## Enhancing Burley Tobacco Production Labor Efficiency

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This study was undertaken to improve our knowledge of the actual utilization of labor on burley tobacco farms. Over the years assumptions have been made about the potential labor savings of new production practices and the assumed labor savings have been applied to a decades old labor baseline. However a comprehensive study of labor utilization had not been conducted since the shift to mostly migrant work crews. The objectives of this study were to: 1) quantify the range of labor hours required for specific tasks on working burley farms, 2) analyze work processes and identify efficient work methods, and 3) develop tools and training materials to assist growers in recognizing inefficient processes and implementing more efficient work methods.

Currently, significant progress has been made toward objective number 1 with some progress on objective 2. Multiple visits have been made to six burley tobacco farms ranging in size from 15 to 220 acres of burley tobacco production. Typical crew sizes ranged from 5 to 24 workers during the observation periods. During each visit crews were observed and videoed during their work procedures. Crews were not explicitly informed of the purpose of these visits so as not to influence their normal work habits. Approximately 50 to 60 hours of video has been captured for further analysis. Specific tasks that have been documented thus far include transplanting, topping, stick dropping, cutting, and housing. Collection of additional video on stripping and baling is continuing into the early winter.

Summary and analysis of the video is in the very early stages and will continue through the winter. As expected we have observed a wide range of work patterns across farms. Initial impressions of the information collected thus far suggest that smaller work crews may be more efficient in terms of output per worker hour due to less non-productive down time. Larger transplanters (more rows) allow more acreage to be covered in a given period of time, but do not appear to substantially affect the number of worker hours required per acre for transplanting. The management of crews particularly when there is a long haul distance between barn and fields seems to be an area with potential for improved labor efficiency. As the videos are further reviewed more precise measurements of the time to perform specific tasks will be conducted to try to identify the practices which lead to reduced efficiency and non-productive time.