EVALUATION OF HARDY FIG VARIETIES
IN A NORTHERN NEW ENGLAND HIGH TUNNEL
A USDA SARE-FUNDED FARMER GRANT, 2014-2015

This research explores the potential for organic fig (*Ficus carica*) fruit production in a northern New England high tunnel (Zone 5b). Building on the success of fig producers who have utilized high tunnels in the mid-atlantic states and on variety trials of fig enthusiasts in New England, this project is the first to quantify the survivability, productivity, and economics of four hardy fig cultivars grown in a high tunnel in coastal Maine. The study has been conducted over the course of the 2014 and 2015 growing seasons. In 2014, Bill Errickson (owner) and Mark Fulford (technical advisor) planted eight trees each of the four varieties, for a total of 32 plants, on 5 foot centers. The varieties included in this study were: Gino's Black (GB), Marsailles Black VS (MBVS), Ronde de Bordeaux (RDB), and Sal's GS (SGS).

Prior to planting, the soil was amended with a mineral and worm castings blend, including granite meal, colloidal phosphate, bone char, and kelp meal, based on a soil test taken prior to planting. Wood chip mulch and landscape fabric were applied after planting and water was supplied throughout the season using drip irrigation. Each variety, with the exception of RDB, had individual plants that suffered transplant shock when transitioning to the conditions of the high tunnel, setting their growth back during the first year of establishment. After leaf drop in the fall, four trees of each cultivar were covered with fabric row cover to evaluate the necessity of additional winter protection. The row covers were removed in the spring of 2015, at which time winter dieback was measured. During the winter of 2014-2015, all fig trees died back to ground level, but began growing again with new growth emergence in the spring. The single exception was seen with the uncovered GB trees, which experienced winter mortality in three out of four plants.

During the 2014 and 2015 growing seasons, data was collected to measure the following parameters: flowering dates, harvest dates, total yield of fruits, yield of marketable fruits, yield of unripe fruits, fruit size (average weight per fruit), plant height, Brix levels, taste, and economics. Figs produce an inflorescence, called a syconium, which contains numerous unisexual flowers that are not outwardly visible; thus, flowering dates were recorded as the first observance of syconium formation. In 2015, the first syconiums were observed on SGS on June 19th, followed by MBVS on June 26th, and RDB and GB on July 3rd.

Vegetative growth was calculated for each variety by measuring stem length for covered and uncovered trees (Figure 1). Vegetative growth was greater in covered varieties of GB, MBVS, and RDB, while winter protection did not result in greater vegetative growth for SGS. RDB displayed the greatest amount of vegetative growth of the four varieties. Fruit set for each variety is displayed in Figure 2, with covered GB and MBVS trees showing greater fruit set when compared to uncovered trees. Fruit set in RDB and SGS does not appear to have increased with winter protection with row cover. Uncovered RDB set the most fruit per plant, closely followed by covered MBVS.

In 2014, two ripe figs were harvested from a RDB plant in September and one ripe fig was harvested from an MBVS plant in November. The fruit of the RDB had an average weight of 0.04 lbs and a Brix level of 17. The fruit of the MBVS weighed 0.03 lbs and had a Brix level of 19. In 2015, a ripe SGS was harvested on September 19th, weighing _____ and having a Brix level of _____. This study will continue through the remainder of the season; additional fruits that ripen will be measured accordingly. While the potential clearly exists for fig production in the Northeast, future efforts should focus on more intensive winter protection and advanced methods for ripening fruit.

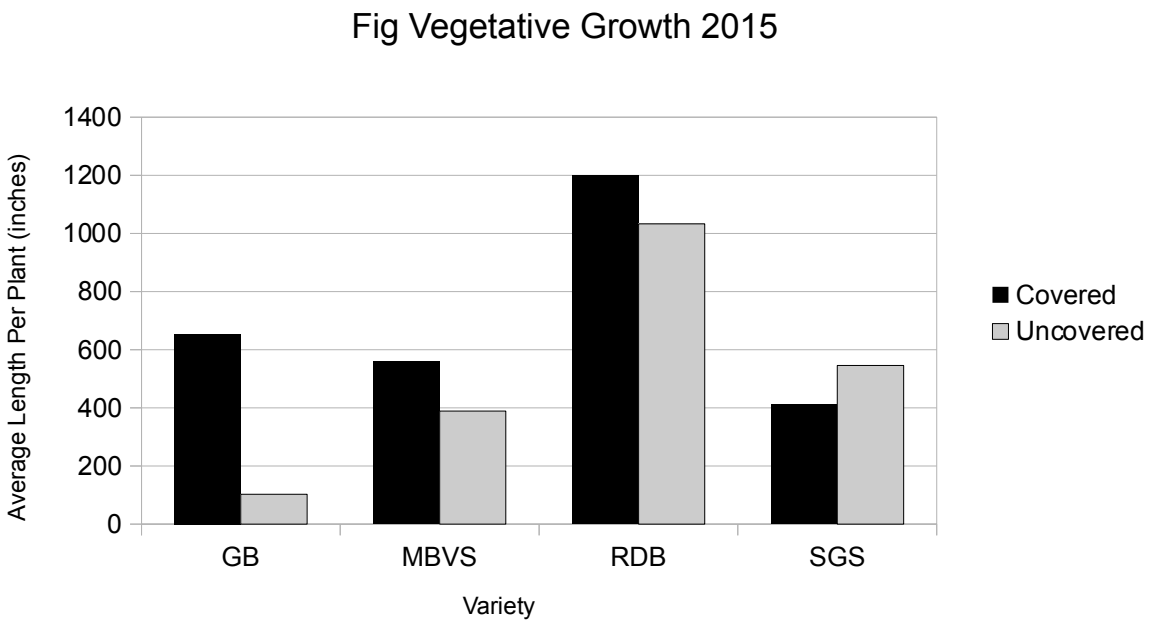

Figure 1

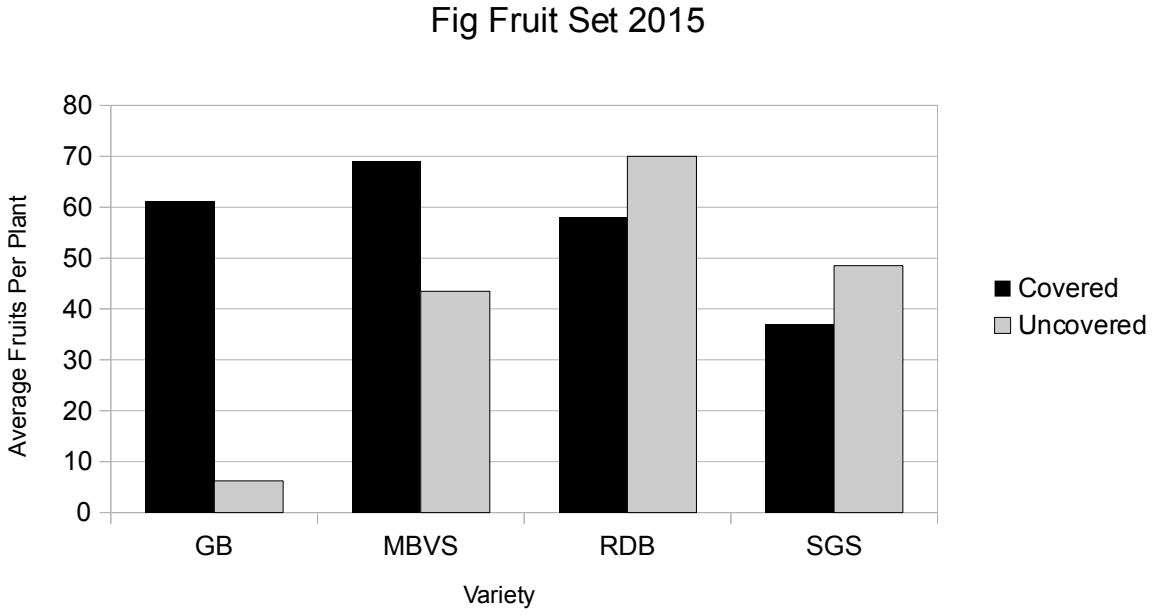

Figure 2