Section IV
Tree Growth and Development

Bud Development

Early Development of the Pistillate Flower in Seven Walnut Cultivars

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A study of early development of pistillate flowers in seven walnut cultivars was started in February, 1976. The time of initiation of each pistillate floral component varied with each cultivar. The earliest indication of floral formation is the flattening of the apical meristem. This was evident during the first week of June for Chico and Serr. For Vina, Tehama and Pedro, flattening occurred in late June. Hartley and Franquette showed floral initiation in early July. The involucre (including bract), appeared two to three weeks after flattening of the apex. For Chico, sepal initiation was evident towards the end of July. Sepals were not formed until the beginning of March for Serr and Vina, middle to late March for Tehama, Pedro and Hartley, and beginning of April for Franquette. Pistil was initiated within a week or two after the sepals except for Chico. This early cultivar produces sepals in July and does not initiate the pistil usually until January of the following year.

Chemical Inducement of Lateral Branch Development

George C. Martin

Multiple lateral bud development without deleterious side effects were noted from July treatment of 1000 ppm of RO7-6145. Treatments of 5000 and 10,000 ppm induced lateral bud development with considerable foliar damage. This damage was mostly in the form of killing the terminal bud, chlorosis of leaves and in some cases base abscission. Applications of the same chemical in August, September and October were less effective than the July treatment. This material may have a use in early tree training and branch selection.