

Stephen F. Austin State University

SFA ScholarWorks

Informal Project Reports

East Texas Pine Plantation Research Project

12-1986

Research Report No. 13, Estimating Dry Weight of Understory Woody Plants in East Texas

Hershel C. Reeves

J. David Lenhart

Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University

Follow this and additional works at: https://scholarworks.sfasu.edu/etpprp_project_reports



Part of the [Forest Management Commons](#)

[Tell us](#) how this article helped you.

Repository Citation

Reeves, Hershel C. and Lenhart, J. David, "Research Report No. 13, Estimating Dry Weight of Understory Woody Plants in East Texas" (1986). *Informal Project Reports*. 61.

https://scholarworks.sfasu.edu/etpprp_project_reports/61

This Report is brought to you for free and open access by the East Texas Pine Plantation Research Project at SFA ScholarWorks. It has been accepted for inclusion in Informal Project Reports by an authorized administrator of SFA ScholarWorks. For more information, please contact cdsscholarworks@sfasu.edu.

D
97
P55
47x

ESTIMATING DRY WEIGHT
OF
UNDERSTORY WOODY PLANTS
IN EAST TEXAS

by
Hershel C. Reeves
and
J. David Lenhart

REPORT NUMBER 13
TO
PARTICIPATING COMPANIES
IN THE
EAST TEXAS PINE PLANTATION RESEARCH PROJECT

A STUDY OF
LOBLOLLY AND SLASH PINE PLANTATIONS
IN
EAST TEXAS

CENTER FOR APPLIED STUDIES
SCHOOL OF FORESTRY
STEPHEN F. AUSTIN STATE UNIVERSITY
NACOGDOCHES, TEXAS 75962

December, 1986

18

Janis Lenhart 1985

This is the thirteenth in a continuing series of reports describing results from the East Texas Pine Plantation Research Project.

Subject and content of each ETPRP report is regional in scope and of particular interest to loblolly and slash pine plantation owners in East Texas.

Any suggestions, ideas or comments will always be welcomed.

* * * * *

Support from the participating companies...
Champion International Corporation,
International Paper Company,
Louisiana-Pacific Corporation and
Temple-EastTex, Inc.

is gratefully appreciated.

* * * * *

Both authors are professors, School of Forestry, SFASU.

This report is based on work by the authors between 1984 and 1986, inclusive.

J. David Lenhart
Project Director
December 12, 1986

This is the thirteenth in a continuing series of reports describing results from the East Texas Pine Plantation Research Project.

Subject and content of each ETPRP report is regional in scope and of particular interest to loblolly and slash pine plantation owners in East Texas.

Any suggestions, ideas or comments will always be welcomed.

* * * * *

Support from the participating companies...

Champion International Corporation,
International Paper Company,
Louisiana-Pacific Corporation and
Temple-Eastex, Inc.

is gratefully appreciated.

* * * * *

Both authors are professors, School of Forestry, SFASU.

This report is based on work by the authors between 1984 and 1986, inclusive.

J. David Lenhart
Project Director
December 12, 1986

ESTIMATING DRY WEIGHT
OF
UNDERSTORY WOODY STEMS
IN
EAST TEXAS

by

Hershel C. Reeves
Professor, School of Forestry, SFASU

and

J. David Lenhart
Professor, School of Forestry, SFASU

ABSTRACT. Equations are presented to estimate the total aboveground dry weight of 19 different species of small woody plants common to the understory of East Texas forests. For each of the 19 species, the predicting variable is basal diameter.

Information on the biomass of the small (less than 1.5 inches) woody vegetation existing under the canopy of larger pines can assist the forest manager in evaluating wildlife habitat, hardwood competition and forest fuel conditions.

In this paper, we present equations to estimate the oven-dry weight of the aboveground portion of individual woody plants for 19 species common to East Texas forest understories.

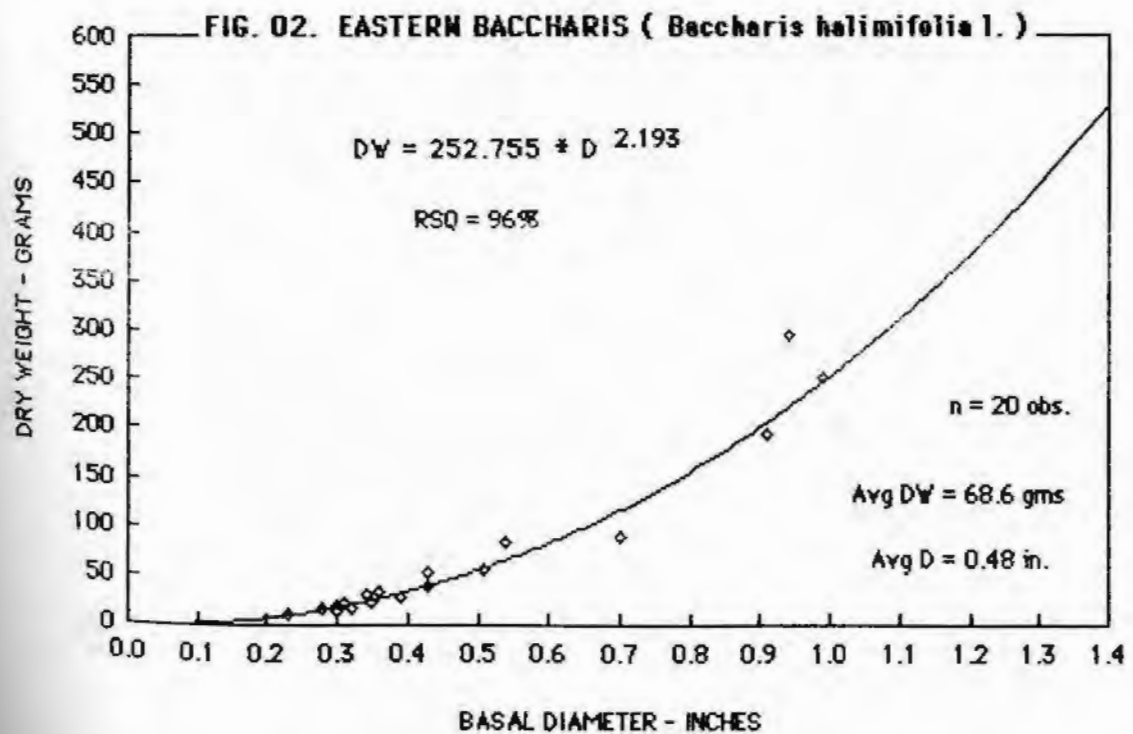
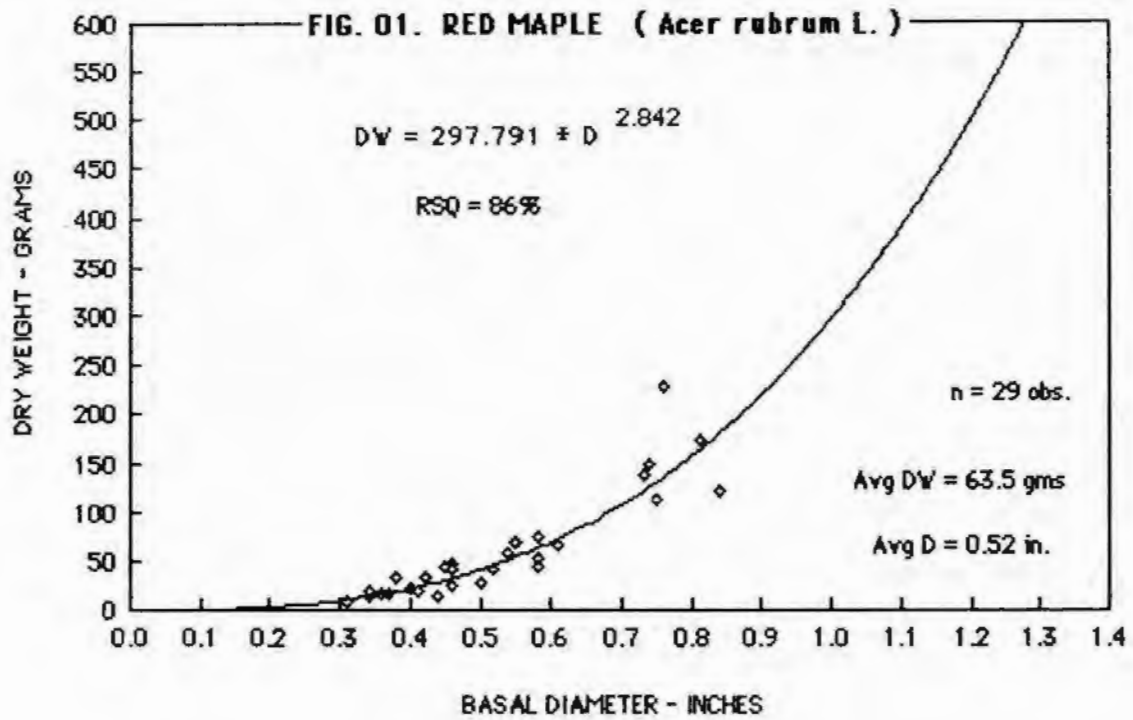
WOODY VEGETATION MEASUREMENT

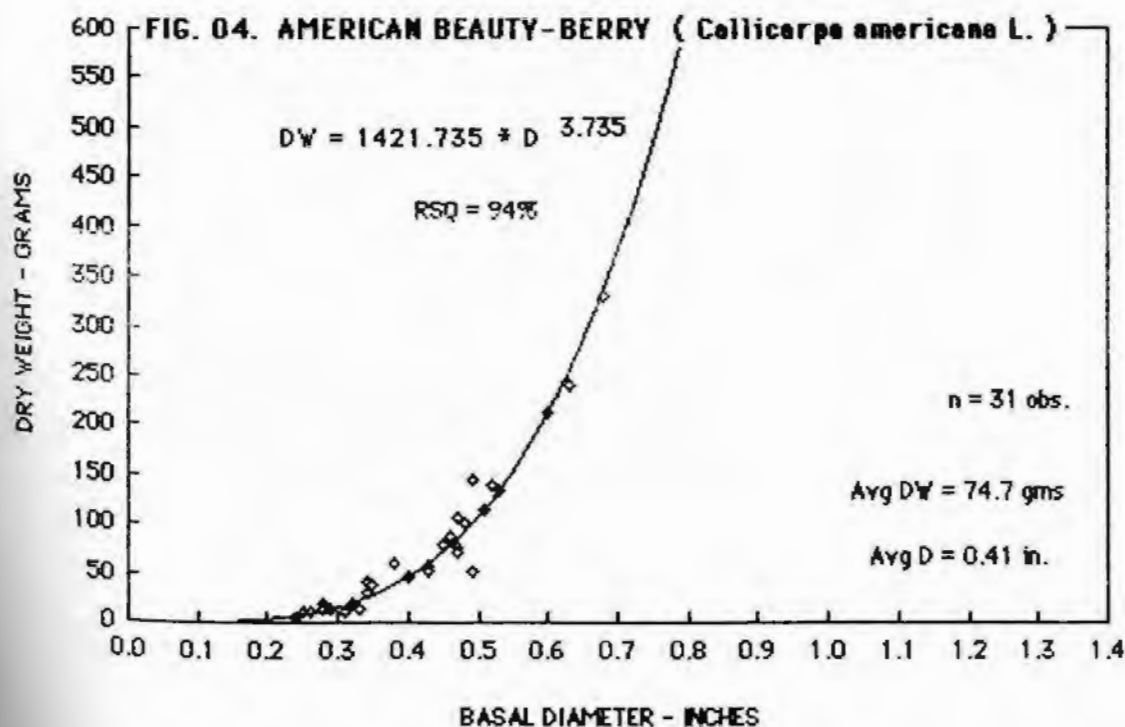
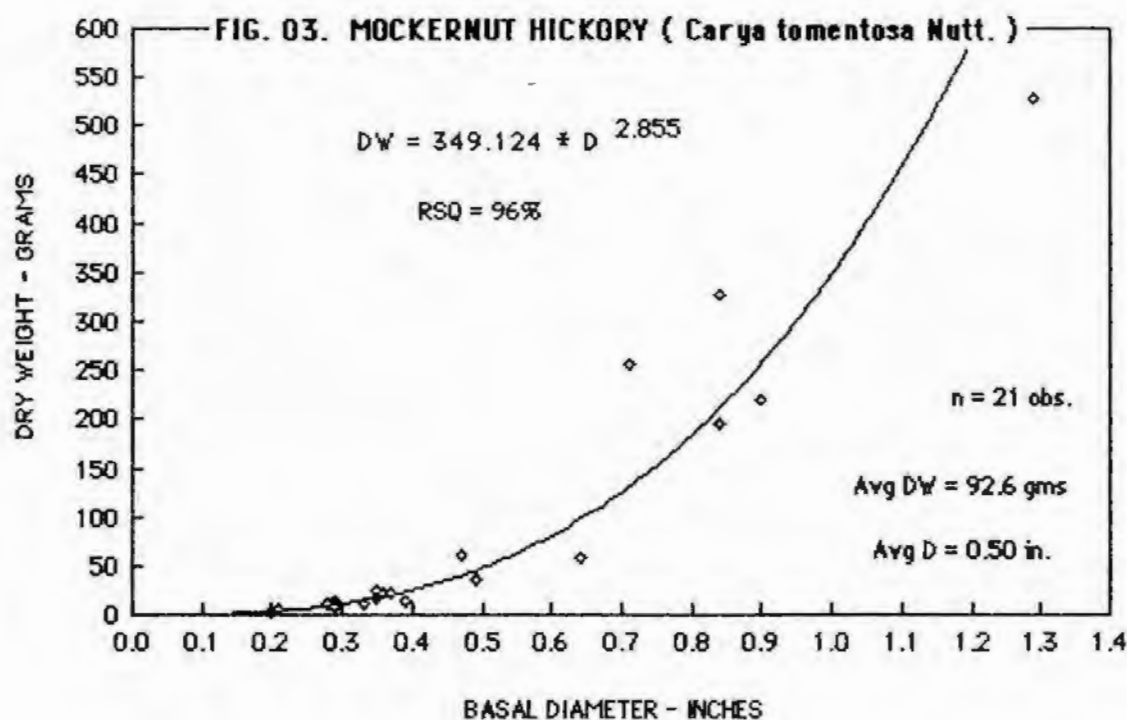
Samples of nineteen species of woody plants were obtained from the understory of pure pine and mixed pine-hardwood forests located in central East Texas. We believe the plants sampled are representative of the understory vegetation in most loblolly pine (*Pinus taeda* L.) and slash pine (*Pinus elliottii* Engelm.) plantations in East Texas.

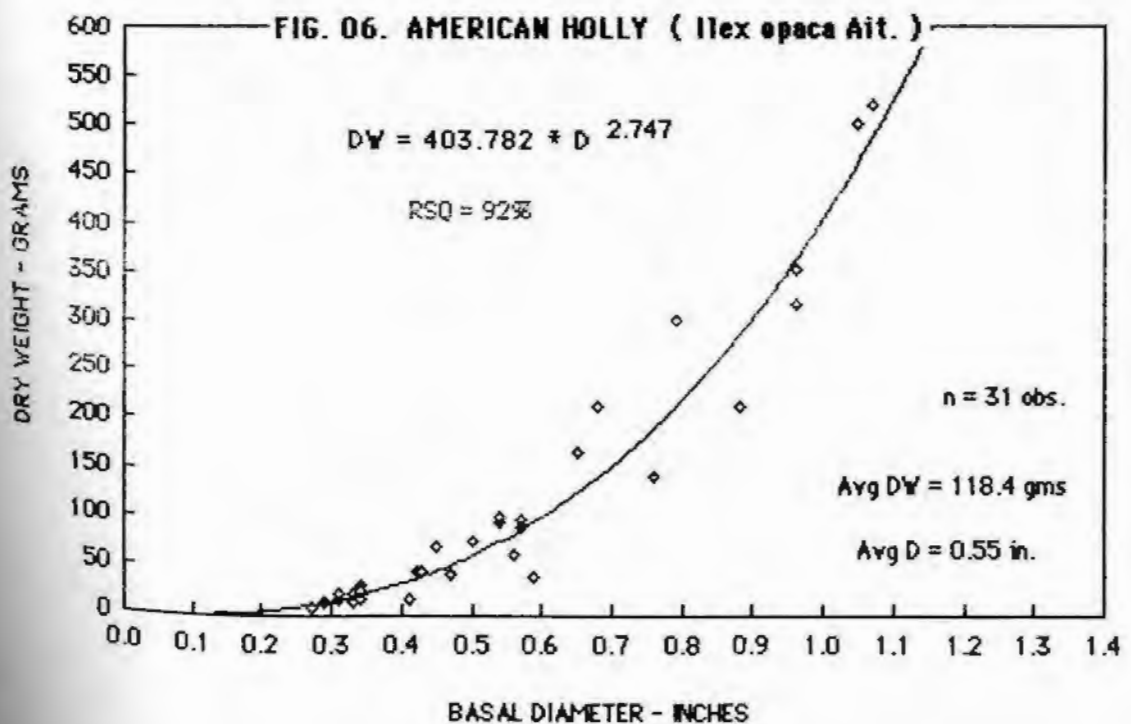
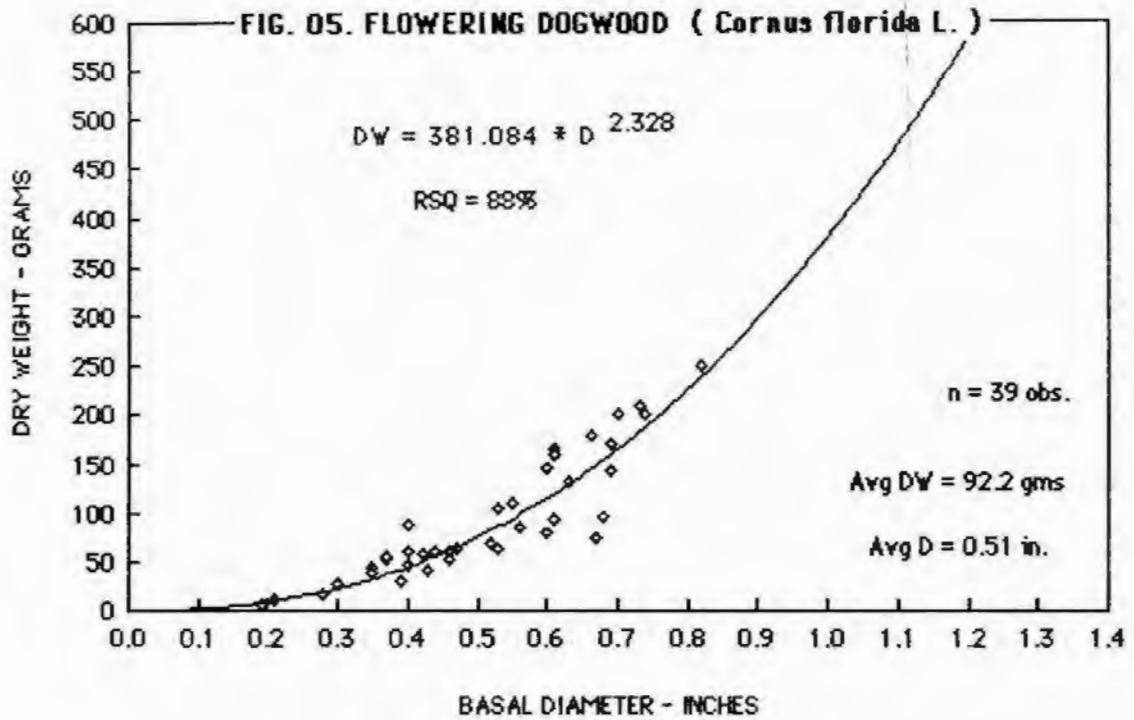
Prior to cutting each sample, the basal diameter (D) of each selected live woody stem was measured near the ground line with calipers to the nearest 0.01 inch. After cutting, total stem height was determined to the nearest 0.1 foot. The stems were brought to the laboratory and dried at 65^o C, until moisture loss ceased. Dried weight (DW) to the nearest 0.1 gram was then obtained.

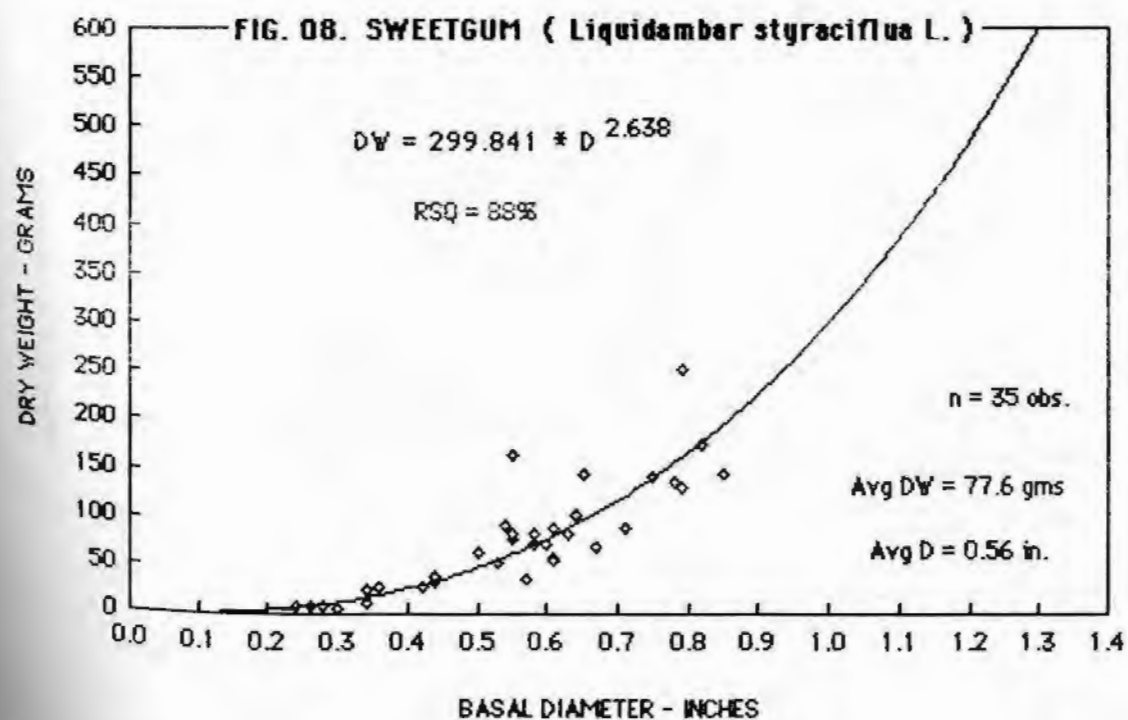
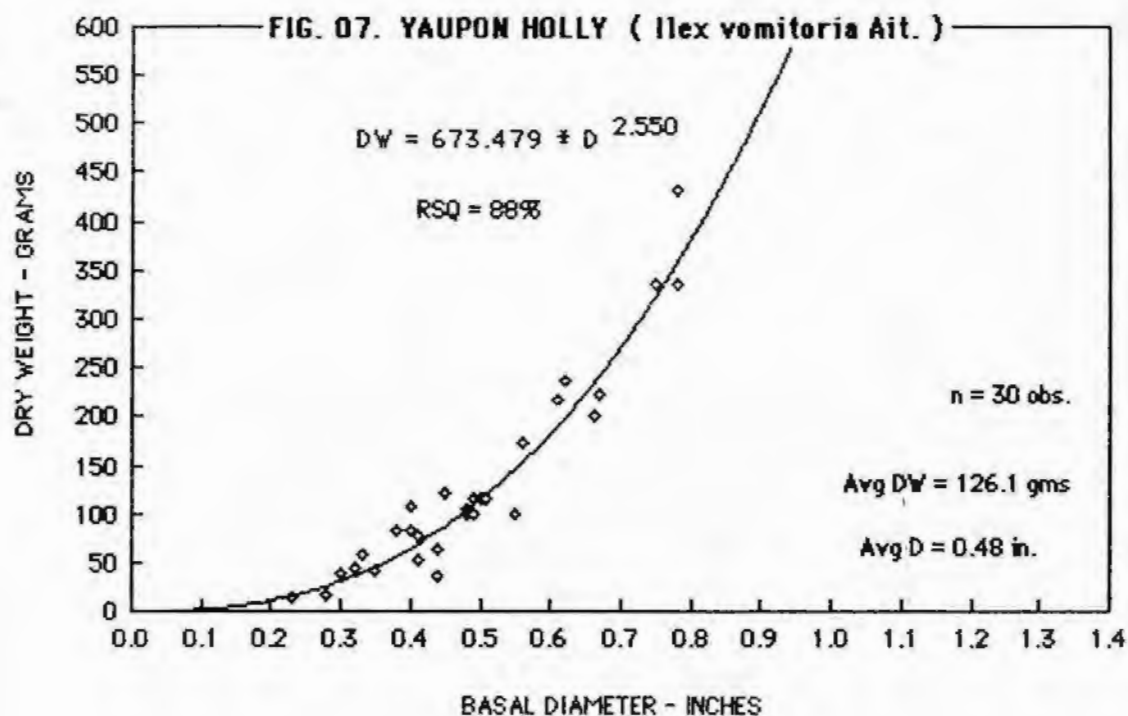
DRY WEIGHT PREDICTION

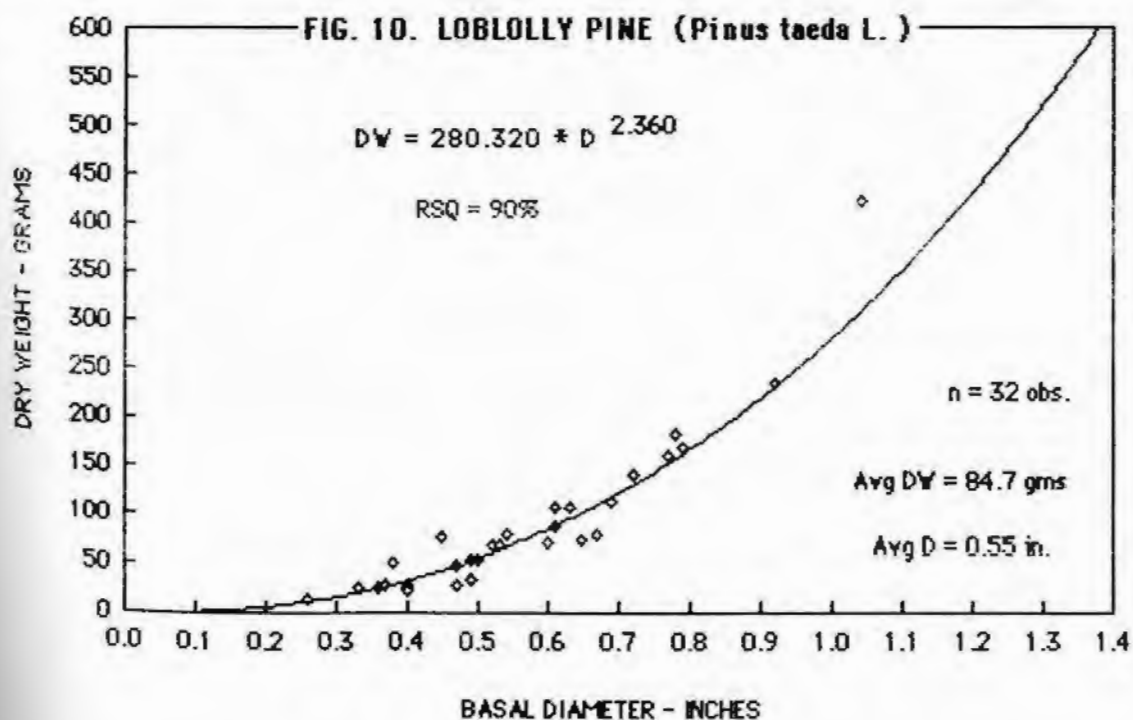
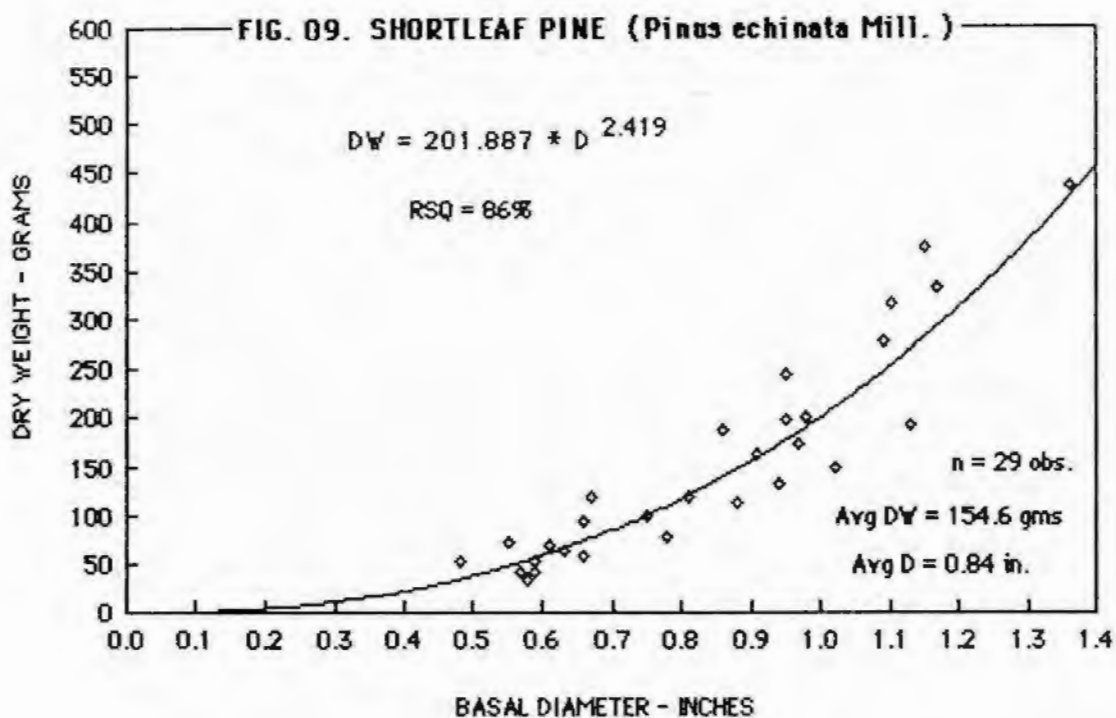
Figures 1-19 present the observed values, sample size, sample averages, prediction equations and predicted line for each of the 19 species.

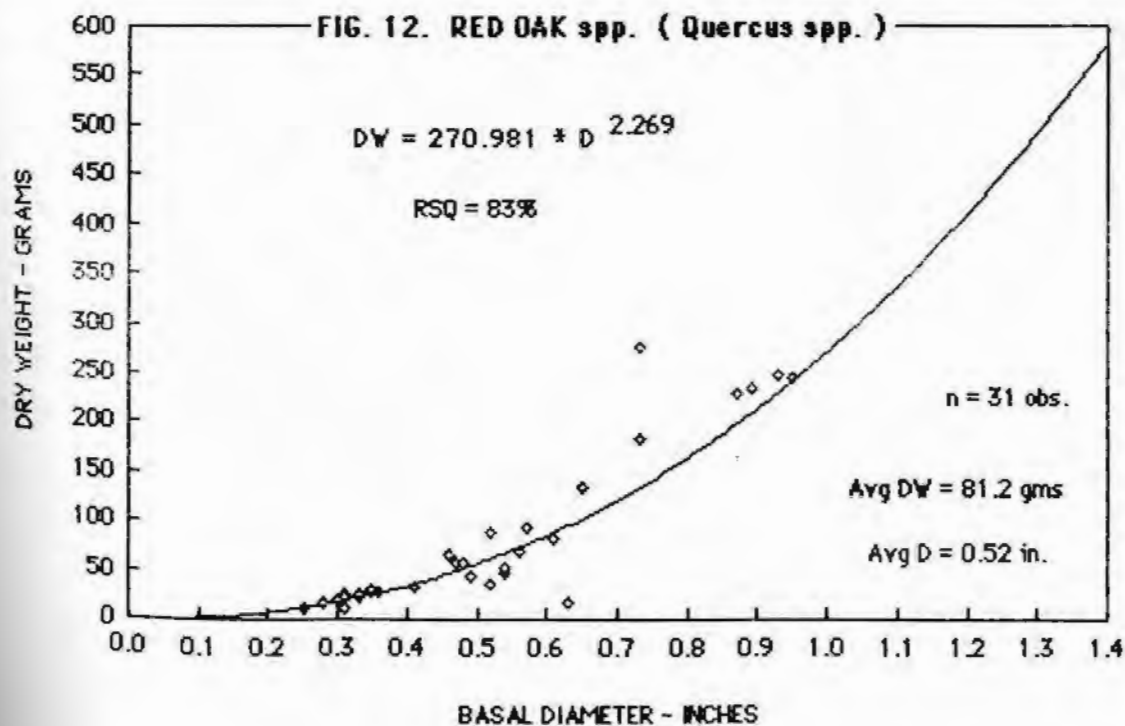
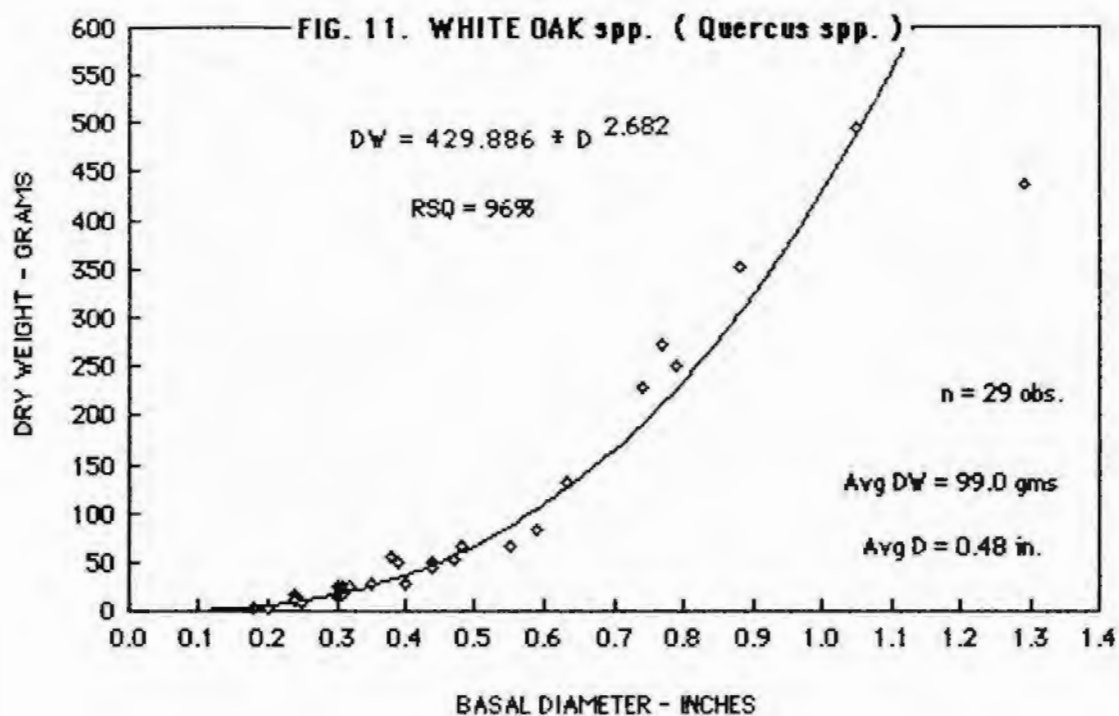


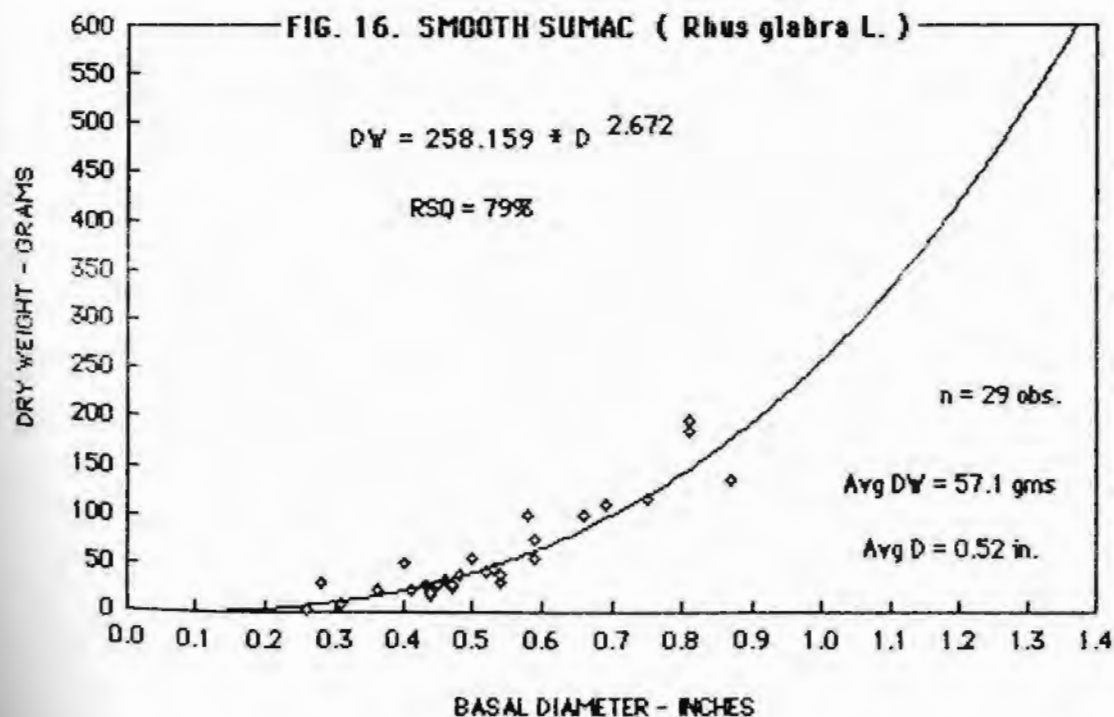
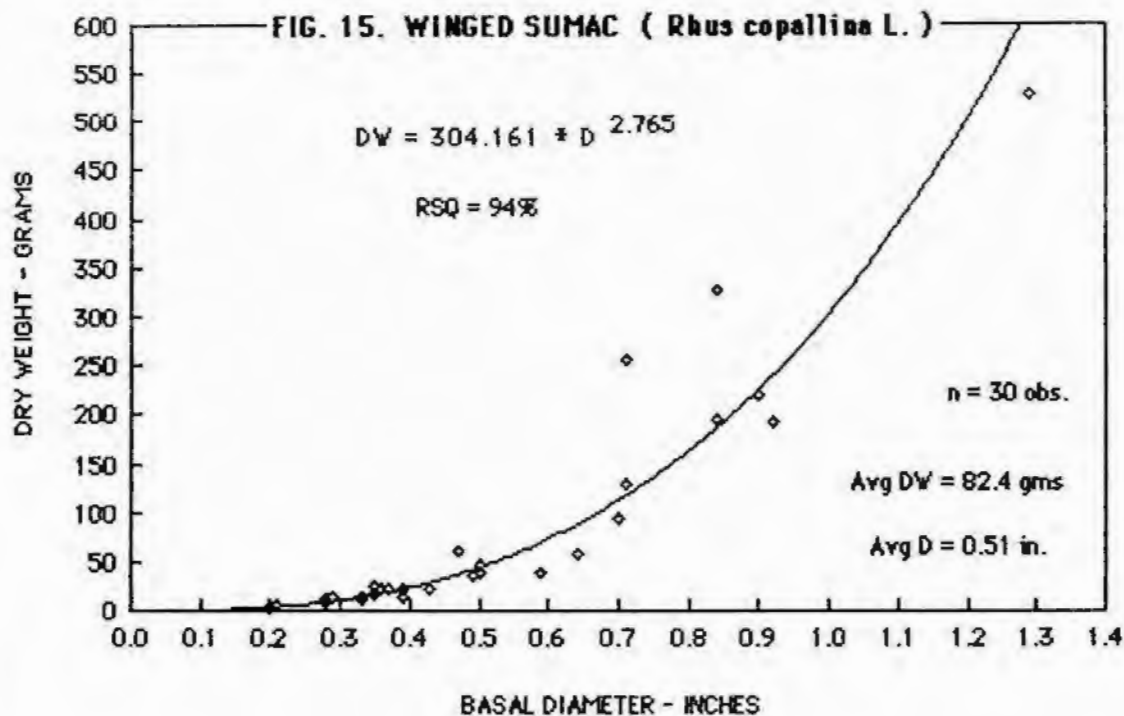












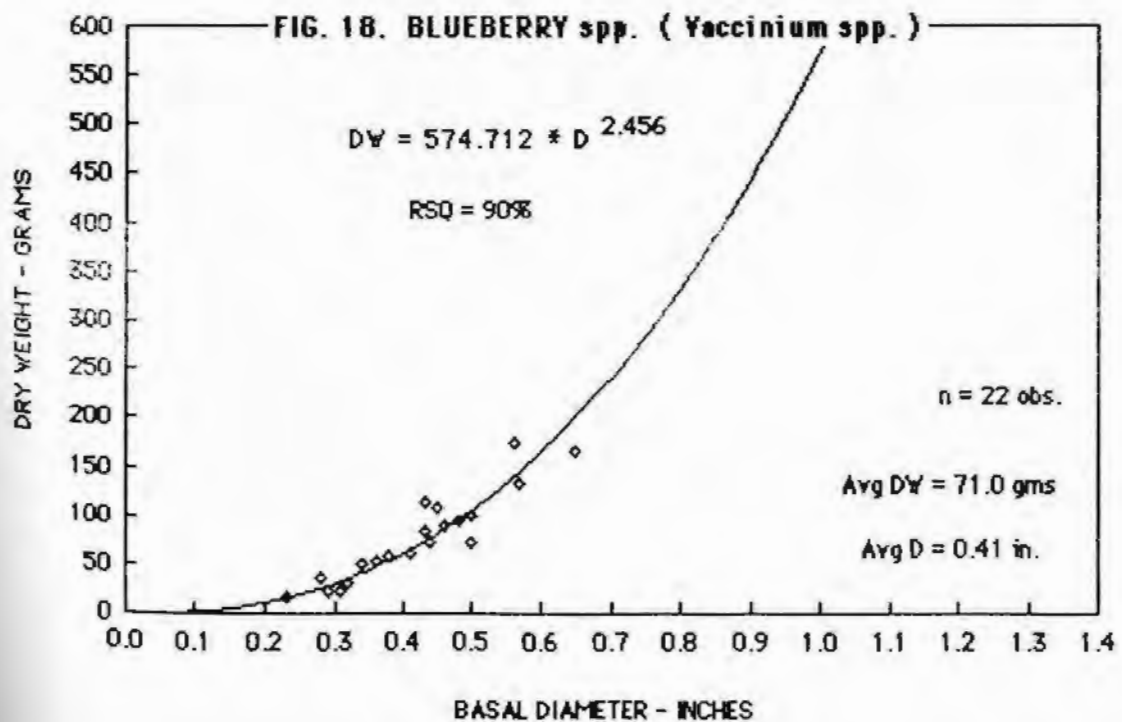
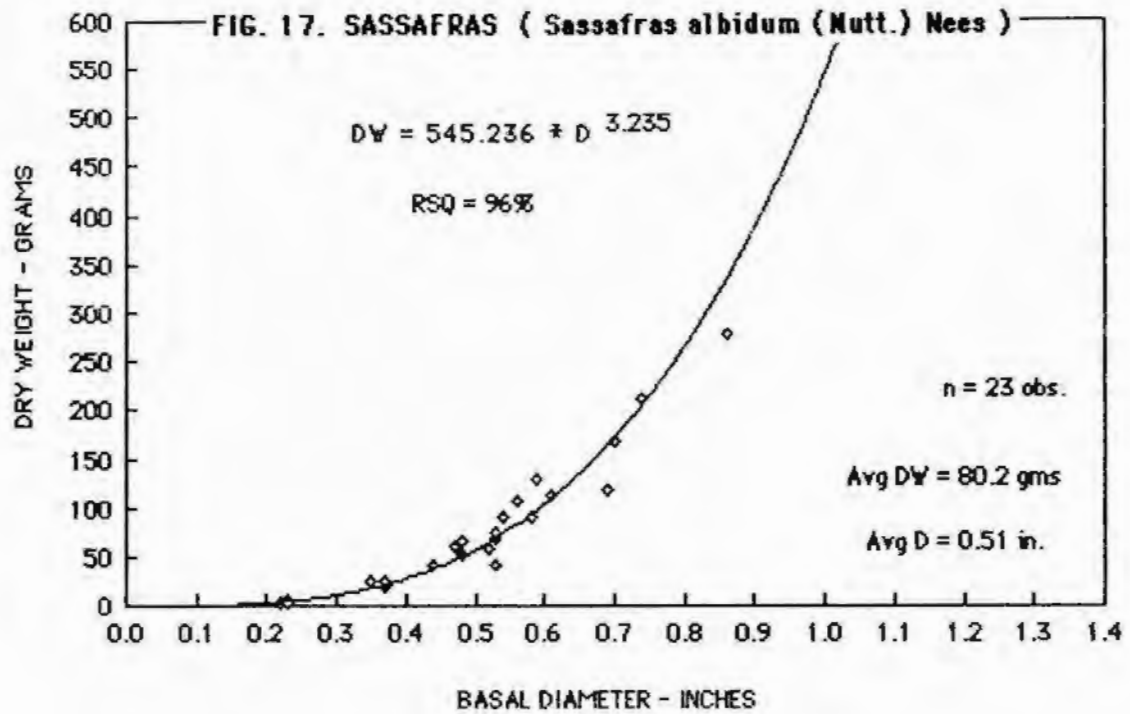


FIG. 19. ARROW-WOOD YIBURNUM (*Yiburnum dentatum* L.)

