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# Fresh Fava Bean Markets in California: Evidence from Farmers Markets

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## Introduction

Fava bean (Vicia faba L.) is an ancient legume crop that is widely grown around the world for food, mainly as dry grain, and for animal feed. Similar to other legumes, fava is a rich source of protein and has a high nutritional value (Etemadi et al., 2019). Dry fava bean grain has about 24% protein, 2% fat, 50% carbohydrate, and 700 calories per serving. The grain's complex carbohydrate and dietary fiber and minerals, together with low fat, cholesterol, and potassium concentrations have attracted consumers. As a result, various fava bean dishes have been developed for dry grain, fresh pods, and other plant parts such as leaves (recipes available here). It is expected that recent interest in more plant-based protein diets will increase fava bean demand since it produces significantly higher protein yields when compared to other legume crops (Multari et al., 2015).

As a legume crop, fava bean obtains most of its nitrogen requirements through symbiotic biological nitrogen fixation (BNF). Because of its high BNF potential, fava bean has been extensively promoted as a cover crop around the country and in California (Boots-Haurpt et al., 2022). As a cover crop, fava bean is grown in mixes with other species to protect soil from erosion and to add soil organic matter and nitrogen (Brennan et al, 2013). The mix is terminated and incorporated back into the soil before sowing the next crop in rotation. Cover crop termination takes place before fava bean reaches the pod production stage; thus, no economic yield is harvested from cover crop mixes.

Fresh (green) fava bean pod production and consumption is also common in different parts of the world. Similar to green bean and soybean edamame, fresh fava bean pods are harvested before they reach maturity while the beans are still tender. In California, fresh fava bean production is limited to gardeners and small farms, mainly along the coast (Hickman and Canevari, 2012).

The Mediterranean climate and winter rainfall of California is well suited for the production of autumn-sown fava bean. When planted by the beginning of the rainfall season in the fall, fresh fava bean pods can be harvested as early as May. The fall planting system can reduce water requirements for fresh fava bean production compared to summer-grown green bean. In their recent study, Brasier et al. (2023) recorded more than 7 and 19 US tons per acre of fresh fava bean pods from single and multiple harvests of autumn-planted fava bean, respectively. In addition, the remaining crop residues after pod harvest are rich in nitrogen and can improve soil quality.

The fava bean industry and market of California are relatively small, and fresh fava bean pods are primarily limited to communities with significant populations from South and Central America, the East Asia, Middle East, and the African continent. This report is part of our efforts to promote fresh fava bean pod production and consumption in California.

# Fava Bean Availability in California

Fava bean can be purchased in various forms including fresh pod, cold packed, dried, canned, and frozen. Different from fava bean food products that are sold all year round, fresh (green) fava bean is seasonal and its availability in the market varies across California. In this study, we attempted to gain a better understanding of where and when fresh fava bean pods are sold in California farmers markets. This is the first study that we are aware of that explores the availability of fresh fava bean pods from California's farmers markets.

# Data Collection

This study employed surveys to collect data from California farmers markets. A list of 624 certified farmers markets (as of April 1, 2022) was obtained from the California Department of Food and Agriculture website (CDFA, 2022).

Data collection was implemented through email and follow-up phone surveys, using identical questions for both methods. The surveys were administered from June to August 2022. The email survey was distributed to a total of 247 California farmers markets, from which 29 responses were received. The follow-up phone survey resulted in an additional 134 responses. The overall response rate was 26%, with a total of 163 responses out of the 624 farmers markets that were surveyed.

# Results

Our study identified 76 California farmers markets that offer fresh fava bean pods (**Figure 1**). As shown on the map, most markets are identified along the coast, where suitable weather allows for year-round fava bean production, and in northern California. The distribution of fava bean availability in farmers markets in these areas could also be associated with the demographic and cultural variations.

Los Angeles County had the highest number of farmers markets that offer fresh fava bean pods. We identified 41 vendors in 11 farmers markets in Los Angeles county that offer fresh fava bean pods. In Northern California, Sacramento County had six vendors in two farmers markets selling fresh fava bean pods, and in Butte County there were two vendors in a single farmers market selling fresh fava bean pods.

Although the majority of markets offering fresh fava beans are selling them during the spring and summer, fava bean availability across California varies significantly by month (**Figure 2**). For example, 61 percent of the 76 markets (i.e., 46 markets) offered fresh fava bean pods in May. While we did not identify any farmers markets that sell fresh fava bean in January, a small portion of surveyed markets continued to sell fresh fava bean throughout the winter.

***Figure 1**: Map of farmers markets that offer fresh fava bean pods in California. Circle size reflects the number of vendors while the color relates to the months of fava bean availability. For more details, including the market address and months of fava bean availability use this Map Link.*

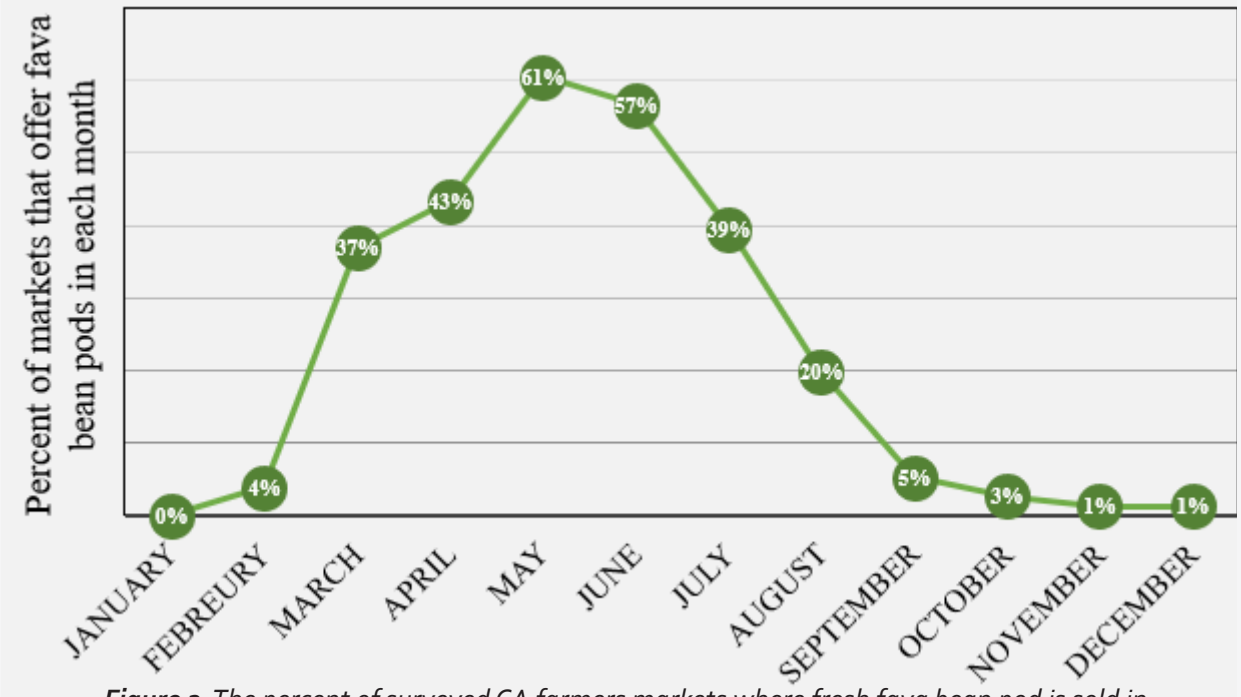


***Figure 2**: The percent of surveyed CA farmers markets where fresh fava bean pod is sold in different months of the year.*

# Implications

The study has two main implications for the California fava bean industry. First, the results of this survey inform existing and potential specialty crop producers about markets where they can potentially sell their harvested fresh fava bean pods. Second, the study results inform consumers about the location and seasons in which fresh fava bean pods are offered for sale in California.

# Acknowledgments

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## Goals

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