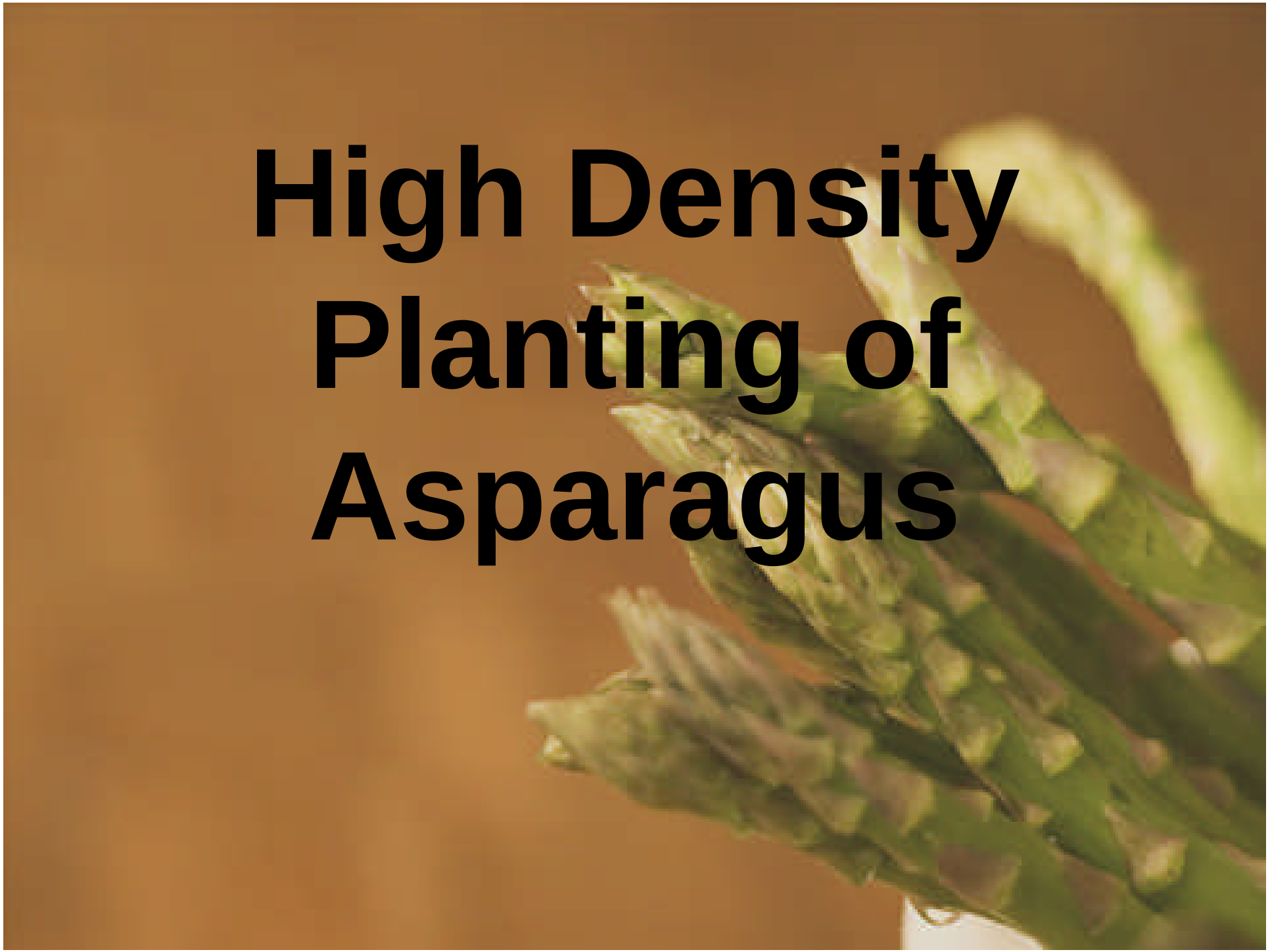
High Density
Planting of
Asparagus

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Abstract

Over the years, there has been a trend from low population plantings of asparagus, to higher numbers of plants per acre. This has been especially true in the traditional asparagus growing areas of northern California, where asparagus beds used to be six feet wide or wider, and only one line of plants (crowns) at a spacing or distance down the bed as much as three feet apart. The resulting population would be only 3,000 plants or less per acre.

That trend is beginning to change to higher density plantings. In many areas, it is now more typical to see one line of plants at a spacing of 6 – 12 inches on a 42 inch bed. The obvious advantage is more production in the earlier years. The disadvantage is a decline of size in later years, and perhaps inadequate air circulation during the fern growing stage.

But changing economics dictate that a constant review of cultural techniques must take place on a regular basis. Time is money. One cannot afford to wait years before a sparsely planted field begins to "fill in".

Based on a series of commercial trials / plantings, our analysis indicates the optimum plant population is somewhere between 25,000 plants per acre, to about 56,000 plants per acre.

Trial 1

Year harvested	30 pound crate equivalent per acre	Pounds per acre
1979	75	2,250
1980	301	9,030
1981	275	8,250
1982	249	7,470
1983	225	6,750
1984	185	5,550
	Average crates per acre 218.6	Total pounds per acre 39,300

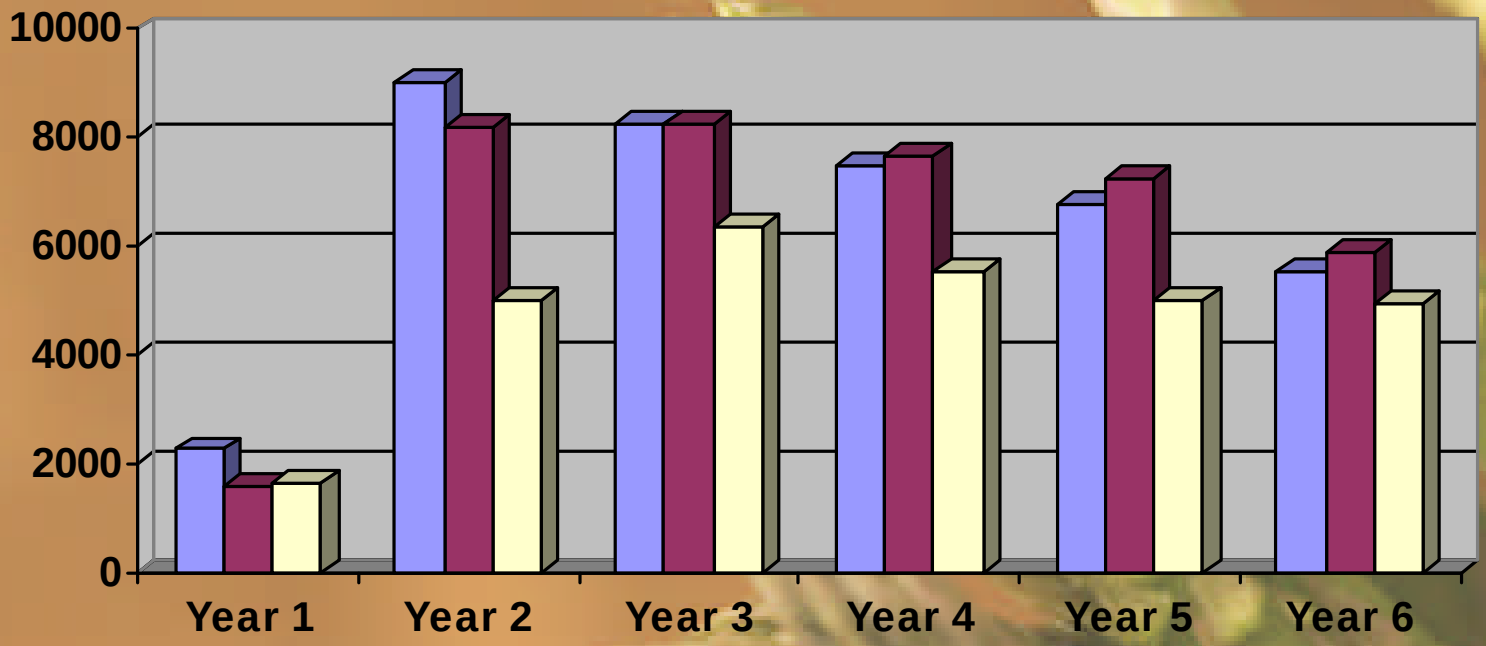
Trial 2

Year harvested	30 pound crate equivalent per acre	Pounds per acre
1996	52	1,560
1997	273	8,190
1998	275	8,250
1999	255	7,650
2000	242	7,260
2001	196	5,880
	Average crates per acre 215.5	Total pounds per acre 38,790

Trial 3

Year harvested	30 pound crate equivalent per acre	Pounds per acre
1979	55	1,650
1980	166	4,980
1981	212	6,360
1982	185	5,550
1983	167	5,010
1984	164	4,920
	Average crates per acre 158	Total pounds per acre 23,475

Year per Acre in Pounds



Blue - 56,000 plants/acre
Red - 25,000 plants/acre
Yellow - 14,000 plants/acre

OBSERVATIONS AND CONCLUSIONS

Assuming there is no real premium for size, and that all costs remain about the same, it is obvious that the last trial had the least dollar return over a six year harvest period. However, there is not much difference in economic return in the first two trials. Therefore, an optimum plant population can vary anywhere from about 25,000 plants per acre to about 56,000 plants per acre. A field planted with fewer plants, as shown in the third trial, results in a significantly reduced amount of dollar return. Given that asparagus is a long term project, the yield data argues for a high plant population that should result in a strong return on investment. Using an inferior seed variety or skimping on the number of plants, per acre is a false economy.