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AVOCADO BREEDING

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The avocado breeding program reached a number of milestones over the last year, including the patent and release of 'Lamb Hass' and 'Sir Prize'. These varieties have been accepted by the California industry with a enthusiasm. Small plantings of 'Lamb Hass' on grower cooperator properties indicate that the variety has exceptional precocity and the potential for very heavy production compared directly with 'Hass'. In Persea mite infested areas 'Lamb Hass' has resistance to this pest with almost no infestation to date. The trees have slightly later fruit maturation compared to 'Hass' and the fruit is retained on the tree for an extended period after legal maturity. While the fruit of this variety is very similar to 'Hass' in appearance (Figure 1) and flavor, several tests have shown slightly lower quality attributes when compared to 'Hass'. It is very unlikely that consumers will notice the difference between 'Hass' and 'Lamb Hass' on the market, and so it is hoped that buyers will pay equivalent prices. This past year some houses sold 'Lamb Hass' as a 'Hass'-type and returned 'Hass' prices to growers while others sold the fruit under the assumption that prices for "other" avocado varieties applied. The second approach, in our opinion, places a potentially exceptional variety in jeopardy.

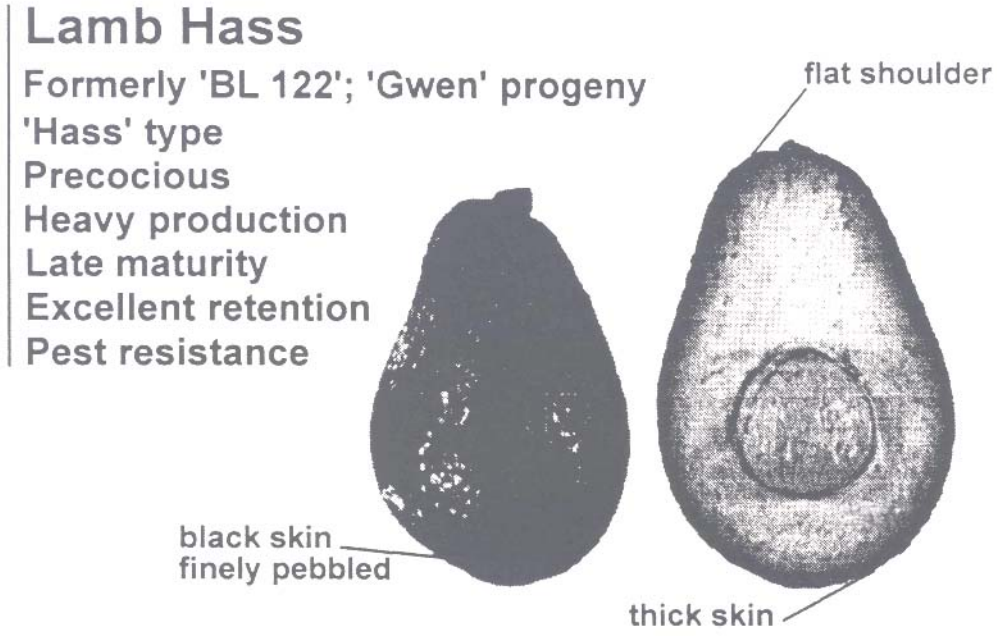

Figure 1. 'Lamb Hass' fruit characteristics and notable attributes.

The second variety released, 'Sir prize', is aimed at the Central Valley of California, where growers are looking for a reasonable variety to replace low value 'Zutano' acreage. This variety is 'Hass' like with slightly earlier production than 'Hass'. The parentage of this vary suggests that there may be some cold tolerance and several test plantings in the San Joaquin Valley are being monitored to confirm this attribute. 'Sir prize' has a B flower type which may contribute to cross pollination of 'Hass' and improved production. Fruit is similar in appearance to 'Hass' when ripe (Figure 2) and the eating quality is excellent. We and several others who have handled the fruit have noted that the flesh does not brown as rapidly as 'Hass' and other varieties when exposed to air. Studies currently being conducted by Mike Clegg will answer some of the questions the industry has concerning cross pollination and the potential of new B flower types in the breeding program to contribute to improved 'Hass' production.

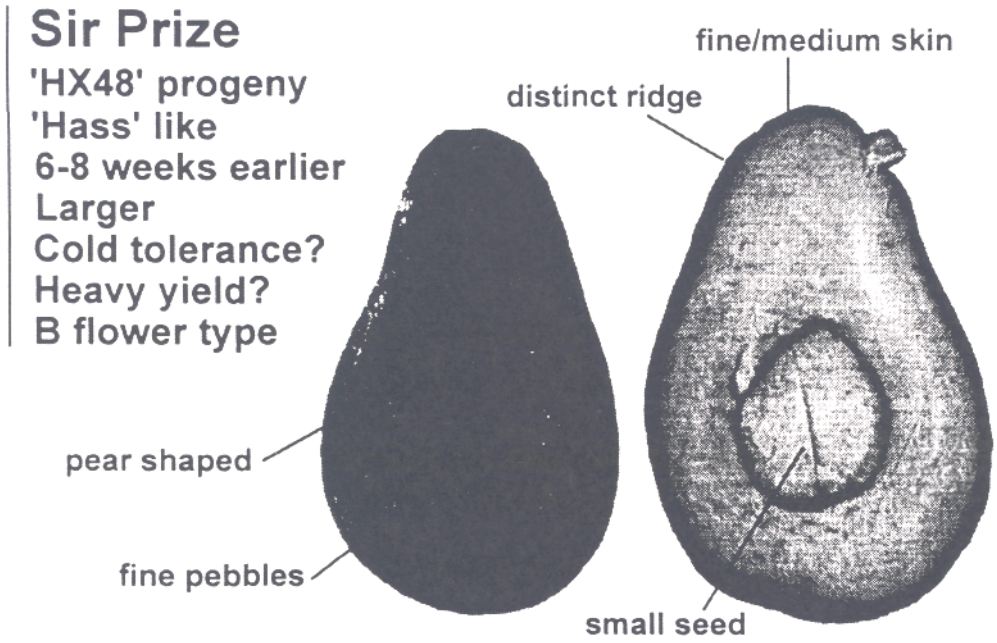

Figure 2. 'Sir Prize' fruit characteristics and notable attributes.

Several other varieties are showing great potential including Gem (figure 3) and BL 667 (Figure 4). These are currently being evaluated and patents applications will likely be processed this year. Gray Martin report that, among the several thousand crosses still under evaluation from the original 40, 000 crosses made during Bob Bergh's tenure, there are several more promising varieties. It is of utmost importance that the breeding program continue to receive the support it has enjoyed from the industry in order to advance potential material for growers. If the California industry is to remain viable our best hope lies in the development of better, more productive varieties. The avocado breeding program is the only serious program in the world, and judging by the reception we had at the World Avocado Congress III in Tel Aviv, Israel last year, the program commands considerable international respect.

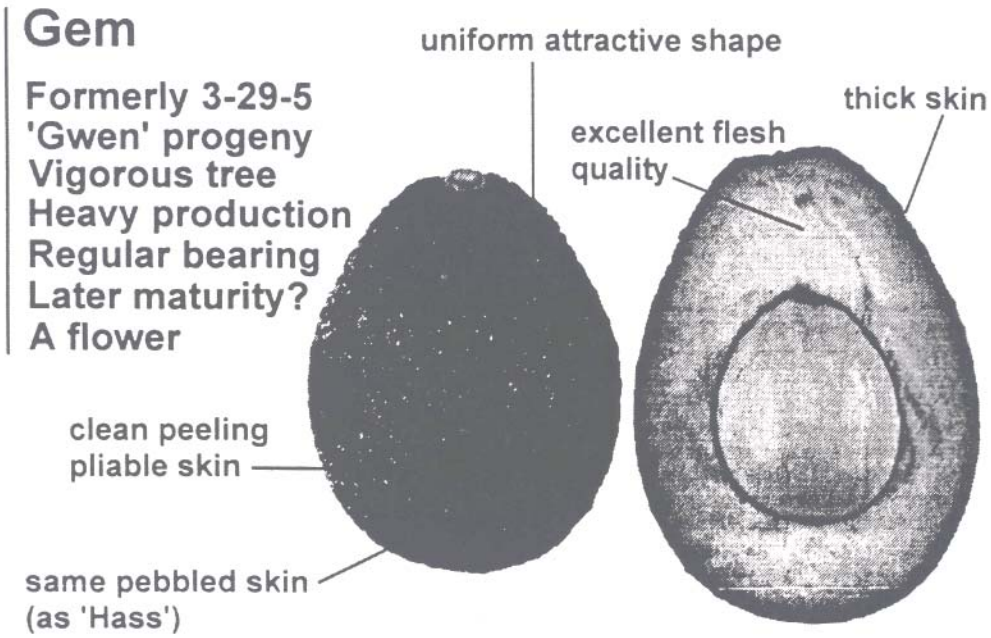

Figure 3. 'Gem' fruit characteristics and notable attributes.

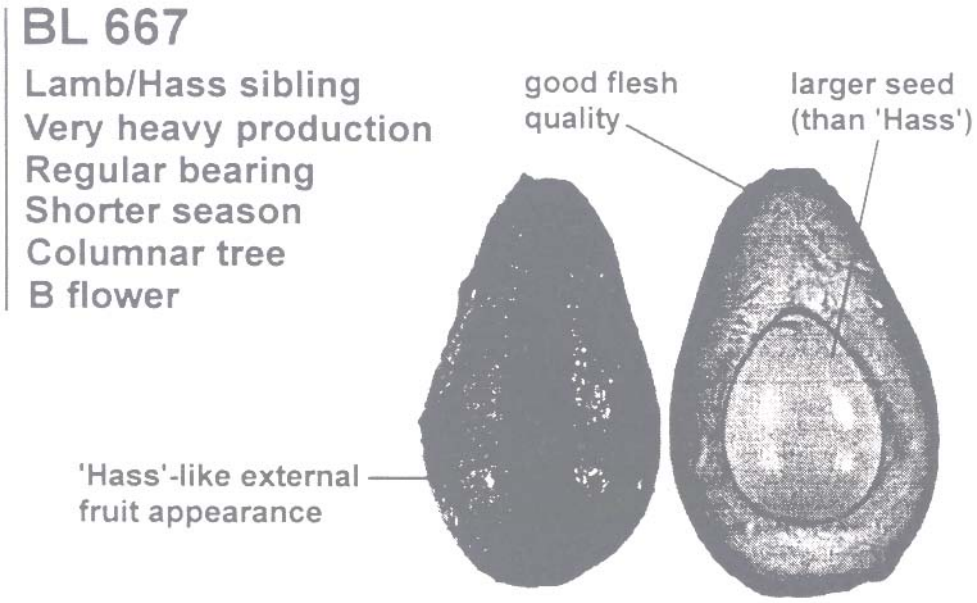

Figure 4. 'BL 667' fruit characteristics and notable attributes.

Gray Martin continues to make significant contributions in tree training techniques and horticultural innovation. He has generated considerable local and international interest

in central leader training and field grafting techniques.