TADAM: A dynamic whole-stand approximation for the TASS growth model

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Errata

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Ignore material that was originally printed in square brackets in the caption to Figure 5. Corrected caption below.

Site: 20		pfixd: 500		ifixd: 10		Smax: 60		Thin factor: 1.3	
Disc rate: 4%		pdirect: 0.01		hdirect: 0.01		vzero: 0.2			
Planting	Age	H	B	N	V	Cost	Return	Net	Discounted
Breast-height	4.959613661		1.3	0	639.3065712	506.3930657		-506.393066	-506.393066
Harvest	56.1342361	20.39519668	38.98187419	584.6916179	260.224255	15.84691618	11462.87451	11447.0276	1266.307678
								NPV:	1266.307678
								Site Value	\$ 1,423.81
Thin intensity: 32% of BA									
Planting	Age	H	B	N	V	Cost	Return	Net	Discounted
Breast-height	4.959613661		1.3	0	1370.911642	513.7091164		-513.709116	-513.709116
Before thin	14.2060689	5.316355785	3.452393321	1306.49452	6.929244301			0	0
Removed	14.2060689	5.316355785	1.094741476	725.983998	2.451916946	22.43779197		0	-12.852965
After thin	14.2060689	5.316355785	2.357651846	580.5105216	4.477327355			0	0
Harvest	55.54567729	20.27031683	38.96370111	557.2595909	253.4343635	15.57259591	11358.59663	11343.02303	1284.104731
								NPV:	1271.251766
								Site Value	\$ 1,433.54

Fig. 5. A spreadsheet using the TADAM Excel add-in to optimize stand treatments.

Missing text on page 580 is indicated in bold:

Closing Remarks

Detailed mechanistic individual-based models are invaluable as research tools. They can synthesize and make sense of isolated facts, identify knowledge gaps, and generate hypotheses for further investigation. In addition, TASS was able to produce plausible predictions at a time when little permanent sample plot data was available. For the management of even-aged single-species stands, however, whole-stand models based on aggregate stand-level variables can be more useful and potentially more accurate (e. g., Vanclay 1994). Besides issues of complexity, usability, and overparameterization, detailed initial information at the tree level may be unavailable or unreliable, and largely redundant.

TADAM has been able to approximate closely stand dynamics as simulated by TASS. In the longer term, it seems natural to develop similar models from actual field measurements. Meanwhile, TADAM complements TASS and TIPSy as an easy to use and flexible analysis tool.