

Title: Vegetation-Free Strip Width in Young and Established Blackberry

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Commercial blackberry production consists of planted rows and between row spaces. As with other perennial fruit crops, a strip of vegetation-free area (or vegetation-free strip width-VFSW) is typically maintained within the planted row to avoid competition with encroaching weed or sod species existing within the between row spaces. Unlike similarly managed crops, the ideal vegetation-free strip width for blackberry has not been established. Understanding more about the influence of VFSW on blackberry growth, development, yield, and fruit quality will allow growers to optimize production practices and maximize the efficiency of input costs.

Two studies were initiated at the Sandhills Research Station near Jackson Springs, NC in newly established blackberries in Spring of 2011. Medium-sized (50 plugs per tray) ‘Navaho’ blackberries plugs were transplanted March 29 at a spacing of 4 feet apart in the row and 12 feet between rows. An area of 1 foot on both sides of planted row was cultivated until primocanes became too tall to do so. In August plants were trellised. Treatments for the first and second location were initiated in mid-August and mid-October, respectively. Treatments consisted of 6 VFSWs: 0, 1, 2, 4, 6, and 8 ft which were established with the application of a 2% solution of Rely plus an inert blue marker dye. Between row spaces consisted of existing annual and perennial weed and turf species and primarily included sandbur, crabgrass, bermudagrass, spotted spurge, prostrate knotweed, carpetweed, bird’s foot trefoil, and yellow nutsedge. Photos of the field and VFSWs can be seen in figure 1.

To determine the influence of treatment on blackberry plant growth, cane number and length were measured. There was no strip width effect on cane number or length in 2011. This is most likely due to the fact that vegetation in between row spaces was sparse in 2011. Plots averaged 2 heavily branched, semi erect, 44” canes per plant. The research will be continued in 2012 when additional data will be recorded and include blackberry yield, fruit number and weight, and canopy density. Additionally, an economic analysis will be conducted in 2012 and will be a result of yield relative to the costs associated with variable herbicide application, mowing, and cane thinning due to VFSW. Results are anticipated to vary by treatment as vegetation between rows continues to establish.

Additionally, a site in Western North Carolina has been obtained for use in conducting this study in established blackberry. Research at this location will begin Spring of 2012 using the protocol described above.

Figure 1. Vegetation-free strip widths in 'Navaho' blackberry, Jackson Springs, NC 2011.

