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Stand-level basal area mixed-effects models are commonly being developed for species around the World. We wanted to determine if a stand-level basal area mixed-effects model fit using one species (e.g. loblolly pine plantations where biological and economic rotation ages can range from 20 to 40 years) could produce accurate estimates following calibration using data from another species. This approach would be useful in those situations where there is limited data available for a species (e.g. naturally-regenerated black spruce where biological and economic rotation ages can range from 75 to 150 years) to model basal area across the entire range of biological or economical rotation ages. Perhaps a mixed-effects model fit using data of a species where repeated measurements have been made across the entire biological or economical rotation age could be calibrated to produce accurate predictions for those species where data is limited at, say, mid-rotation or final rotation ages. When entering data into traditional growth and yield models in a sense the model is "calibrated." However, mixed-effects could be advantageous because calibration can include more than one temporal observation that may allow for a better prediction of the basal area trajectory. Additionally, this approach could be useful where there are insufficient measurement ages across a rotation for newer silvicultural treatments.