre	Kanawha lbs/acre	Lewis lbs/acre	Sutherland lbs/acre
Jersey Supreme	17.7	4,001	3,189	3,776	2,101
Grande	20.2	4,231	2,433	3,496	1,932
Jersey Deluxe	21.2	3,478	3,807	2,914	1,363
UC 157 F1	16.3	3,455	2,363	2,760	3,442
Jersey Gem	18.3	4,372	2,652	2,587	1,397
Gijnlim	15.6	3,037	2,747	3,497	2,174
Atlas	20.1	3,704	2,601	2,634	1,082
Jersey Giant	17.4	4,159	2,414	2,085	1,694
Jersey Jewel	17.8	2,880	3,172	2,117	2,642
Jersey General	19.6	3,790	2,302	2,341	694
Apollo	19.1	3,086	2,172	2,346	1,207
Purple Passion	28.3	2,512	2,959	2,826	844
Jersey King	19.4	2,585	2,594	2,325	616
Greenwich	17.8	2,958	1,663	1,632	1,304
Jersey Knight	17.8	2,642	1,405	1,070	2,002
Mary Washington	16.3	–	2,301	1,847	1,923
Jersey Prince	17.0	2,502	1,580	2,170	766
<i>Average</i>	<i>18.9</i>	<i>3,194</i>	<i>2,491</i>	<i>2,439</i>	<i>1,611</i>