

# Acadian Variant of FVS (ACD) Benchmarking

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## Introduction

The `AcdFiaBench.db` contains remeasurement data for 5564 FIA plots. The treatment history breakdown is shown in Table 1. The plot distribution by forest type is shown in Table 2.

The plots were grown using the ACD7 variant containing revised growth equations for all tree components and mortality.

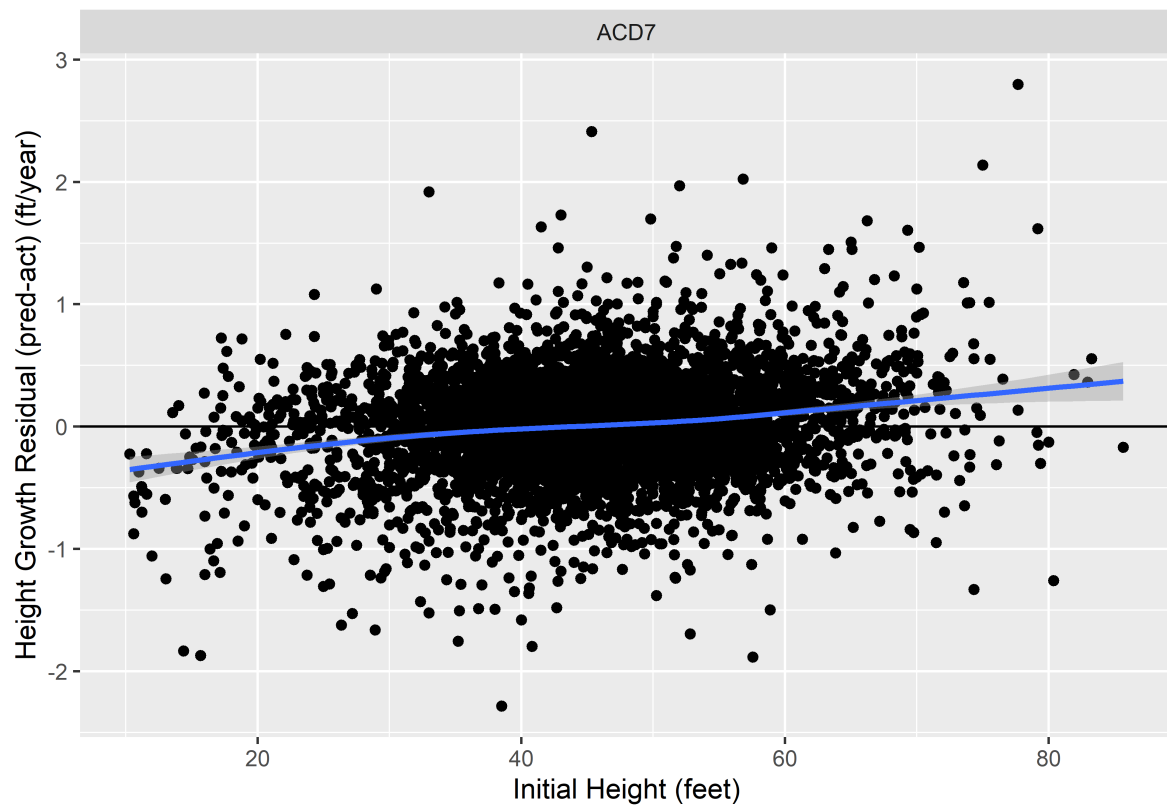
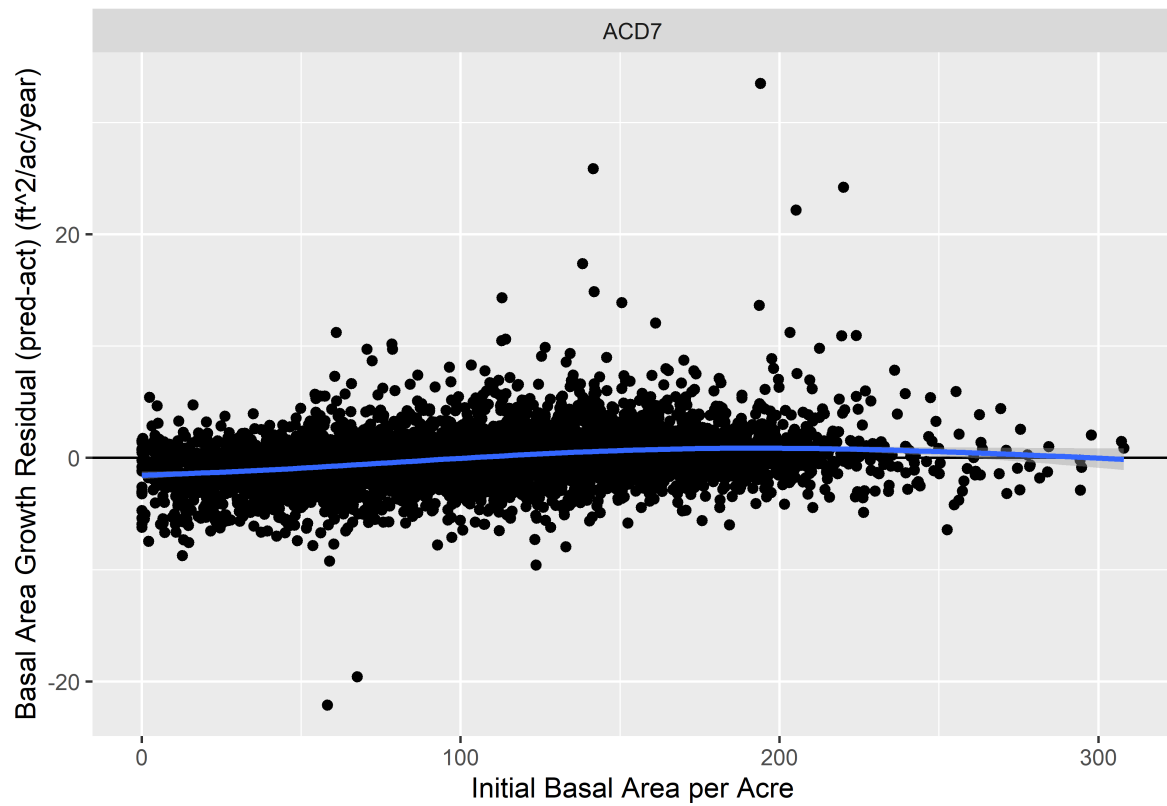
Table 1: Treatment Periods

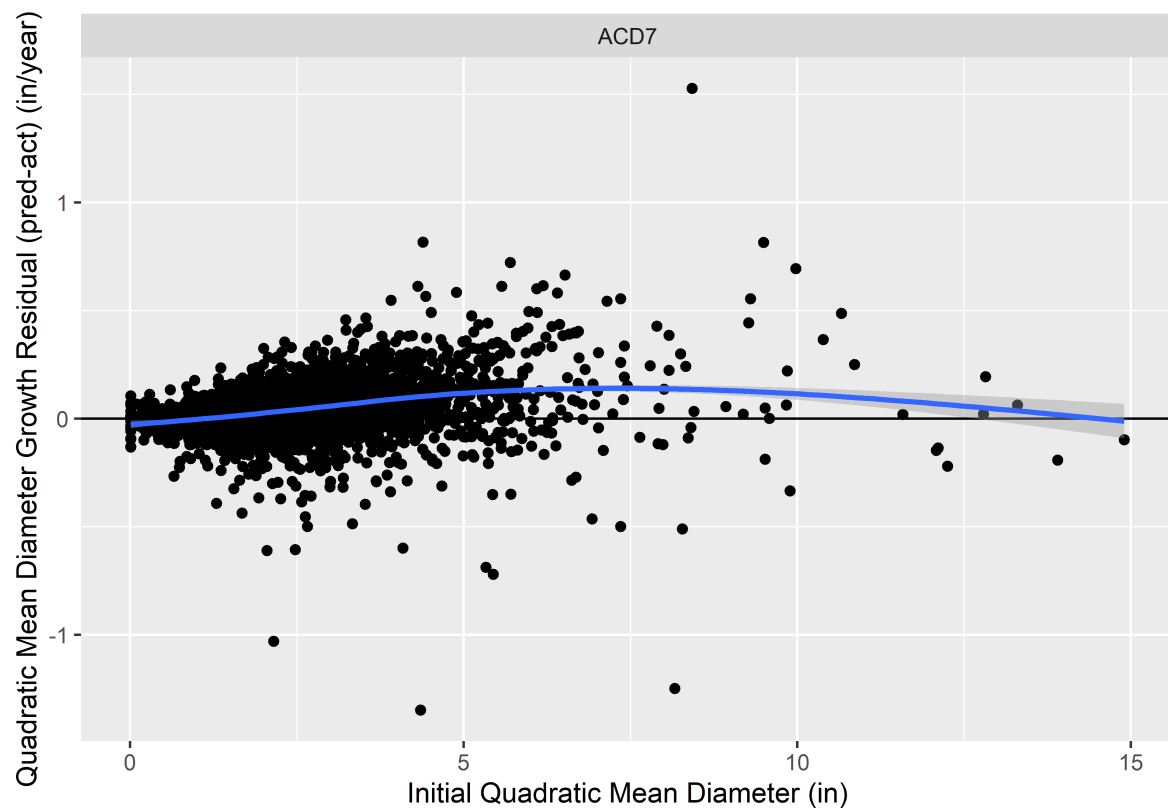
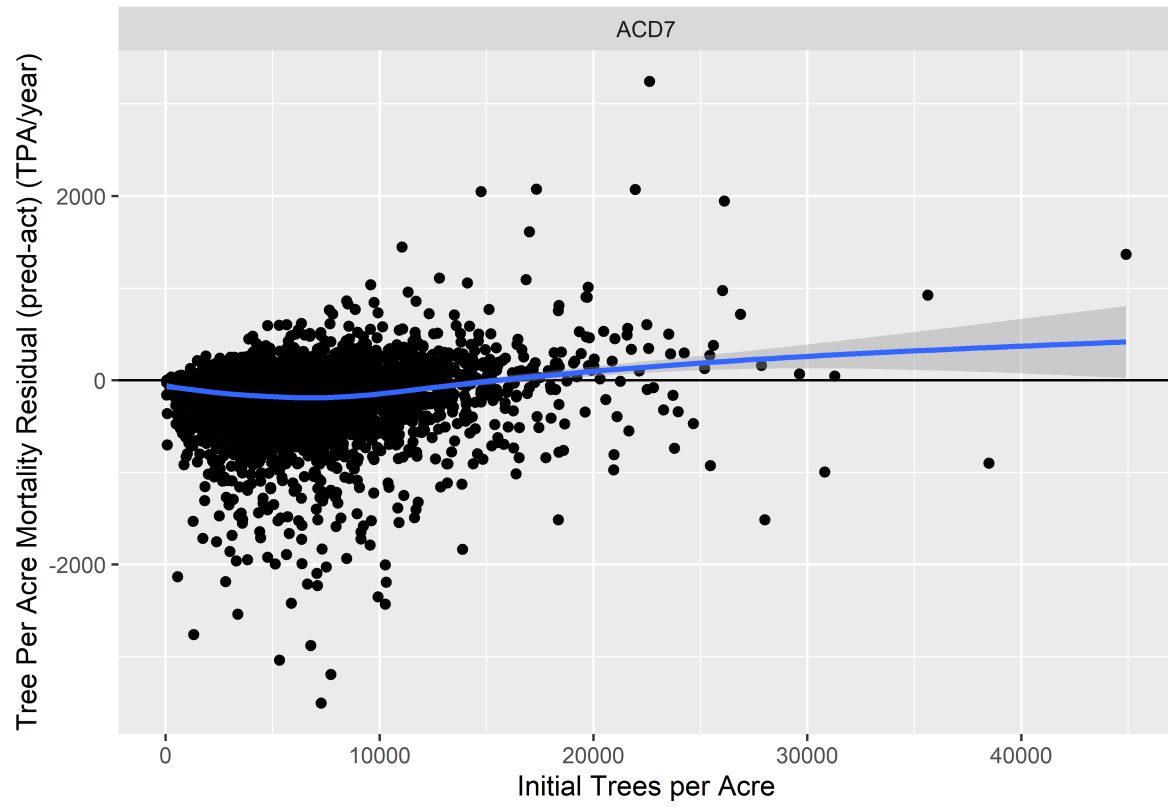
TrtPeriod	N Plots
none	3893
post	1194
pre	477

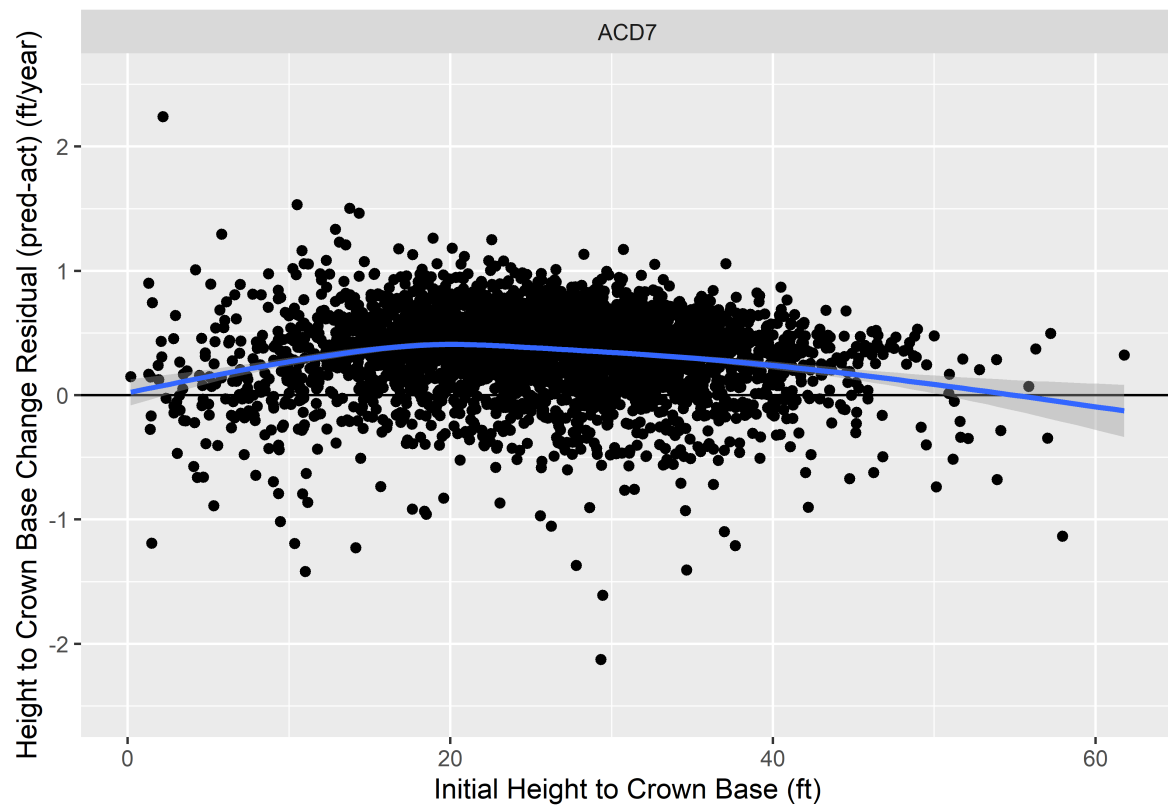
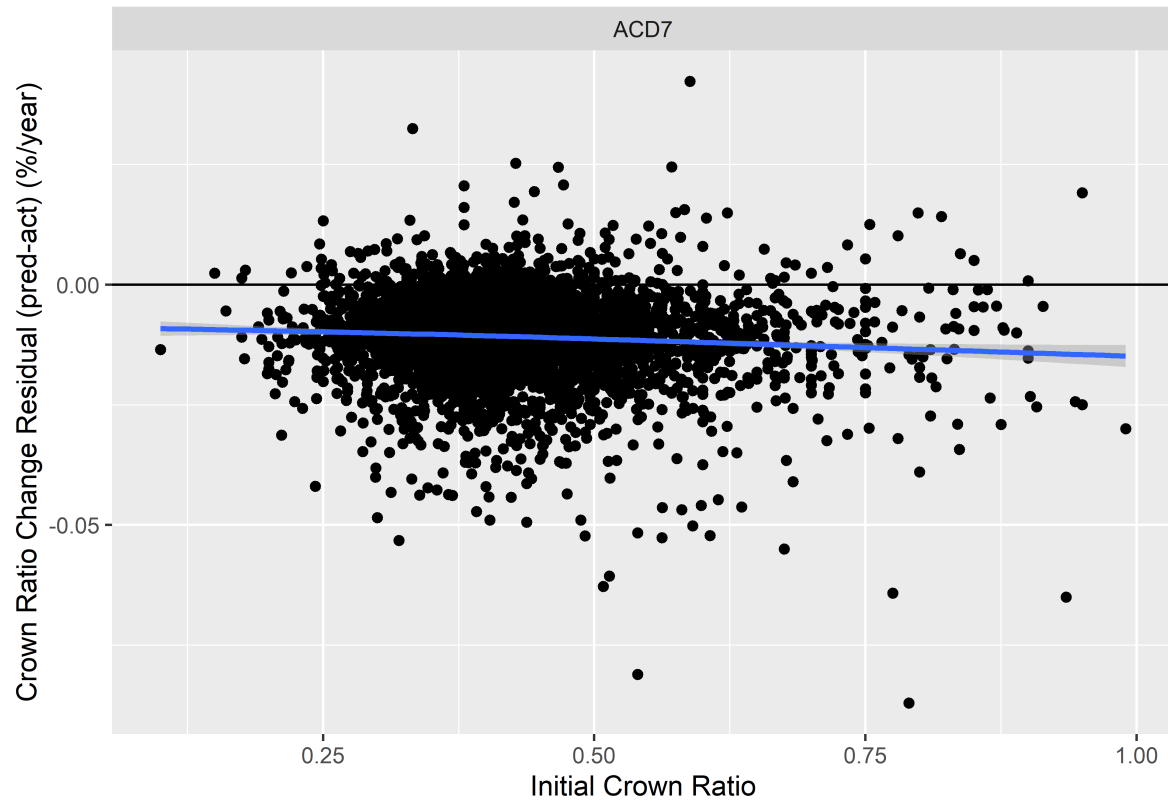
Table 2: Forest Types

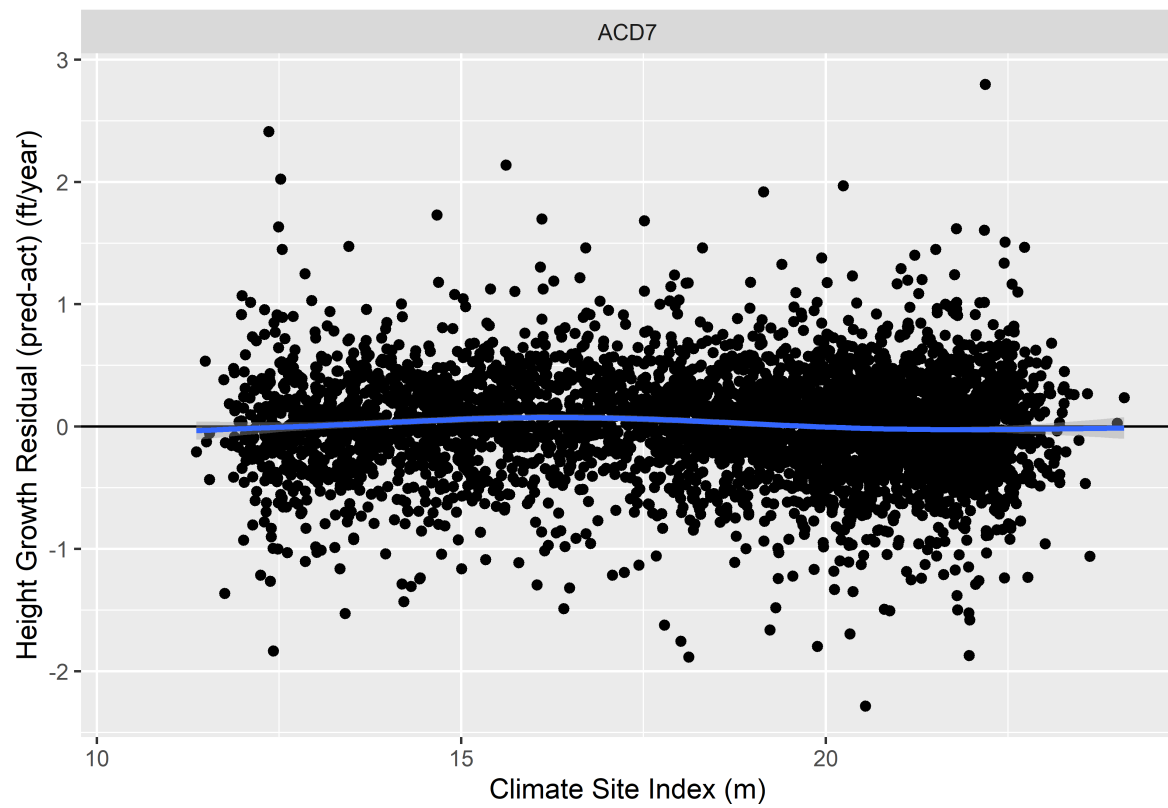
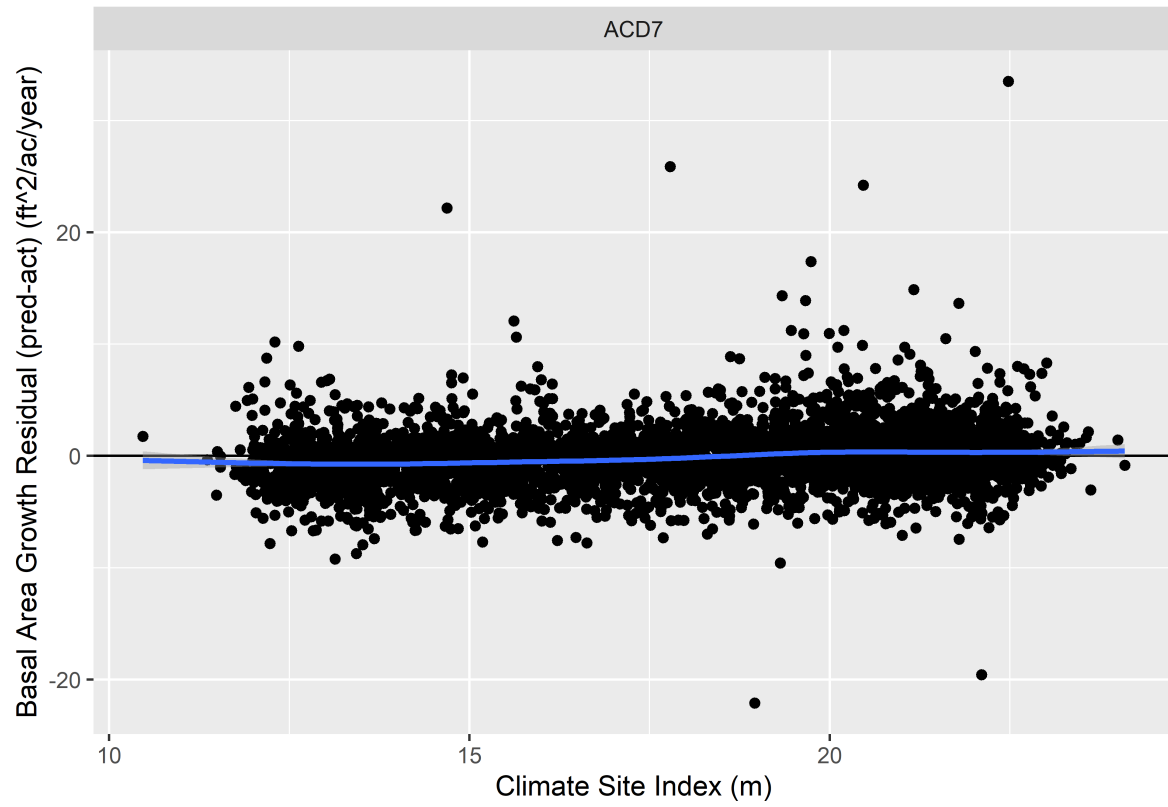
Forest Type	N Plots
Aspen	113
Aspen / birch group	1
Balsam fir	583
Balsam poplar	15
Black ash / American elm / red maple	30
Black cherry	9
Black locust	2
Black spruce	103
Eastern hemlock	229
Eastern redcedar	1
Eastern white pine	242
Eastern white pine / eastern hemlock	72
Eastern white pine / northern red oak / white ash	158
Elm / ash / black locust	2
Gray birch	32
Hard maple / basswood	2
Introduced larch	2
Maple / beech / birch group	3
Mixed upland hardwoods	24
Northern red oak	56
Northern white-cedar	180
Norway spruce	3
Other exotic hardwoods	1
Other pine / hardwood	61
Paper birch	180
Pin cherry	2
Pitch pine	2
Red maple / lowland	74
Red maple / oak	12
Red maple / upland	444
Red pine	13
Red spruce	249
Red spruce / balsam fir	530
Spruce / fir group	2
Sugar maple / beech / yellow birch	1311
Tamarack	20
White oak	3
White oak / red oak / hickory	5
White spruce	60
Willow	1
NA	16

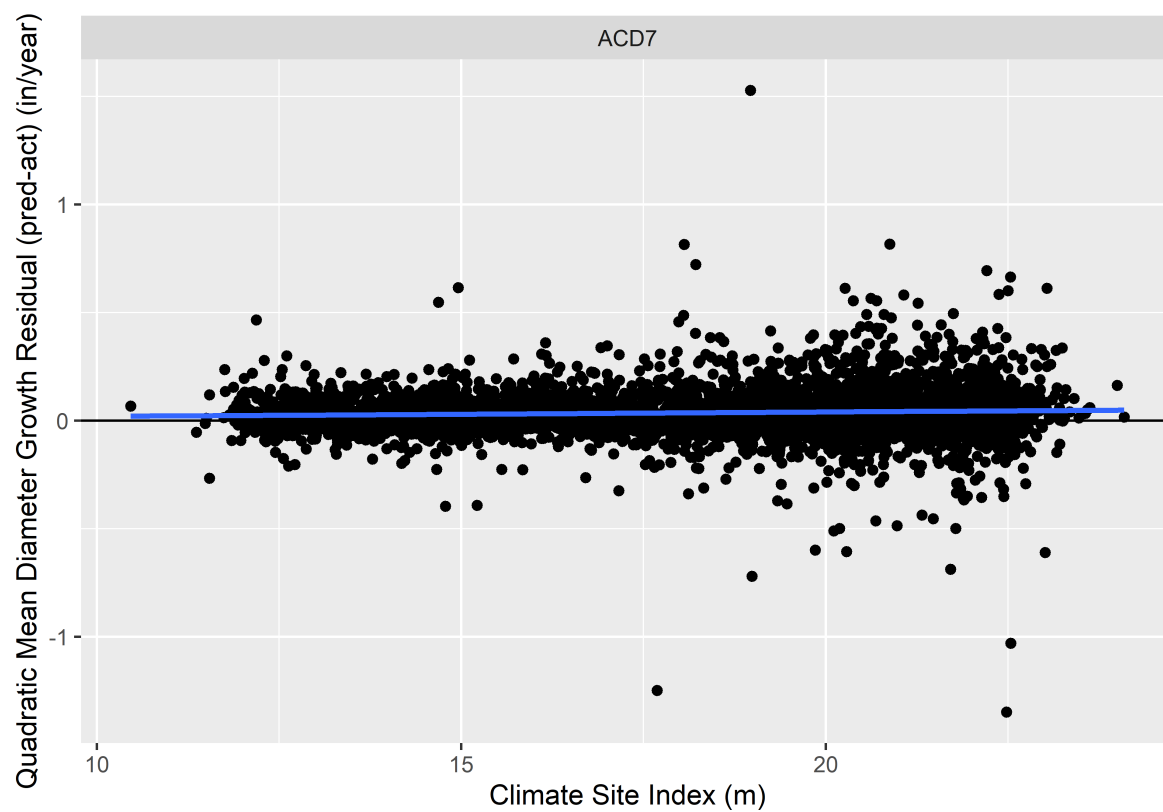
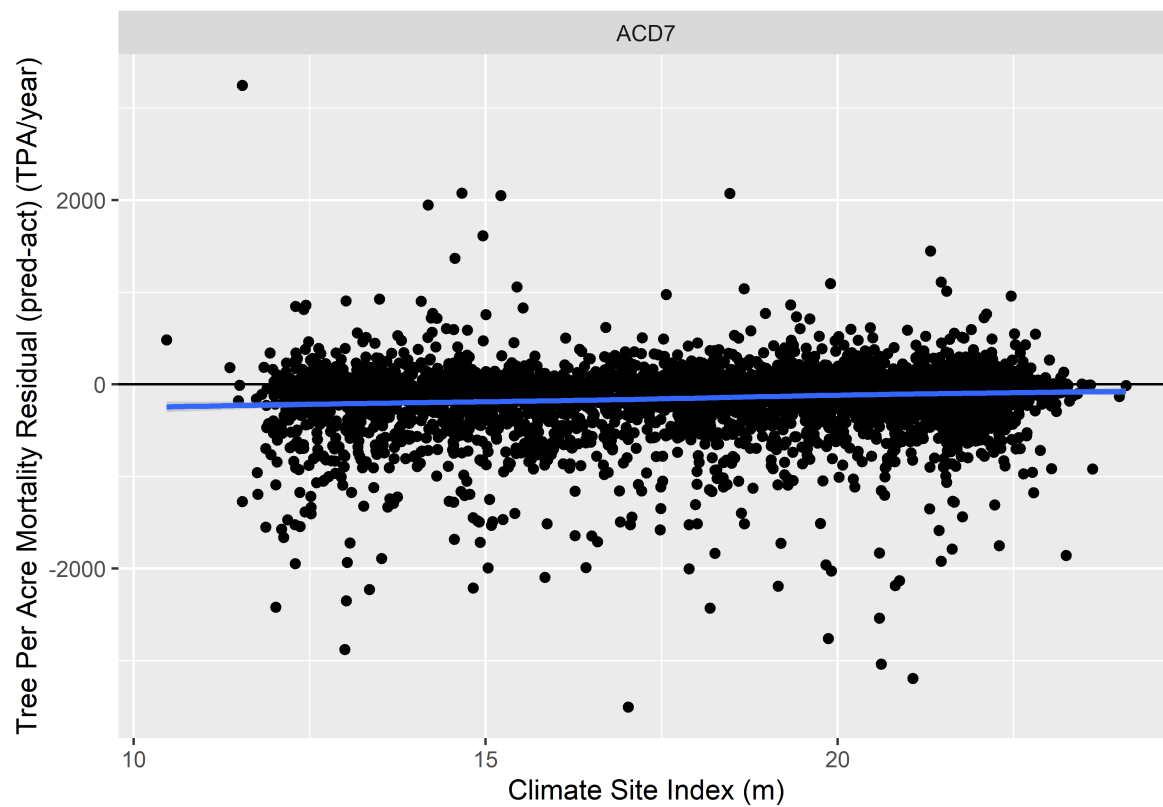
## All Plots Validation Residual Analysis

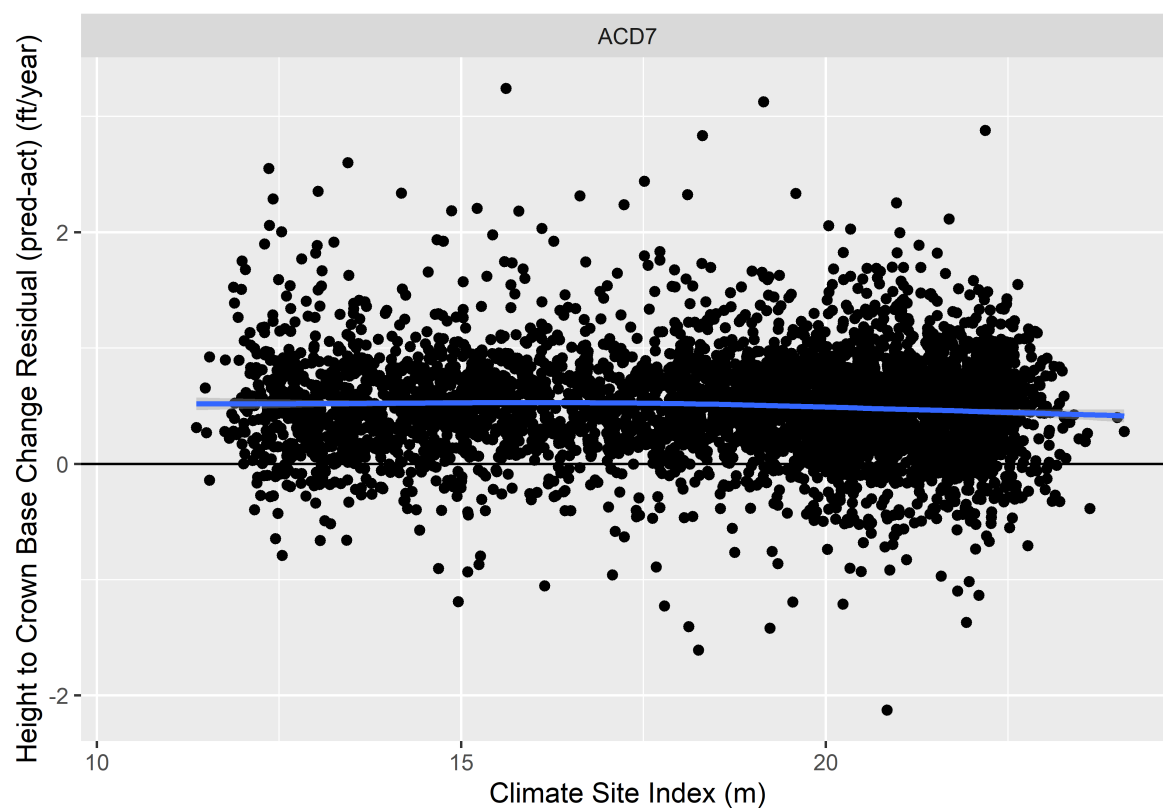
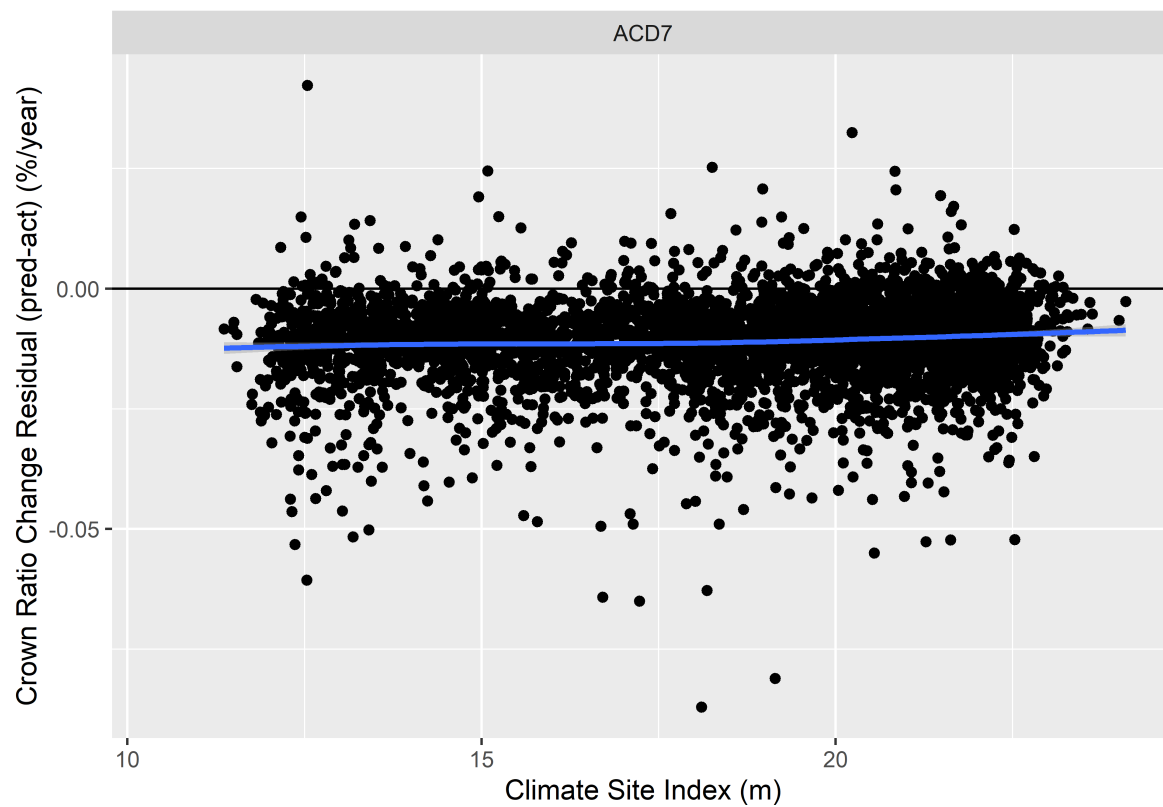




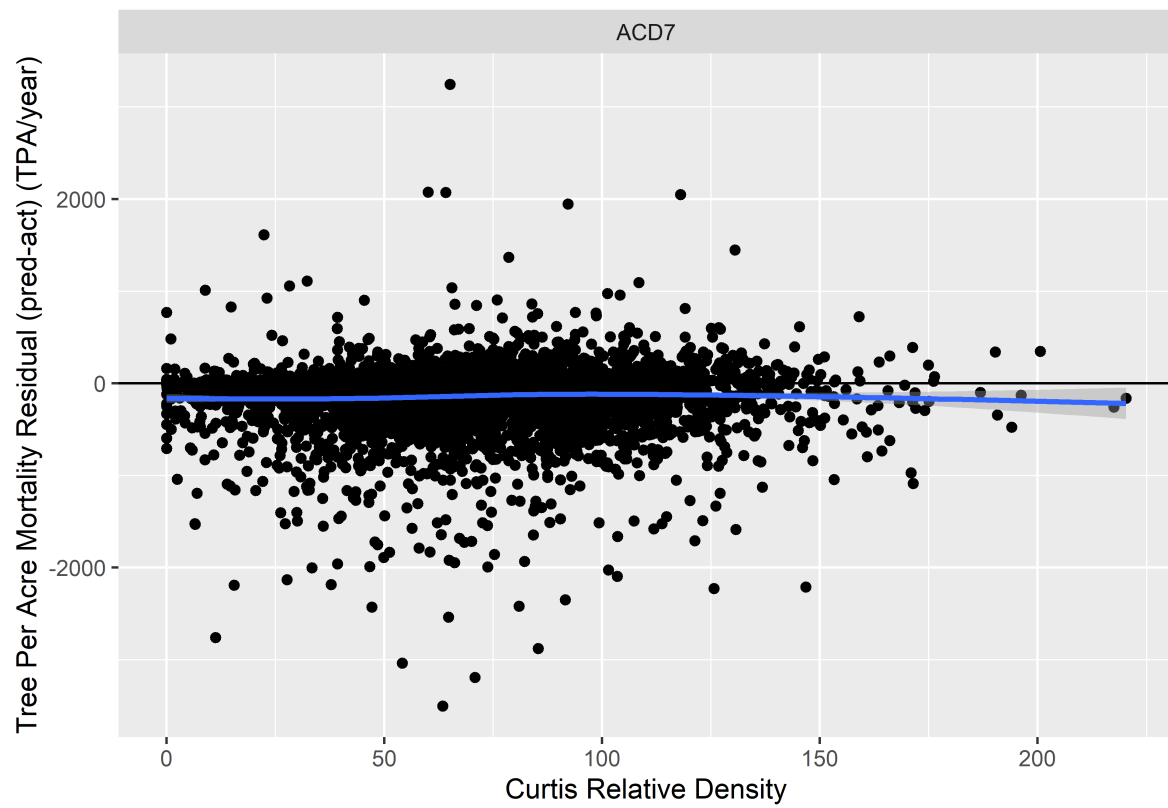
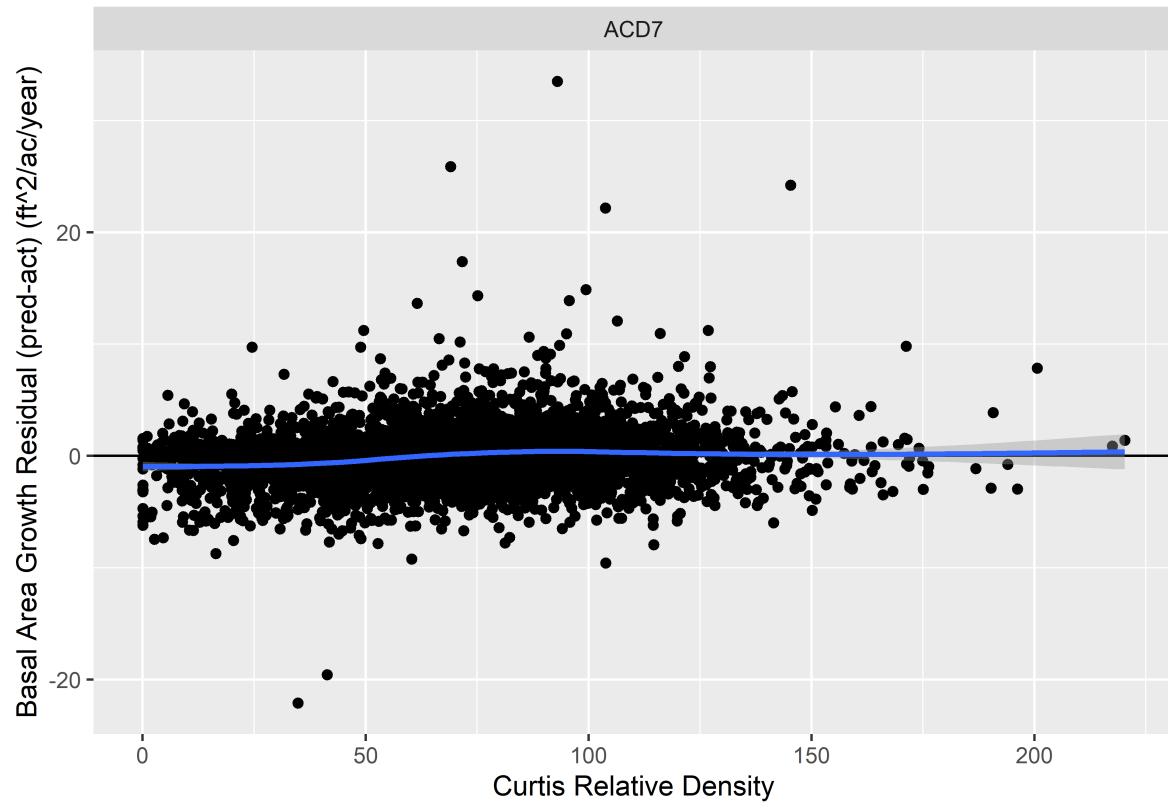


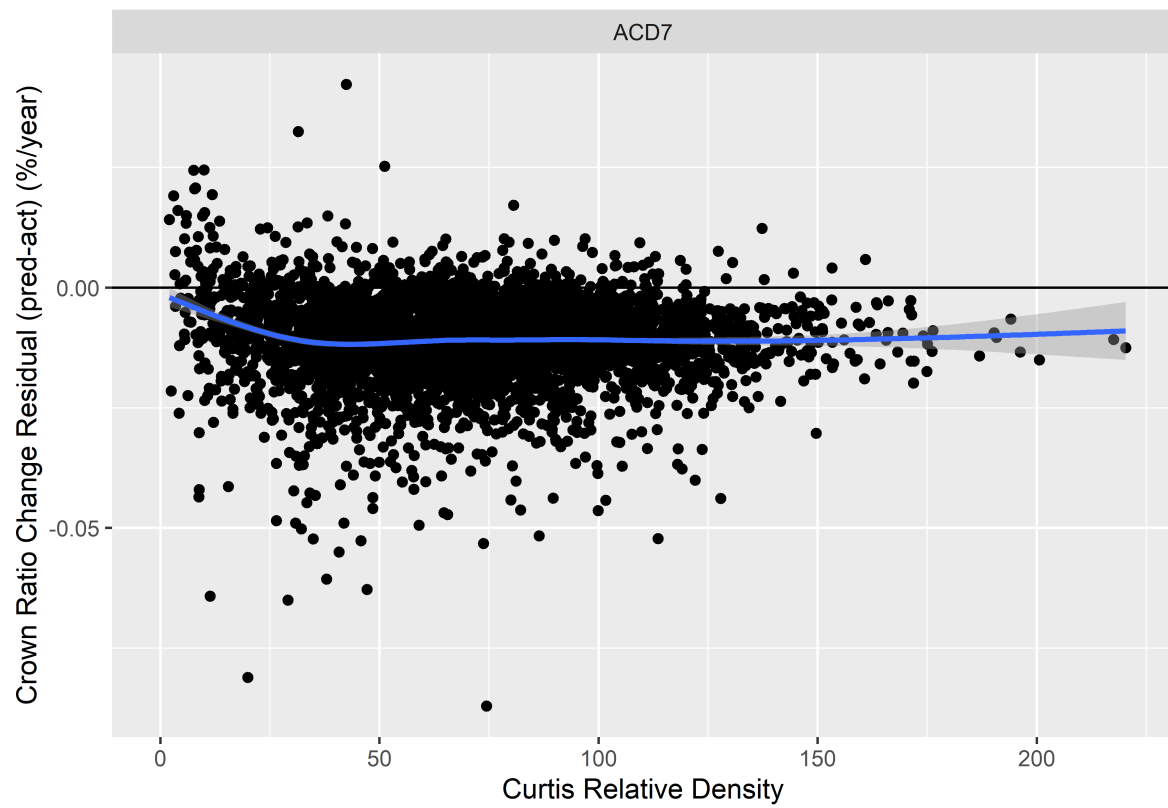
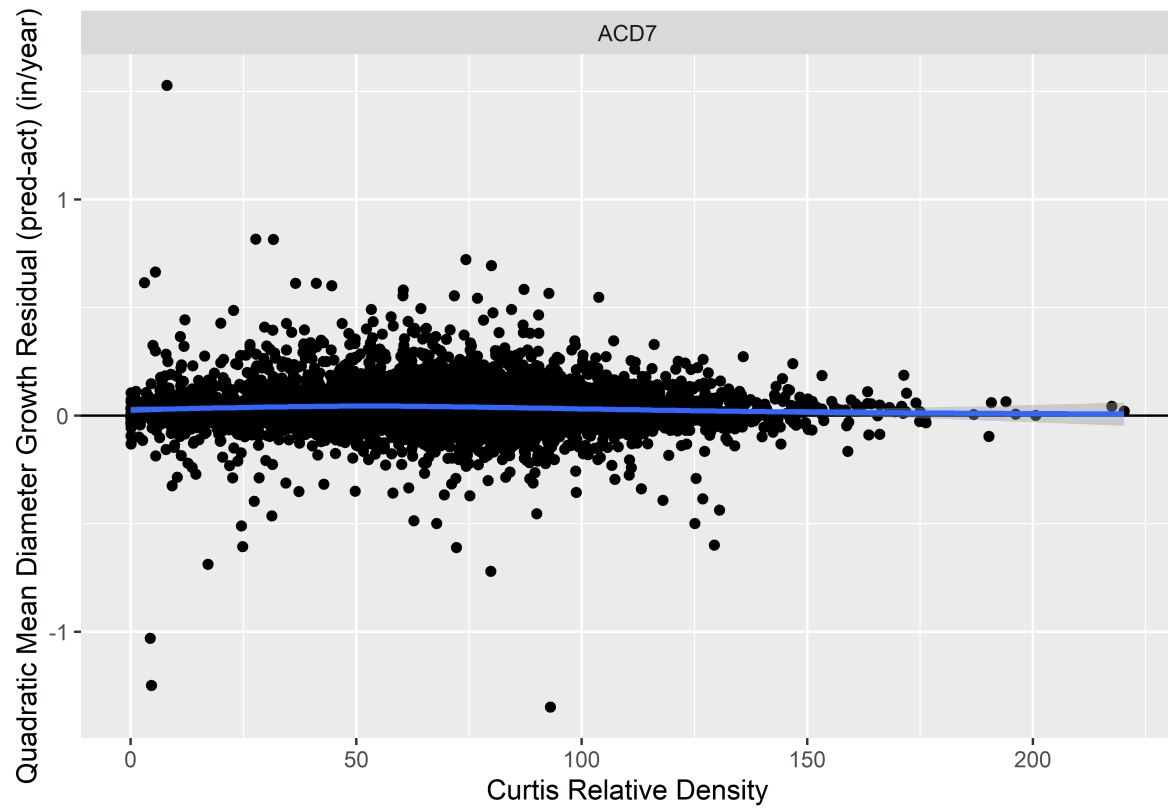












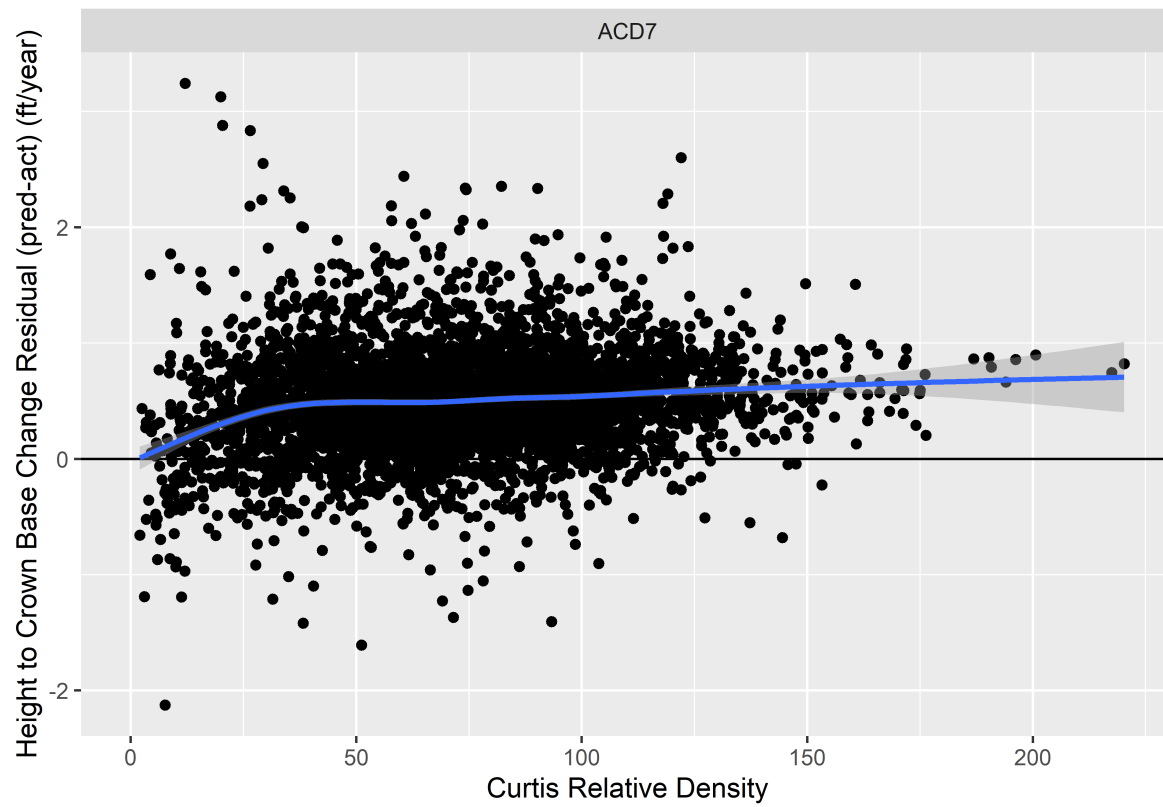


Table 3: Annual Growth Residuals

Variable	N	Mean	Median	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
version: ACD7								
Basal Area Growth Error	4803	-0.0322	-0.0816	2.51	-22.1	-1.37	1.12	33.5
Tree per Acre Change Error	4803	-139	-59.6	353	-3502	-224	20.4	3244
Quadratic Mean Diameter Growth Error	4803	0.0371	0.0273	0.114	-1.35	-0.0181	0.0848	1.53
Height Growth Error	4597	0.0121	0.0211	0.422	-2.28	-0.229	0.262	2.8
Crown Change Error	4578	-0.0108	-0.00999	0.00854	-0.087	-0.0146	-0.00602	0.0423
Height to Crown Base Change Error	4578	0.496	0.485	0.441	-2.13	0.243	0.733	3.24