A collaboration between:

Broccoli Production in California

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Production Regions

The area used for broccoli production has increased more than tenfold in California since the 1940s (Figure 1), with the major increase taking place between 1970 and 2000. Since then, the broccoli area has stabilized at approximately 120,000 acres. The broccoli production area in the U.S. followed a similar trend, having more than tripled between 1970 and 2000. The expansion during this period took place almost exclusively in California [3]. While the proportion of U.S. broccoli produced in California increased between 1950 and the early 1970s from roughly 50% to 90%, it remained at about 90% since then [3] (Figure 1).

The leading broccoli producing county in California is Monterey, where about 40% of California's broccoli has been produced in 2007 [2] (Figure 1). This corresponds to more than one third of the U.S. production. Monterey County is followed by Santa Barbara County (24%) and San Luis Obispo where 7% of California's broccoli is produced. Together these three coastal counties produced 70% of California's broccoli, or almost two thirds of the broccoli produced in the U.S. Other important broccoli producing counties are Fresno and Imperial [4] (Figure 2).

In coastal areas, broccoli can be produced year-round, while Imperial Valley growers produce broccoli only during the winter months [1].

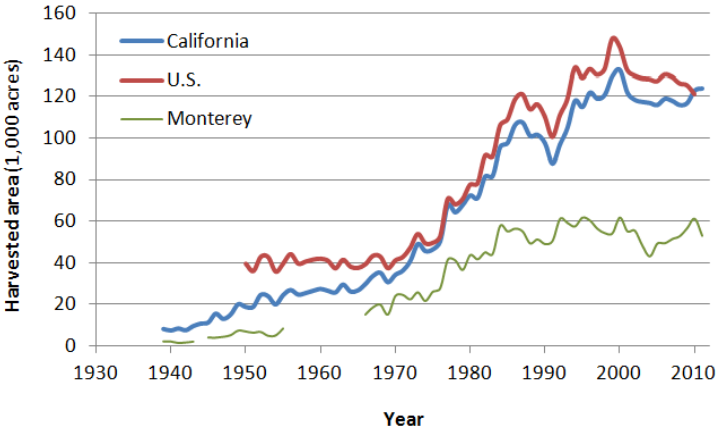

Figure 1: Harvested acreage of broccoli in Monterey County, California and the U.S. from 1939 to 2011 [3, 2].

Figure 2: Location of the five leading broccoli producing counties in California [4].

Yield and fertilizer use

Broccoli yield averaged 51 cwt/acre in the 1940 and 50s (Figure 3). Since then it has increased linearly by approximately 2 cwt/acre each year, reaching 165 cwt/acre in 2011 [3].

Based on survey data collected every four years by the USDA, the annual N application rate between 1992 and 2010 has ranged between 150 and 235 lbs/acre, averaging 193 lbs/acre [4]. Unlike yield, there was no clear trend over time in the amount of fertilizer applied, suggesting than nitrogen use efficiency increased over the last two decades. During the same period, the average annual application rate of phosphate (P_2O_5) and potash (K_2O) was 88 and 63 lbs/acre, respectively.

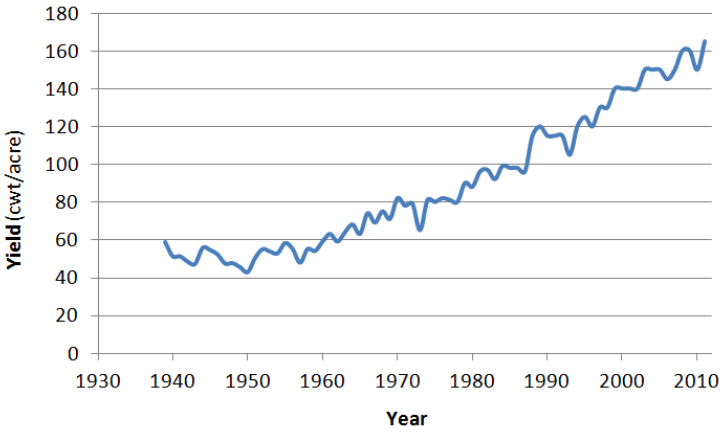

Figure 3: Development of broccoli yield since 1939 in California [3].

References

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The document has been prepared within the project “Assessment of Plant Fertility and Fertilizer Requirements for Agricultural Crops in California”, funded by the California Department of Food and Agriculture Fertilizer Research and Education Program (FREP).

This document is available online at https://apps1.cdfa.ca.gov/FertilizerResearch/docs/Broccoli_Production_CA.pdf

Last update: June, 2016