The following is my (Shana Hanson's) summary
from Wayne Zeller's data on our tree and shrub leaf forage samples.

HCl-Butanol-Acetone-Iron Assay (modified HCl-Butanol Assay)

Screening tool for assessing presence and relative levels of Condensed Tannins

Thanks to: **Wayne E. Zeller**
USDA-ARS, U.S. Dairy Forage Research Center, Madison, WI   53706

Thanks to Andrea Clemensen
for introducing Wayne to me,
for this collaboration.

0 White Ash

1 Green Ash, Honeysuckle, Pagod Dogwood

1.5 Creeping Blackberry

3   American Basswood

3.5   Winterberry, Smooth Buckthorn, Norway Maple

5 Red Maple, Rock Maple, Black Cherry, Pin Cherry, American Elm, American Beech,
   Arrowwood, Leatherwood,

5.5 Red Oak

6 Box Elder, Birdsfoot Trefoil

7 Gray Birch (catkins were same), Quaking Aspen, Big-Toothed Aspen,

8 White Birch

10 Black Locust

3 of Wayne Zeller's 5 slides of photo data follow, used by me with his permission for NOFA MA Go Nuts Agroforestry Presentation, May 2, 2024.

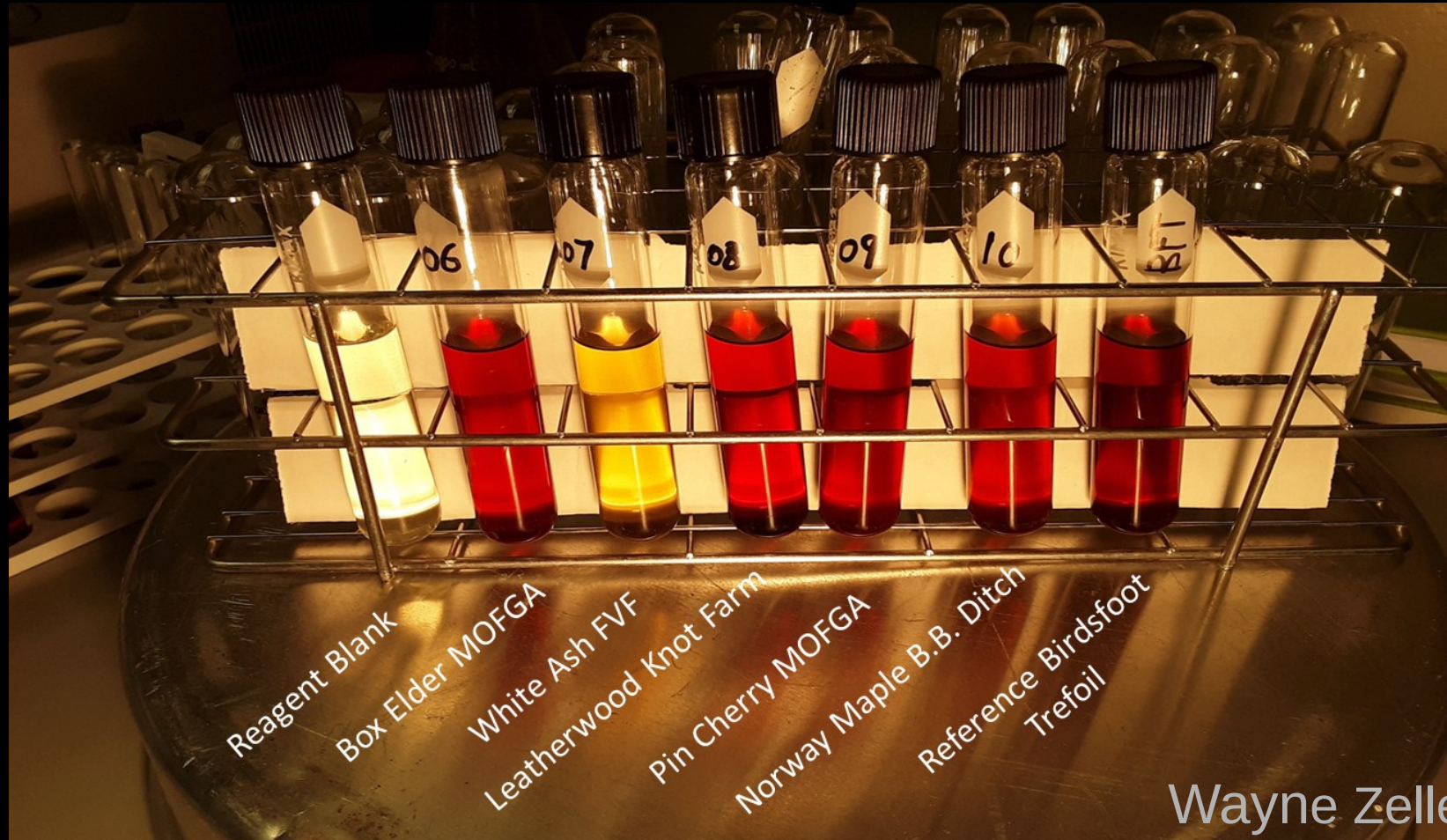* Darkness correlates to level of Condensed Tannins.

Samples 1-5 along with controls

(The darker the solution becomes, the more Condensed Tannins.)

Reagent Blank
Pagoda dogwood YKF
Honeysuckle MOFGA
"Fresh" Black Cherry MOFGA
American Beech MOFGA
Rock Maple MOFGA
Reference Birdsfoot Trefoil

Wayne Zeller photo

Samples 6-10 along with controls

Reagent Blank
Box Elder MOFGA
White Ash FVF
Leatherwood Knot Farm
Pin Cherry MOFGA
Norway Maple B.B. Ditch
Reference Birdsfoot Trefoil

Wayne Zeller photo

Samples 16-20 along with controls

(These are photo examples. Talk to Wayne for the full slide deck, with more details.)

Wayne Zeller photo