Florida Agricultural Classified Use Real Property Appraisal Guidelines

Property Tax Oversight
June 2024

NOTE: The 2024 Florida Agricultural Classified Use Real Property Appraisal Guidelines are one of a three guideline series which are part of the manual of instructions and establish standard measures of value in accordance with section 195.032, Florida Statutes. These guidelines were last adopted June 18, 2024, and are the most recent version currently available. These guidelines are intended to aid and assist Florida county property appraisers and staff in arriving at the valuation of agricultural classified use real property. **Pursuant to section 195.062, Florida Statutes, these guidelines do NOT have the force and effect of rules and shall be used only to assist tax officers in the assessment of property as provided by section 195.002, Florida Statutes**.

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1.0 INTRODUCTION

1.1 Overview and Specific Authority. Section 195.002(1), Florida Statutes (F.S.), identifies the Florida Department of Revenue (Department) as a state administrative agency with the statutory responsibility of general supervision of the assessment and valuation of property, and the administration and collection of property taxes. The Department's supervision is necessary to ensure all property is placed on the tax rolls and valued in accordance with the requirements of the state constitution.

Every four years, the voters in each Florida county elect a property appraiser as directed by Article VIII, section 1(d), of the Florida Constitution. Section 192.001(3), F.S., states the property appraiser is "the county officer charged with determining the value of all property within the county, with maintaining certain records connected therewith, and with determining the tax on taxable property after taxes have been levied." In the course of discharging its statutory duties, the Department provides general supervision to the property appraiser of each of the 67 counties in the state of Florida.

Property appraisers have the statutory responsibility to list and assess all real property in their respective county each year for ad valorem taxation purposes, as stated in ss. 192.011 and 193.085(1), F.S.

Section 192.011, F.S., states, in pertinent part "[t]he property appraiser shall assess all property located within the county, except inventory, whether such property is taxable, wholly or partially exempt, or subject to classification reflecting a value less than its just value at its present highest and best use." Section 193.085(1), F.S., states, in pertinent part "[t]he property appraiser shall ensure that all real property within his or her county is listed and valued on the real property assessment roll."

Sections 195.062(1) and 195.032, F.S., specifically direct the Department to develop guidelines to establish standard measures of value, which include these *Agricultural Classified Use Real Property Appraisal Guidelines,* to aid and assist property appraisers in performing their assessment and valuation responsibilities. Statute provides the specific authority and legislative directive for the Department's development of these guidelines, as well as underscores the Legislature's intent to limit the scope of their use.

Section 195.062(1), F.S., states, in pertinent part:

> The department shall prepare and maintain a current manual of instructions for property appraisers and other officials connected with the administration of property taxes. This manual shall contain all:
>
> - Rules and regulations.
> - Standard measures of value.

- Forms and instructions relating to the use of forms and maps.

Section 195.032, F.S., states:

> In furtherance of the requirement set out in s. 195.002, the Department of Revenue shall establish and promulgate standard measures of value not inconsistent with those standards provided by law, to be used by property appraisers in all counties, including taxing districts, to aid and assist them in arriving at assessments of all property. The standard measures of value shall provide guidelines for the valuation of property and methods for property appraisers to employ in arriving at the just valuation of particular types of property consistent with ss. 193.011 and 193.461. The standard measures of value shall assist the property appraiser in the valuation of property and be deemed prima facie correct, but shall not be deemed to establish the just value of any property. However, the presumption of correctness accorded an assessment made by a property appraiser shall not be impugned merely because the standard measures of value do not establish the just value of any property.

1.2 Description of Guidelines. The standard measures of value are provided through three sets of guidelines: the *Tangible Personal Property Appraisal Guidelines*, the *Real Property Appraisal Guidelines*, and this document, the *Agricultural Classified Use Real Property Appraisal Guidelines*. The full set of documents that comprise the manual of instructions, in accordance with s. 195.062(1), F.S., are available here: floridarevenue.com/property/Pages/Cofficial_MOI.aspx

The required scope of the components of the appraisal process will vary among the diverse real property markets in Florida's 67 counties. Resources (e.g., availability of information, equipment, and personnel) may differ among Florida counties and affect how property appraisers specifically apply the appraisal process. Property appraisers should apply these *Agricultural Classified Use Real Property Appraisal Guidelines* based on the economic factors and market dynamics present in their county. The guidelines are not a substitute for the duty to comply with current Florida ad valorem tax law, administrative rules, and regulatory requirements.

Section 195.0012, F.S., states: "It is declared to be the legislative purpose and intent in this entire chapter to recognize and fulfill the state's responsibility to secure a just valuation for ad valorem tax purposes of all property and to provide for a uniform assessment as between property within each county and property in every other county or taxing district." General application of the principles detailed in these guidelines, even among counties experiencing different market conditions or varying resources, should yield uniform assessments.

1.3 Purposes of These Guidelines. These *Agricultural Classified Use Real Property Appraisal Guidelines* have three primary purposes:

1. To aid and assist property appraisers and staff in developing agricultural classified use

assessment valuations of real property for ad valorem tax purposes in accordance with Florida ad valorem tax law
2. To promote and facilitate the accuracy and equity of agricultural classified use assessment valuations of real property for ad valorem tax purposes, both within and among counties
3. To meet the Department's statutory obligations to aid and assist property appraisers, as stated in ss. 195.062(1), 195.002(1), and 195.032, F.S.

In accordance with s. 194.035(3), F.S., these guidelines are also statutorily cross-referenced as necessary source materials for purposes of the Department's duty to provide Value Adjustment Board (VAB) special magistrate training. For more information, the VAB training materials are available on the Department's website: floridarevenue.com/property/Pages/VAB.aspx

1.4 Context of These Guidelines. Section 195.062(1), F.S., dictates these guidelines do not have the force and effect of rules. As such, these guidelines do not function as the complete reference authority on any of the following or similar subjects: valuation theory, approaches, methods, or procedures; assessment administration; or applicable provisions of Florida ad valorem tax law, or regulatory requirements. In accordance with the limitations imposed by s. 195.062(1), F.S., these guidelines do not constitute a determinative legal standard for the valuation of agricultural land. The statutory valuation legal standards are described in further detail in s. 194.301, F.S., and sections 2.1 and 2.5 of this document.

The user should not solely rely on these guidelines. A thorough and independent knowledge of Florida ad valorem tax law and professionally accepted appraisal practices and appropriate appraisal methodologies is necessary. Property appraisers should use other professionally accepted sources of appraisal guidance, such as the Uniform Standards of Professional Appraisal Practice (USPAP), published by the Appraisal Foundation. These sources should not conflict with current Florida ad valorem tax law.

Users should review all statements contained within the context of this entire document and should refer to this document in conjunction with other professionally accepted source materials. Citation to information from a particular source does not imply that all applicable information from that source is cited or relevant to the appraisal of property for ad valorem tax purposes in the State of Florida. These guidelines do not establish the value of any property and could not and do not encompass or address every methodological detail, legal premise, appraisal practice or educational treatise that might be applicable in the valuation of every property.

These guidelines do not address the procedure for approving or disapproving applications for agricultural classified use. Chapter 12D-5, Florida Administrative Code (F.A.C.), sets forth the administrative rules for classifying real property as agricultural land for the purpose of ad valorem taxation in accordance with s. 193.461, F.S.

1.5 Content of These Guidelines. This document addresses the requirements for assessing agricultural classified use property in compliance with Florida ad valorem tax law and administrative rules. Users should refer to this document in conjunction with other applicable sources of professionally accepted appraisal practices and standards but only to the extent that other sources do not conflict with Florida ad valorem tax law.

This version of the *Agricultural Classified Use Real Property Appraisal Guidelines* replaces the 1982 version entitled *The Florida Agricultural Classified Use Appraisal Guidelines*. The 1982 version was organized into five sections which have been updated and appear in this version as sections 2 through 6 with all tables now provided as addenda. Section 1 has been added to provide an overview of legal roles and authority and to provide a description and context for these guidelines. The methods and approaches to value for agricultural classified use land have not changed significantly since these guidelines were last published. The most substantial updates to the document are the inclusion in section 2 of statute language specific to assessing agricultural classified use property and updates to the band-of-investment (BOI) section, including the addition of a detailed BOI example (addendum A). The BOI update was communicated to property appraisers in a memo from the Department in spring 2021.

Throughout these guidelines hyperlinks to relevant material are provided. Some of the material is published by other entities, and the Department does not maintain those web addresses or the material. If a hyperlink fails, users should search the internet for the referenced material.

2.0 GENERAL PROVISIONS

2.1 Overview. The procedures and data sources set forth in this section are to be used in the context of the other agricultural sections in these guidelines.

These guidelines contain sections dealing with the four major agricultural land uses in Florida: timberland, pasture land, citrus land, and cropland. It is impracticable, if not impossible, to detail each and every type of agricultural endeavor within the state. Therefore, lands used for other agricultural endeavors should be valued in accordance with the principles set forth in these guidelines to the extent they apply. For instance, lands used for dairy purposes should be valued according to the principles contained in the pasture land section, even though the pasture land section generally deals with the more typical cow-calf operation, or land used for groves other than citrus could be valued according to the principles contained in the citrus land section, provided the approach is relevant to the grove type. For highly specialized crops, livestock, or agricultural endeavors, if there is insufficient data to support a specialized valuation, property appraisers may value them with "like kind" properties.

2.1.1 Classified Use Valuation. Section 192.042(1), F.S., requires that all real property must be assessed according to just value each year on January 1. Article VII, Section 4(a), of the Florida Constitution permits agricultural land to be classified and assessed based solely on its character or use for purposes of ad valorem taxation. Classified use value is defined in s. 192.001(1)(c), F.S., as "[t]he value of property in a classified use or at a specified percentage of its value under Art. VII of the State Constitution."

Specific information regarding the valuation of properties classified as agricultural is provided in s. 193.441(1), F.S., which states "[f]or the purposes of assessment roll preparation and recordkeeping, it is the legislative intent that any assessment for tax purposes which is less than the just value of the property shall be considered a classified use assessment and reported accordingly."

Throughout these guidelines, the term "agricultural classified use assessment" is used to refer to the value determination. To achieve agricultural classified use assessment valuations of real property, property appraisers may use the procedures detailed in these guidelines or other methods so long as they adhere to professionally accepted appraisal practices and comply with Florida ad valorem tax law.

2.1.2 Property Identification and Classification. The property appraiser is responsible for approving or disapproving applications for agricultural classified use. Section 193.461, F.S., pertains to the threshold determination of whether real property can be properly classified as agricultural property. Section 193.461(3)(b), F.S., states, in relevant part:

Subject to the restrictions specified in this section, only lands that are used primarily for bona fide agricultural purposes shall be classified agricultural. The term "bona fide agricultural purposes" means good faith commercial agricultural use of the land. In determining whether

the use of the land for agricultural purposes is bona fide, the following factors may be taken into consideration:

- The length of time the land has been so used.
- Whether the use has been continuous.
- The purchase price paid.
- Size, as it relates to specific agricultural use, but a minimum acreage may not be required for agricultural assessment.
- Whether an indicated effort has been made to care sufficiently and adequately for the land in accordance with accepted commercial agricultural practices, including, without limitation, fertilizing, liming, tilling, mowing, reforesting, and other accepted agricultural practices.
- Whether the land is under lease and, if so, the effective length, terms, and conditions of the lease.
- Such other factors as may become applicable.

Chapter 12D-5, F.A.C., sets forth the administrative rules related to classifying real property as agricultural land for the purpose of ad valorem taxation in accordance with s. 193.461, F.S.

The land on which supporting farm/agricultural buildings are built is agricultural land and should be assessed at use value. The land on which residential improvements are built is not agricultural land and should be assessed at just value. See s. 196.461(3)(d), F.S., and rule 12D-5.003, F.A.C.

In 2021 and 2022, the Legislature provided clarification on land used for agritourism purposes. Section 570.86, F.S., defines agritourism activity to mean: “any agricultural related activity consistent with a bona fide farm, livestock operation, or ranch or in a working forest which allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy activities, including farming, ranching, historical, cultural, civic, ceremonial, training and exhibition, or harvest-your-own activities and attractions. An agritourism activity does not include the construction of new or additional structures or facilities intended primarily to house, shelter, transport, or otherwise accommodate members of the general public. An activity is an agritourism activity regardless of whether the participant paid to participate in the activity.”

Section 570.85, F.S., allows agritourism operators to maintain agricultural classifications for ad valorem tax purposes under s. 193.461, F.S., so long as the agritourism activity is consistent with agricultural production. For more information on Florida agritourism, visit www.followfreshfromflorida.com/agritourism.

Please note the following summarized legislative changes effective July 1, 2022 (chapter 2022-77, Laws of Florida, SB 1186):

Amended s. 570.85(1), F.S., to remove a requirement that agritourism be a “secondary”

stream of revenue for a bona fide agricultural operation. However, it is important to remember for purposes of agricultural classification, s. 193.461(3)(b), F.S., still requires that the primary use of the land be a bona fide agricultural use.

Amended s. 570.87, F.S., to provide an agricultural classification pursuant to s. 193.461, F.S., may not be denied or revoked solely due to the conduct of agritourism activity on a bona fide farm or the construction, alteration, or maintenance of a nonresidential farm building, structure, or facility on a bona fide farm which is used to conduct agritourism activities. So long as the building, structure, or facility is an integral part of the agricultural operation, the land it occupies shall be considered agricultural in nature. However, such buildings, structures, facilities, and other improvements on the land must be assessed under s. 193.011, F.S., at their just value and added to the agriculturally assessed value of the land.

2.2 Agricultural Factors. Once the real property has been granted agricultural classification, the assessment shall be made in accordance with s. 193.461(6), F.S., which states:

(a) In years in which proper application for agricultural assessment has been made and granted pursuant to this section, the assessment of land shall be based solely on its agricultural use. The property appraiser shall consider the following use factors only:

1. The quantity and size of the property
2. The condition of the property
3. The present market value of the property as agricultural land
4. The income produced by the property
5. The productivity of land in its present use
6. The economic merchantability of the agricultural product; and
7. Such other agricultural factors as may from time to time become applicable, which are reflective of the standard present practices of agricultural use and production

(b) Notwithstanding any provision relating to annual assessment found in s. 192.042, F.S., the property appraiser shall rely on 5-year moving average data when utilizing the income methodology approach in an assessment of property used for agricultural purposes.

(c) 1. For purposes of the income methodology approach to assessment of property used for agricultural purposes, irrigation systems, including pumps and motors, physically attached to the land shall be considered a part of the average yields per acre and shall have no separately assessable contributory value.

2. Litter containment structures located on producing poultry farms and animal waste nutrient containment structures located on producing dairy farms shall be assessed by the methodology described in subparagraph 1.

3. Structures or improvements used in horticultural production for frost or freeze

protection, which are consistent with the interim measures or best management practices adopted by the Florida Department of Agriculture and Consumer Services pursuant to s. 570.93 or s. 403.067(7)(c), F.S., shall be assessed by the methodology described in subparagraph 1.

4. Screened enclosed structures used in horticultural production for protection from pests and diseases or to comply with state or federal eradication or compliance agreements shall be assessed by the methodology described in subparagraph 1.

(d) In years in which proper application for agricultural assessment has not been made, the land shall be assessed under the provisions of s. 193.011, F.S.

Agricultural land has value because of its productivity and ability to generate income. Estimating the value of any property is an opinion generated by competent and qualified appraisers based on the three traditional and proven approaches to value: sales comparison, income, and cost.

The property appraiser may use the sales comparison, income, and cost approaches in estimating the value of agricultural lands in Florida for ad valorem tax purposes. These approaches may be used as a check against each other. In addition, specific and unusual situations such as, but not limited to, unreliable or unobtainable data may effectively prohibit the use of a particular approach. The property appraiser has discretion in selecting the approach to be used. Whichever approach is used, care must be exercised to ensure value conclusions do not exceed market values (see s. 193.441(1), F.S.).

Due to the large number of agricultural parcels to be valued by the property appraiser each year, it is impracticable, if not impossible, for the property appraiser to value each parcel of property in the manner of a fee appraisal. Therefore, the property appraiser may utilize a mass appraisal system to value agricultural property within the county.

2.2.1 The Sales Comparison Approach. The sales comparison approach relies heavily on verified sales of similar properties in order to make comparisons. Generally, the sale of land in Florida strictly for bona fide agricultural use, as defined by s. 193.461(3)(b), F.S., in contrast to agricultural use combined with other property rights, is not sufficient to permit accurate and dependable comparisons. Also, the amount and maturity of the commodity being produced on the properties is often a distorting influence on the sale. This can be illustrated using the six basic property ownership rights or “bundle of rights.” These rights are:

1. The right to use
2. The right to sell
3. The right to lease or rent
4. The right to enter or leave
5. The right to give away
6. The right to refuse to do any of these

Each of these rights can be assigned a value, and the total amount would be equal to an estimate of value. Section 193.461(6)(a), F.S., specifies that “the assessment of land shall be based solely on its agricultural use.” The only property right that can be assessed for property tax purposes is the right to use it for “bona fide agricultural purposes” as defined by s. 193.461(3)(b), F.S.

2.2.2 The Cost Approach. The cost approach is a method in which the appraiser estimates the contributory value of the improvements to land. As such, it is not a method for measuring the ability of the land to generate income from agricultural use. Farm buildings and residences should be appraised separately, at just value, and their value added to the agricultural value of the land.

2.2.3 The Income Approach. The income approach, or capitalization of net earnings to land as an indication of value, is recommended and is used throughout these guidelines to value agricultural classified use properties in accordance with s. 193.461, F.S. However, it is recognized that this is not the exclusive method of valuing agricultural lands. See *St. Joe Paper Co. v. Brown*, 223 So 2d 311 (Fla. 1969). The property appraiser shall rely on 5-year moving average data when utilizing the income approach in an assessment of property used for agricultural purposes in accordance with s. 193.461(6)(b), F.S.

The income approach reflects a buyer’s and seller’s evaluation of the earning potential of the land. Any land values computed on an income approach that exceed market values should be re-evaluated to determine if the components were adequately accounted for in the income computation. The use of the capitalized net income approach as set forth in this guide inherently considers the factors required to be considered by s. 193.461(6)(a), F.S.

The capitalization rate expresses the relationship between net income from the land and value. Value is defined as the present worth of future rights to income. There are three basic methods used to estimate the capitalization rate in an appraisal process. They are the market comparison, summation, and the band-of-investment (BOI) methods. All components used to derive a capitalization rate shall be calculated using a 5-year moving average. The property appraiser should add the county millage rate for vacant agricultural lands to develop the overall capitalization rate. The Department recommends property appraisers use the current year county millage rate without adjustment for 5-year averaging.

> **The Market Comparison Method**. The market comparison method attempts to directly establish a capitalization rate by dividing the net income by the sale price, which is a proxy for value. This method may be unsuitable for one of two reasons. The first is that only sales for agricultural uses can be developed as comparables. The second reason this method may be unsuitable is that it may produce a market value rather than an agricultural classified use value. There are many reasons for buying agricultural land other

than the desire to receive a current income stream. These include but are not limited to the following:

- Desire to gain the status of landowner
- Opportunity to live in a rural setting
- Desire to live near relatives or reclaim a family homestead
- Gain income tax advantage
- Opportunity to provide a hedge against inflation
- Spread fixed costs through the more efficient use of machinery

The Summation Method. The summation method attempts to estimate the capitalization rate by summing the individual components of the capitalization rate. These components are:

- The *safe rate* is the rate obtainable with the most safety and the least risk.
- The *risk rate* is the return commensurate with the risk assumed by the investor; it is a component because the return on real estate is a desired return and may or may not be realized by the investor.
- The *nonliquidity rate* is necessary, since an investment in real estate ties up money which cannot be quickly reconverted to cash; therefore, real estate is considered a nonliquid asset.
- The *management rate* is a necessary component in order to compensate for the time and cost involved in managing the real estate investment, not to be confused with the management of the real estate itself.

The summation method provides a theoretical presentation of investors' desired returns, risks, liquidity, management, and other rates, to explain why a selected capitalization rate is used in the valuation of real property. Because of the intangible character of the components, it is not considered a sound procedure through which a specific rate may actually be derived.

The Band-of-Investment (BOI) Method. The BOI method uses mortgage debt financing information to estimate a capitalization rate by weighting the fractional rates of mortgages and equity. Since Farm Credit of Florida is the major agricultural real estate lender in Florida, it is appropriate to use their typical loan to value ratio and interest rate in the mortgage portion of this method. The equity rate can be obtained by comparing equity yields on similar risk investments; or it may be calculated as shown below using a mortgage constant. In the equations that follow, the average of January 20-year fixed bond rates from the Federal Farm Credit Banks Funding Corporation (FFCBFC) in conjunction with the mortgage constant are used to represent the equity yield rate or the rate required to attract an investor to this type of investment. FFCBFC bond rates may be obtained from www.farmcreditfunding.com.

The BOI is a straightforward calculation built from four different components:

- Loan-to-value (LTV) ratio
- Prevailing interest on debt financing
- Expected return on equity
- A mortgage constant

The LTV and typical interest rate are often set by the lending institution and the remainder becomes the equity portion of the valuation. These components are combined to calculate a capitalization rate as shown in the following table. An example of the BOI capitalization rate calculation is provided in addendum A.

Band-of-Investment Capitalization Rate Calculation		
$MR_m + ER_e = R_o$		
Where:		
M	=	Loan-to-value ratio (LTV)
R_m	=	Mortgage constant (calculated using the annual percentage rate (APR) and available loan funds)
E	=	Required equity percentage of the loan (1 – LTV)
R_e	=	Equity yield rate (mortgage constant plus the FFCBFC January 20-year bond rate)
R_o	=	BOI capitalization rate

2.2.4 Data Sources. Production, income, expense, acreage, and other data should be based on a typical (that which most frequently exists or occurs in the particular situation or area under consideration) operation. A typical agricultural operation may be confined within one county or span an area in several counties. Yield data used in these guidelines reflect agricultural operations in Florida. However, consideration has been, and should be given, to the fact that some of these publications reflect net income from above average operators or research projects, in contrast to the typical operator. These data sources should be used with appropriate adjustments for the county.

In these guidelines, the land capability unit system of United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, may be used as an alternative method where local production information is not available. Yields shown in these soil surveys are for a few representative crops and grasses and indicate the potential attainable with high-level management and assume normal growing seasons. Yield adjustments are recommended within the NRCS surveys that also assume the use of high-quality seeds adapted to the soil and climate, good seedbed preparation, liming based on soil analysis, use of adequate amounts of fertilizer and control of plant diseases and insects.

The property appraiser should be familiar with the most important soil types in the county. Data on soil types may be obtained from NRCS's Web Soil Survey website. Detailed soil surveys for

many counties have been published and are underway in others. A general soil map of each county is available. The property appraiser should use this source as a reference to verify soil types and production levels for each parcel subject to an agricultural classified use assessment. Some farmers have soil surveys of their lands which they may make available to the property appraiser.

Local data is the preferred data source. The property appraiser should actively solicit, collect, and verify local data when available. Published data may be used to back up local verified data or used in the absence of local data. The user of published data needs to verify that it is correct for the application for which it is being used. For instance, soil quality plays an important role in the assessment of agricultural lands. In the absence of local data, an appraiser's use of published soil data may be a professionally accepted appraisal practice.

2.2.5 Value Consistent with Use. A bona fide agriculturist may change the use of certain lands from one agricultural pursuit to another (or allow land to lie fallow on occasion), and this change may be incomplete and not readily discernable on January 1, the assessment date established in s. 192.042(1), F.S. The property appraiser should value the lands in a manner consistent with the use and value of its prior use, its intended use in the immediate future, if discernable, and the value of surrounding lands used in a similar capacity.

2.2.6 Nonproductive Land Value. Nonproductive land, or wasteland, has some value and may contribute to the value of the surrounding productive land but is not subject to valuation by the income approach. The property appraiser should value these lands according to their contribution to the surrounding land. According to the Property Use Classification System detailed in *The Dictionary of Real Estate Appraisal*, 7th ed. (Chicago: Appraisal Institute, 2022), wasteland is: "Land that is not suitable for the economical production of beneficial crops including but not limited to river bottoms, sand hills, rock outcroppings, sandy washes, areas of high salinity, and land that is inaccessible by typical farm equipment."

2.2.7 Five-year Average. To minimize the effect of the wide fluctuation of data used and to provide a measure of stability to the resulting values on agricultural lands, several years of historical data on cost and income should be considered. The property appraiser shall rely on 5-year moving average data when utilizing the income methodology approach in an assessment of property used for agricultural purposes in accordance with s. 193.461(6)(b), F.S.

2.3 Property Inspection. Section 193.023(2), F.S., requires property appraisers to inspect real property every five years. This statute allows property appraisers to use image technology in lieu of physical inspection where geographically suitable. The minimum technology standards for physical inspection are provided in the Department's annual *Tax Roll Production, Submission, and Evaluation Standards* available at https://floridarevenue.com/property/Pages/Cofficial_CompleteSubRollEval.aspx.

In the event of a natural disaster, the property appraiser should attempt to reinspect all affected parcels to document damage caused by the disaster as of January 1 and consider the impact it may have on the use value.

2.4 Quality Assurance. The *Real Property Appraisal Guidelines* discuss the quality assurance process for mass appraisal. Quality assurance for properties assessed based on their value in use differs in some respects. Details for the Department's in-depth review and ratio study and any differences for classified use properties are provided in section 11 of the Department's annual *Tax Roll Production, Submission, and Evaluation Standards* available at https://floridarevenue.com/property/Pages/Cofficial_CompleteSubRollEval.aspx.

2.5 Assessment Challenges. Property appraisers should also be aware of s. 194.301, F.S., which was substantially changed in 2009, related to administrative (Value Adjustment Board) and judicial review of ad valorem tax assessment challenges. This statute describes some of the standards property appraisers must follow in the assessment of property for ad valorem taxes, including agricultural classified use property. The property appraiser has the responsibility to ensure their valuation procedures and methodologies meet these statutory standards. The professional standards for the property appraiser's development and reporting of agricultural classified use valuations for ad valorem taxation in Florida are stated in s. 194.301, F.S. The standards are:

1. Compliance with professionally accepted appraisal practices,
2. Avoidance of arbitrarily different appraisal practices within groups of comparable property within the same county,
3. Avoidance of superseded case law, and
4. The correct application of an appropriate appraisal methodology.

The 2009 amendments to ss. 194.301 and 194.3015, F.S., made clear the Florida Legislature's intent to supersede contradicting case law. Specifically, s. 194.301(1), F.S., now states: "The provisions of this subsection preempt any prior case law that is inconsistent with this subsection" and s. 194.3015(1), F.S., provides: "… any cases published since 1997 citing the every-reasonable-hypothesis standard are expressly rejected to the extent that they are interpretative of legislative intent." Yet, some pre-2009 and post-2009 case law does not reflect the appropriate application of the principles outlined in these major statutory changes and applies the statutorily superseded burden of proof. Some examples of such case law applying the superseded burden of proof legal standard include:

City National Bank v. Blake, 257 So.2d 264 (Fla. 3d DCA 1972)

Blake v. Xerox, 447 So.2d 1348 (Fla. 1984)

Bystrom v. Whitman, 488 So.2d 520, 521 (Fla. 1986)

Walmart v. Todora, 791 So. 2d 29,30 (Fla. DCA 2001)

Mazourek v. Walmart, 831 So.2d 85, 91 (Fla. 2002), quoting *Walmart v. Todora*

Fla. Dept. of Revenue v. Howard, 916 So.2d 640 (Fla. 2005)

In re Lifestream Technologies, LLC, 337 B.R. 705, 710 (Bkrtcy. M.D. Fla. 2006), quoting *Mazourek v. Walmart*

3.0 TIMBERLAND

3.1 Timberland Defined. According to the Property Use Classification System detailed in *The Dictionary of Real Estate Appraisal*, 7th ed. (Chicago: Appraisal Institute, 2022), timberland is: "Land with merchantable trees, timber, or timber products that is periodically harvested. The amount of time between harvests varies depending on the species and growing conditions. Interim uses may include passive and active recreation like hunting."

3.2 Timberland Valuation. This section describes procedures for the assessment of timberland based on potential net income from the average annual growth potential from seedling to economically mature timber. This is a modified sustained yield method in that annual increment of value represented by growth is recognized and converted into a dollar value. Expenditures for management and protection are deducted and the resulting annual net income is capitalized. The basic formula in the income approach is:

$$\text{Value} = \frac{(\text{yield} \times \text{price}) - \text{costs}}{\text{capitalization rate}}$$

The assessment of timberland is based on the land's capability to produce timber, not the amount of timber growing on the land at the time of the appraisal. Primary emphasis should be placed on the income approach with adjustments made to reflect other factors where a variation from the norm is noted. Two sources of income data for timber operations are calculated, potential net income and annual land rent income. Reliable rental information may be difficult to obtain for bona fide timber operations. When available, rental income lends itself readily to the 5-year capitalization process, because rent income is usually a net income, except for taxes which are considered in the capitalization rate.

3.3 Timberland Categories. For taxation purposes, timberland is considered to have two categories: productive and nonproductive. Productive timberland is generally understood in the agricultural industry to include land that is:

- Producing or is physically capable of producing usable crops of wood,
- Economically accessible now or in the foreseeable future, and
- Not withdrawn from wood products utilization for use as parks, orchards, pastures, or other purposes.

Since timberland is valued on the land's ability to produce marketable timber, the agricultural classified use valuation should be determined based on how much marketable timber the land is capable of producing. Productive timberland includes land from which the timber has been removed. The landowner would then determine how this land would be used. If left as a forest site, there are many acceptable methods to regenerate timberland. These include machine or hand planting, seeding (seed tree or spreading seed), coppice regeneration, allowing natural regeneration from residual seeds, and others.

Nonproductive timberland is generally understood in the agricultural industry to include nonproductive marshes, depleted mines, dumps, pits, lakes, ponds, utility rights-of-way, or other nonproductive or waste lands. Nonproductive lands have some value and may contribute to the value of surrounding timberland but are not subject to valuation by the income approach. The property appraiser should, therefore, value this land according to its contribution to the surrounding productive timberland. It is acceptable to value this land at or below productive swampland.

3.4 Factors Influencing Timberland Values. The primary factors influencing timberland values are:

- Productivity of soil expressed as site index
- Local stumpage prices in the area
- Management costs which include costs of site preparation, planting, and annual recurring expenses

These factors must be evaluated and established by each property appraiser for the county to arrive at assessed value for timberland.

3.4.1 Determining Productive Capacity/Site Index. Productive capacity may be generally determined from site index yield tables for pine stands. These guidelines utilize data from both *Growth and Yields of Natural Stands of the Southern Pines* by F.X. Schumacher and T.S. Coile (copyright 1960 by T.S. Coile, Inc., Durham, NC) and data from University of Florida, School of Forestry, *Growth and Yield of Slash Pine Plantations in Florida, Research Report No. 3*, by Robert L. Barnes (May 1955). Slash pine yield tables have been used throughout these guidelines because slash pine has historically been the predominant species under intensive management in the state.

The site index is the average total height the dominant and/or co-dominant trees will attain at either 25 or 50 years of age. Normally, 25-year site indexes are referred to as site quality. As shown in addendum B, which is an excerpt from *Growth and Yields of Natural Stands of the Southern Pines* (cited above), an acceptable way to convert 25-year indexes to 50-year indexes is the addition of 20 feet to the 25-year index which gives an equivalent 50-year index. All timber schedules in this document are production based using 50-year site indexes.

Site index is obtained by measuring the height of a representative tree and determining its age. This data is applied to a 50-year site index curve. Using the site index curve in addendum B, a 27-year-old tree that is 65 feet tall, following the curve to the right results a site index of 80. That is, according to this graph, the tree will be 80 feet tall when it reaches 50 years of age. See addendums B and C for site index curves. The NRCS soil surveys for Florida counties also list the site index for several major pine species by soil type. The site index information for sand pine, longleaf pine, and loblolly pine can be cross-referenced to a slash pine site index using the NRCS soil surveys.

The number of sample points required to establish the site index for a given parcel of land depends on the size of the parcel and the variability of the soil. A few measurements may suffice if the soil is relatively uniform, but otherwise many may be required. Some parcels may be represented by a single pine site index figure, but this figure must be representative of the parcel and not the result of an isolated sample.

Site index measurements on young trees are frequently not very reliable. Measurements on trees under 15 years of age, especially on sites with lower-than-average yields, should be used with caution. A check on the correctness of site index measurements may be obtained by comparing them with those on neighboring parcels having similar soils. The site index should not change abruptly from parcel to parcel without an accompanying noticeable change in the timber, other vegetation, or soil.

Timber stands that are predominantly hardwoods which can be legally harvested (as in a clear-cut) and reforested to planted pine may be valued at a percentage of the associated pine value for the slash pine site index of the property. Hardwood timber types that do not meet the criteria stated above (usually bottom land hardwoods or creek or river banks) should be classified as productive swamp and valued as such.

Where a parcel of land has no suitable trees to measure for a site index, the index should be established by comparison with adjacent or neighboring tracts with similar soils using NRCS soil surveys. The Department, county forester or representative of the Florida Forest Service, or other professional foresters may also assist the property appraiser in establishing the indexes in these cases.

The annual growth increment expressed in tons per acre per year can be obtained from addendum D. Coile and Schumacher's *Growth and Yield of Natural Stands of the Southern Pines, 1960* and Bennett and Clutter's *Per Acre Sawtimber, Pulpwood and Gum Yields – 25-year Basis* from United States Forest Service's Research Paper SE-35 were the sources for addendum D. The yields in these publications are listed in cords (128 cubic feet of stacked wood) per acre. This yield data has been converted from cords per acre to tons per acre using a factor that reflects the current market and reporting of timber yields and stumpage prices.

3.4.2 Stumpage Value. According to International Association of Assessing Officer's (IAAO) *Glossary for Property Appraisal and Assessment,* 3rd ed. (2022), stumpage value is defined as: The value of uncut timber. Prices paid for stumpage vary considerably throughout the state. Historically, prices have been highest in the northeast, lessening in the panhandle and lowest in the south. Patterns of land ownership and distances to mills influence these prices along with accessibility, volume, method of cutting, quality of the raw product and other factors. While the stumpage price reflects value for all forest products in a county, pulpwood prices should be given the most emphasis. The reasons for this are the relative stability of pulpwood prices over the years and its strong influence on wood-using industries.

The selected stumpage price used in a county for timberland valuation may be established from landowner sales, timber buyer surveys, local timber pricing publications, and through a joint effort of the property appraiser and the Department. The Department obtains current local stumpage prices each year from property owners, industry representatives, timber brokers, the Florida Forest Service, and other sources of reliable sales information. The selected stumpage price should be derived consistently by the same method used in the preceding years and compatible with the 5-year averaging techniques described in section 2.

3.4.3 Management Costs. Management costs associated with timber operations are of two types: improvements to the land and annual recurring expenses. The improvements to the land prorated include annualized costs (cost/rotation age) for site preparation, seedlings, and planting. Forest maintenance and protection from insects, disease, fire, and natural disasters are annual recurring expenses.

Management costs may be acquired from the Florida Forest Service, timber industry, and private forestry operations on an individual county basis. This data will be interpreted and adjusted in the same manner as stumpage prices. Upon request, the Department will provide a typical cost figure to the property appraiser for use in the valuation of timberland.

Ad valorem taxes are a component of the capitalization rate and are not to be included in the annual management cost.

3.5 Establishing Pine Timberland Classes. The Department's Land Use Codes list provided annually in the Tax Roll Production, Submission, and Evaluation Standards, available at https://floridarevenue.com/property/Pages/Official_CompleteSubRollEval.aspx, identifies five site index classes for productive pine timberland. Where all five classes are not present in a given county, the property appraiser may establish only those classes that are present. The classes consist of 10-foot site index increments based on a 50-year site index. The timberland classes with their respective site index ranges are:

Class	**(50 Year) Slash**
Timberland 1	Site Index 90 and above
Timberland 2	Site Index 80-89
Timberland 3	Site Index 70-79
Timberland 4	Site Index 60-69
Timberland 5	Site Index 50-59

Hardwood or natural pine-hardwood mixed timberlands should be classified by a percentage of the above site index classes.

Swamp – Productive swamplands capable of producing hardwoods or cypress for many economical commercial uses.

Nonproductive – Lands not capable of producing an economical commercial agricultural product.

Timber classification should be separated into the sub-use categories of natural pine and planted pine. These two different methods of forest management are readily discernible on the ground and using aerial photography. The two methods are different in reference to yields and costs of establishment and maintenance. By using the yield figures given in addendum D (Integrated Yield Data) for related use category (planted, natural) and site index, a value table may be constructed as explained in the next section. Yield and cost figures for use category and site index would be consistently applied. The stumpage prices used in the calculation would be the same for both and be derived as stated in section 3.4.2 of these guidelines.

3.6 Local County Value Tables. The property appraiser should establish value tables for the site index ranges within the county. The timber value table included in these guidelines (see addendum E) is recommended for use. The pine stand rotation age, number of trees per acre, and yield data provided in the table are researched, established, and published by USDA. The property appraiser inputs a 30-year annualized cost per acre for natural and planted stands, local price per ton, and an overall capitalization rate. Natural timber sites will not include annualized site preparation and planting costs but will include other annualized management costs.

Value tables are predicated on data that could be interpreted in many ways. Without a thorough knowledge of forestry and forest operations data may be misinterpreted and applied in a way that would be impossible to duplicate and would invariably lead to erroneous value conclusions. A local county value table that deviates fixed data from the recommended table should be well-researched and documented to provide an appraisal method that is consistent and replicable. The rotation age selected for the local value table development should reflect the most consistently used rotation periods in the county by prudent forest land managers. Site-preparation and planting costs should be annualized by the selected rotation period. Yields should be annualized and typical for the rotation selected and stated in units that are typical for the stumpage prices collected.

A non-pine value table is included for hardwood and swamp land based on potential production, local prices, costs, and market information (see addendum F). Upland hardwood land that cannot be legally harvested and re-planted should be classified as productive swampland.

3.7 Timberland Valuation Summary. Key elements and terminology in timberland valuation include:

- 50-year site index – measure of forest soil capability of productivity; established by the property appraiser
- Yield information – see addendum D
- Local stumpage price – typical per ton pulpwood price collected during the calendar year applied as a 5-year average

- Site-preparation and planting cost – the one-time per acre cost of site preparation for pine tree seedlings (clearing, chopping, burning, bedding, etc.) and planting pines (seedlings, planting, etc.), annualized over the rotation age and applied as a 5-year average
- Local management costs – annual expenses incurred in managing natural pines and planted pines such as forest maintenance and protection, applied as a 5-year average
- Capitalization rate – derived as described in section 2 of these guidelines
- Value tables – are locally derived by the property appraiser based on the five factors described above. Tables are revised using updated capitalization rates, stumpage prices, site preparation and planting costs, and management costs. The value tables are the final product of the income approach to timberland valuation.

4.0 PASTURE LAND

4.1 Pasture Land Defined. Pasture land is generally understood in the agricultural industry to be land used for the production of herbage or grasses for the purpose of livestock grazing or feeding. The NRCS defines pasture land as: Range and pasture lands are diverse types of land where the primary vegetation produced is herbaceous plants and shrubs (see https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/rangepasture/).

4.2 Pasture Land Valuation. The capitalized net income approach as described in section 2 of these guidelines is recommended for the valuation of agricultural pasture land. Two methods of obtaining income from pasture land are agricultural land rents for grazing or hay production and operational budgets. Operational budgets can be for saleable hay to produce income or from the production of salable beef pounds from the production of forage.

4.3 Rental Income for Pasture Land. Using rental information is the preferred method for obtaining pasture land value. Rental income is recommended since it is relatively easy to obtain, and it closely approximates income attributable to the land only, although rent paid to corporate land owners often includes a management fee. The management fee represents a small amount per acre and includes owner-incurred costs of incidentals related to establishing the lease and collecting rent as well as lease broker fees. Renters often form a competitive market among themselves with the resulting rents they are willing to pay tending to represent a typical management level.

Property appraisers should qualify rental agreements by verifying all terms. Qualified rents or leases are bona fide arms-length transactions between knowledgeable persons where the entire remuneration (money or services) is shown in the agreement. The only rents considered should be for agricultural use of the land only, less any management fee. Rental agreements may be verbal and must also be verified.

Annual countywide rental surveys should be conducted because the responses represent the agricultural rental market for the county. In order to derive a meaningful unit of comparison, the rents collected should be sorted based on the Animal Unit Months (AUM) of the soils. The NRCS soil survey for each Florida county lists the AUMs for each soil type. The soil types can be found using the maps listed in the soil surveys or by using the GIS maps supplied by the Department. The typical rent per acre is obtained by weighting the selected net rents (net income) for each production level or AUM class to be valued. Sum the product of each rent (net rent x acres) then divide by the sum of the selected rent acreages. See addendum G for an example of pasture land rental analysis.

The selected rent should be reconciled using other statistical measures such as the mode and median. Previous years' selected rents should be compared to the current year's rents. The selected rent should not vary by large percentages from one year to the next. Increasing or decreasing rents should show a trend in the agricultural market and using the 5-year averaging should smooth any large value changes from year to year.

To calculate value, average the current typical net rent with the previous four years of typical net rent. Next, divide the computed 5-year average net rent by the 5-year overall capitalization rate (see section 2) to get the classified use value. Values for the various types of operations should be compiled into basic tables and applied to all range and pasture land within the county. See the value schedule in addendum H.

4.4 Income from Livestock Operation. This section describes a procedure for the appraisal of grazing land based on beef yields derived from the capability of the pasture land to produce forage for livestock. Pounds of beef produced is treated as the production unit. Beef yields are converted to a dollar value; from which annual operating expenses are deducted and the resulting annual net income is capitalized. The property appraiser shall rely on 5-year moving average data when utilizing the income methodology approach in an assessment of property used for agricultural purposes in accordance with s. 193.461(6)(b), F.S.

Pasture land varies relative to soils, local climate, and ability to support livestock. To properly value these lands, it is important to consider these variables. Since using specific data for every type and level of operation is a practical impossibility, it is appropriate to create value tables based on supportive data and within established parameters used in actual operations. Property appraisers should make discretionary adjustment to individual properties where conditions warrant.

On a statewide basis, the primary factors influencing pasture land values are:

- Productivity of the soil
- Market price of beef
- Extent of pasture improvement
- Annual expenses associated with different types of operation
- Additional expenses (including supplemental feeding, if necessary)

To arrive at value for pasture land, the property appraiser should determine these factors on a local basis.

4.4.1 Productivity of Soils. Soil productivity is expressed in terms of AUM, as described in sections 4.4.6 through 4.4.7. Soil productivity and degree of land improvement are important factors influencing the value of grazing land. While most soils in Florida are low in natural fertility, beef production is closely related to the amount of plant nutrients in the form of fertilizer applied to them; soils do affect beef production and profit. The property appraiser must be cognizant of the role of the soil quality in assessment of pasture land.

The property appraiser should be familiar with the most important soil types in the county and which of these are the most productive. NRCS soil surveys are available to the property appraiser and should be utilized. Identifying major soil types is an important tool in the assessment of pasture land.

4.4.2 Classes of Pasture Improvement. Pasture land is considered to have four classes:

- *Range pasture* – raw, unimproved, native pasture used for grazing livestock
- *Semi-improved pasture* – range pasture having some improvement such as webbing, chopping, or mowing which increases the grazing capacity of the land but does not include improvements such as seeding or application of fertilizer and lime
- *Improved pasture* – land that has been cleared, limed, drained and seeded to legumes and/or grass mixtures. Such grasses include but are not limited to Bahia, Bermuda, and Pangola grasses. Improved pasture is typically fertilized and renovated from time to time and is grazed or harvested for hay or silage.
- *Waste pasture (nonproductive)* – includes acreage in depleted mines, dumps, pits, lakes, pond, and other nonproductive lands

Nonproductive land has some value and may contribute to the value of the surrounding productive land but may not be subject to valuation by the income approach. The property appraiser should, therefore, value these lands according to their contribution to the surrounding productive land. Ponds and water sources that are accessible by livestock may be considered pasture land to the extent they support livestock. Excess ponds and water sources may be considered nonproductive land.

4.4.3 Annual Expenses. Annual expenses such as feed, fertilizer, labor, machinery, transportation, veterinarian services, and other costs should be obtained from sources which reflect actual local expenses.

4.4.4 Livestock Budgets. Livestock budgets prepared by economists with the University of Florida Institute of Food and Agricultural Sciences (IFAS) can be used to obtain income information if local producer records are not available. These budgets reflect income and expense summaries that consider investment and operating costs for machinery and equipment, buildings and fences, water control systems, costs of hay production, fertilizer, interest on livestock investment, pasture renovation and all other practices which are typically included in the operation of a ranch.

These budgets should represent typical levels of management. Net returns from budgets that represent unusually high levels of management should be adjusted before being included in the determination of income value.

4.4.5 Value Table. The property appraiser shall establish value tables for each general type of ranch operation found within the county (native range pasture; semi-improved pasture; and improved pasture) using the following steps:

1. Determine the yields in pounds of saleable beef per acre from:
    - Typical managed ranch operations within the county.
    - NRCS land capability unit system using AUM as explained below.

2. Determine the expenses associated with the yields determined in step 1.
3. Determine the market price of beef on an annual basis. Apply the price of beef to the yields as determined in step 1.
4. Subtract the expenses as found in step 2 from the dollar value of beef found in step 3 to obtain the annual net income.

To calculate value, average the current typical net income with the previous four years of typical net income. Next, divide the computed 5-year average net income by the 5-year overall capitalization rate to get the classified use value. Values for the various types of operations shall be compiled into basic tables and applied to all range and pasture land within the county. See the value schedule in addendum H.

Factors other than soil and degree of land improvement will usually have a minor effect on agricultural value, however, when the property appraiser determines that a parcel varies significantly from the norm, a further adjustment may be made on an individual basis.

4.4.6 NRCS Soil Capability and Animal Unit Month (AUM). The NRCS has compiled information on all soils in Florida (see link in section 4.4.1). These compilations reflect study and observations by soil scientists, district conservationists and other skilled specialists over a period of years. Under the NRCS system, soils of similar productivity and profile characteristics are grouped together and referred to as a capability unit. Each capability unit is further identified with a W, S, or E to denote either wetness, soil quality or erosion as the principal limitation in its use. NRCS soil surveys with land capability designations are available for most of Florida's counties.

The basic measure of land capability for pasture and grazing land in the NRCS system is an AUM. The NRCS defines AUM as "The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month." The animal unit is based on one cow with calf. A 7-AUM means that one acre will provide sufficient forage to maintain one cow-calf in normal health and growth for seven months of the growing season. The operator would need to provide food for 5-months of the year.

The NRCS reports AUM ratings only for high levels of management on improved grass or irrigated grass/clover pastures. The values represent the production levels attained by the best producers utilizing the best technology available when the soil survey was conducted. These yields should be adjusted as necessary to reflect local conditions under typical management.

In the absence of local production information, the NRCS AUM ratings can be used as the basis for computing the pounds of saleable beef per unit as a percentage of total beef pounds. Generally, the NRCS calculates total beef pounds by multiplying the AUM rating times 51.0. Total beef production is then adjusted to account for:

- Percent calf crop

- Typical level of management
- Herd maintenance
- Percent death loss

Calf crop refers to the number of calves born expressed as a percentage of the total brood cows and bred heifers. Typical management level recognizes imperfect knowledge and that a degree of inefficiency exists in all operations. Herd maintenance requirements are the percentage of total beef pounds essential to maintain a breeding herd (replacement heifers) as opposed to that available for market. Death loss is loss from all causes expressed as a percent of the total herd number.

4.4.7 Pounds of Saleable Beef Formula. To derive the pounds of saleable beef produced per acre, use the following equation:

#AUM per acre
x 51.0 pounds of beef per AUM
x percent level of management
x percent calf crop
x (1 - percent herd maintenance needs)
x (1 - percent death loss)
= pounds of saleable beef

The pounds of saleable beef are multiplied by the market price to obtain total revenue. The production expenses, as described earlier, are then subtracted from total revenue to obtain net income. The net income is then divided by the capitalization rate to obtain the land value as explained above using a 5-year average.

5.0 CITRUS LAND

5.1 Citrus Land Defined. Citrus land is land suitable for citrus groves. According to the Property Use Classification System detailed in *The Dictionary of Real Estate Appraisal*, 7th ed. (Chicago: Appraisal Institute, 2022), orchard/grove land is: “Uniformly spaced fruit- or nut-bearing trees or shrubs that are not annually planted. Plantings are spaced for easy equipment operation and maximum production from a specific variety of trees or shrubs. Does not include vineyards, which are separately categorized.” While this section details valuation of citrus land, the procedure discussed may be relevant for valuation of other types of orchard or grove land.

5.2 Citrus Land Valuation. In citrus land valuation, variables affecting groves are numerous and complex; therefore, it should be recognized at the outset that there are many exceptions. These guidelines intend to succinctly and explicitly set forth meaningful parameters to encompass most grove situations and to assist in equitable valuations.

5.3 Citrus Producing Areas. There are three citrus producing areas within the state:

- Ridgelands and rolling country of the central interior,
- Indian River section of the central and lower east coast; and
- Flatwoods and marshes of central and south Florida.

Groves in the interior are characterized by longer tree life and the attainment of larger tree sizes in later maturity. Conversely, citrus trees in the Indian River area have significantly shorter lives while attaining greater physical size earlier in their producing years. At maturity, however, these trees are seldom as large as those of the interior. The trees of the flatwoods and marsh area have intermediate longevity, spacing and size. The areas also differ in other particulars, namely: terrain, susceptibility to diseases, insects, weather hazards and other features. Local factors affect the quantity and quality of fruit produced. Therefore, local costs and prices reflected through the practices of typical managements are important to recognize and incorporate in the determination of value schedules. Consideration of disease and disease pressure as well as mitigation strategies are important factors in determining value schedules.

5.4 Economic Life of Typical Grove. Given the variations in local conditions, the economic life of a typical grove differs for each area of the state. Economic life is the period over which a property will yield a return on and of the investment over and above the land’s economic rent. The estimate of economic life is an appraiser’s judgment based on supporting data. Theoretically, economic life ends in a predetermined number of years. In practice, recycling of the better groves is usually continuous and unending. Economic life should be based upon consultations with citrus industry leaders and the attrition rates experienced by growers in each area.

5.5 Determining Typical Yield. A typical citrus tree is one that exhibits the predominant characteristics of a group. Obviously, a tree typical of a particular group may not be typical of

all groups. Data published by USDA's National Agricultural Statistics Service (NASS) in the annual *Florida Citrus Summary* is the best guide to establish baseline typical yields (available at: www.nass.usda.gov/Statistics_by_State/Florida/Publications/Citrus/).

This data should be adjusted based on observed production averages or production records available in the area. Disease pressure may be a major influence in determining yields and may cause large variances. It is recommended to use industry leaders as well as appraisers well versed and educated in citrus to make these determinations. The yields should represent an average of the typical yields within the county or geographic area for various citrus varieties by age. In the event there are geographical areas within a county with differing production levels, there should be well-documented reasons for the differences. Every effort should be made to have singular production levels based on ages across a county in accordance with the typical production of the county.

5.6 Citrus Value Schedules. The property appraiser should develop annual value schedules using the income approach. In order to keep the assessed values as current as possible, the annual updates must incorporate the most recent cost and price information available. It should be recognized, however, that a time lag in the updated schedules is unavoidable because the data is not available from official sources until a year after the fact.

Data published by IFAS in the annual *Citrus Production Cost* publication is the best guide to establish typical costs (available at: https://crec.ifas.ufl.edu/research/economics/). Data published by USDA's NASS in the annual *Florida Citrus Summary* is the best guide to establish typical on-tree price per box (see link in section 5.5). In the event neither of these publications are available due to late publication or discontinuation of the service, knowledgeable industry leaders should be consulted and/or appraisers educated in citrus should make the determination based on available empirical data and research.

5.6.1 Basis of Citrus Value Schedules. Value schedules are based on these factors: a basic agricultural capitalization rate, the base land value of citrus land, the cost of trees and planting, representative numbers of trees per acre, typical yield levels at given ages, and economic life. Next the variables of production costs and fruit prices must be considered which, aside from the influence of management, are largely the results of external forces and are subject to annual variations.

In Florida, the vast majority of citrus acreage is devoted to the production of a few classes of fruit. They are:

- Early, mid-season, and late oranges
- Mandarin varieties
- Grapefruit varieties

These fruits are dominant in Florida and are individually distinguishable throughout the industry, and should therefore be valued separately. Additionally, there are several specialty fruits. Generally, these are more costly to produce, have historically been subject to very erratic markets and do not have the same degree of marketability as the more dominant citrus fruits. The property appraiser may include further classifications should a locally significant fruit not be encompassed in the dominant classifications.

The annual value schedule is only a guide. It is the responsibility of the property appraiser to recognize situations requiring a departure from the schedule. The property appraiser should make necessary and justifiable adjustments.

Adjustments may be on a specific parcel basis, encompass a regional area or be made on a countywide basis. Appropriate and adequate documentation should be available to warrant adjustments. Reasons to apply adjustments may include disease, damage from natural or man-made disasters, and general industry conditions. Likewise, an inherent discrepancy could potentially exist through the use of statewide averages which deviate from the typical production of a county, local region, or soil type.

One example of this could be a high value derived from a specific variety that is predominantly grown for fresh fruit in other portions of the state. This variety may not typically be harvested for fresh fruit in one area, but it is grown and harvested for processed fruit in that particular area. Because that area carries a low percentage of the statewide acreage, the fresh fruit price complied by USDA's NASS and found in the annual *NASS Citrus Statistics Report* statistically outweighs the processed fruit price (juice). This would cause the production in that area to be inaccurately valued, causing an adjustment to be warranted. Adjustments should be determined by individuals knowledgeable in citrus and the specific geographical area and should be documented. Current fresh and processed fruit prices are published in the *NASS Citrus Statistics Report* (see link in section 5.5).

5.6.2 Preparing the Value Schedule. Follow these steps to prepare the value schedule:

1. *Determine the region*. The Indian River region is distinct, but in locations where the interior and flatwoods merge, a discretionary judgment must be made.
2. *Estimate economic life*. This may be established by inquiry of industry leaders and other knowledgeable sources. Geographic area and disease pressure will be the predominate influences on economic life and should be applied on a regional basis.
3. *Compute acreage.* The planted grove acreage may include small ancillary portions such as turning rows and perimeter driveways. Multiply this acreage by the appropriate land value of each category. Skips and pushed trees should be classified as citrus base land and multiplied by the base land rate. Sandsoaks, sandponds, bayheads, wetlands, etc., are not citrus land and should have only a nominal or nonproductive value assigned. Any area that complements a grove or that is essential to its operation is citrus land; valuation should be commensurate with citrus base land.

4. *Discern fruit varieties and composition*. Where the composition is mixed or cannot be accurately blocked off, an estimate of the proportionate composition must be determined.
5. *Ascertain effective tree age*. Effective tree age is developed by estimating the remaining years of economic life. It may be applied to a given tree or block of trees having equivalent condition, size, productivity and remaining economic life. Most often the effective age will equal or closely parallel chronological age, for the first fifteen to twenty years provided correct judgments have been made with respect to economic life for the area. Two notable exceptions are trees that have been buckhorned and those that have sustained extensive damage, thus reducing bearing wood surface. In either event, remaining economic life is considerably lessened, and value should be predicated on rejuvenation or recovery prospects as well as reduced production. Tree size and chronological age usually have little relationship for older trees. Where there is uniformity of tree size, effective age is most easily estimated. Otherwise, a sound judgment must be relied on in categorizing age groups by variety. Because citrus production levels increase at larger rates in early producing years, grove valuations should increase correspondingly. It is most important to have correct age estimates in the early producing years. Effective age is determined by the length of economic life, kind of fruit, yield and tree condition. To a knowledgeable citrus appraiser, effective tree age or the number of years of remaining economic life of a tree is generally discernable.
6. *Estimate fruit production in boxes per tree acre*. Average yields per tree by age and variety will prove a very useful guide. Additional trees per acre make for significant increases in per acre yields during a grove's earlier years. Thereafter, the amount of bearing wood surface or linear feet of canopy becomes relatively more important.
7. *Multiply the per-box fruit price by boxes produced per acre*.
8. *Deduct production expenses*.
9. *Divide net income by the applicable capitalization rate*. The result is value per net tree acre.

5.7 Value Adjustment. Citrus land values derived using value tables may require adjustment due to disease pressure, climate conditions, natural or man-made disasters, or greater than normal susceptibility to a contingent hazard. When a value reduction is made, the extent of adjustment and justification to support the adjustment must be documented. The appropriateness of value adjustments should be reviewed annually.

5.8 Procedures and Formulas. Procedures and formulas for citrus valuation are provided below.

Fruit Gross Income Computation Formula:

Dollars per box
x boxes per acre
= Gross Income per Acre

- Compute the average dollars per box of a particular variety using the 5-year average dollars per box of that variety.
- Obtain the average box production for effective age of tree for that variety.

Production Cost Computation. Use a 5-year simple average. General and specific cost components are:

- Labor, power, and equipment:
  - Cultivation
  - Pruning
  - Cold protection
  - Site preparation and planting
  - Banking and unbanking
  - Irrigation
  - Hedging and topping
  - Tree and bush removal
  - Cost and maintenance of power and equipment
- Fertilizers and lime
- Spray (ground and/or aerial application)
- Production management
- Business management
- Miscellaneous

The interest on grove investment and county ad valorem taxes shall not be included in the above production costs. These are reflected in the capitalization rate.

5.9 Capitalizing Net Income. Subtract the production cost per acre (cost of managing one acre of citrus for commercial production, determined through information provided by citrus growers) from the gross income per acre (sum of all earnings for each acre) to arrive at the net income per acre. Capitalize this net income into value per acre by dividing the net income by the capitalization rate.

5.10 Recapture. Since citrus trees are a wasting asset, there may be a provision for recapture (earnings or profits beyond a fixed amount) in addition to the discount rate (agriculture tax rate) and the effective tax rate (standard tax rate). The following definitions from IAAO's *Glossary for Property Appraisal and Assessment,* 3rd ed. (2022) are provided for reference:

- Recapture Rate – "A portion of the overall rate in an income approach representing the return of the owner's investment in property. Expressed as the current year's percentage of the remaining economic life."
- Discount Rate – "A rate of return that converts future payments to present value."
- Effective Tax Rate – "The rate expressing the ratio between the current tax bill and the property value; the official tax rate of the taxing jurisdiction multiplied by the assessment ratio (statutory level of assessment). It is expressed as a percentage of market value. Differs from nominal tax rate when the assessment ratio (statutory level of assessment) is not 100 percent. The rate may be calculated either by dividing the amount of taxes by market value or by multiplying a property's assessment level by the nominal tax rate."

- Economic Life – “The total number of years during which the improvements and/or personal property contribute to the total property value. Economic life is equal to the effective age plus the remaining economic life and is often referred to as the Total Economic Life.”
- Effective Age – “The age of a property based on the amount of observed deterioration and obsolescence, which may be less than, greater than, or equal to the chronological age.”

Recapture can be calculated by dividing 1 by the remaining economic life. For example, a grove with an effective age of 20 years is in an area where groves are generally thought to have an economic life of 50 years. To find the recapture rate, find the remaining economic life by subtracting the effective age (how old the trees are) of the grove from the economic life (age at which a grove does not become profitable anymore due to decline of tree health).

50 years "economic life" - 20 years "effective age" = 30 years "remaining economic life"

Then divide 1 by the remaining economic life to find the recapture rate.

1 ÷ 30 years "remaining economic life" = .033 or 3.3% "recapture rate"

5.11 Base Land Value. Base land value should be reflective of the land’s suitability for producing citrus in its existing condition. This is a theoretic value based on the income ability of the land with all improvements in place for growing citrus. The property appraiser should be able to discern this value from knowledgeable citrus growers and/or similar land uses given the same type of inputs to the land in preparation for production.

6.0 CROPLAND (Vegetables and Field Crops)

6.1 Cropland Defined. According to the Property Use Classification System detailed in *The Dictionary of Real Estate Appraisal*, 7th ed. (Chicago: Appraisal Institute, 2022), cropland is: "Land that is planted, cultivated, and harvested in consistent intervals. Large-scale mechanical equipment is often used. Related functions may include irrigation, pest control, and fertilization. Crops include but are not limited to vegetables, fruits, corn, wheat, flowers, hay, and other commodities. May include buildings or structures such as houses, barns, or sheds than [sic] contribute nominally to value. Sometimes called a farm." The production obtained may be the result of a simple form of agricultural operation or one that is concentrated, intense and complicated. Field crops are annuals rather than groves, pastures, orchards, timber, etc. Cropland includes field crops such as corn, soybeans, tobacco, cotton, peanuts, etc., and annual crops grown for fresh produce or processing, generally called vegetables.

6.2 Cropland Valuation. Cropland has value because of its ability to generate income through productivity. As described in section 2 of these guidelines, the income approach is recommended for assessing agricultural lands and is used for cropland valuation for both field crops and vegetables. Furthermore, the prices and costs used should be derived using the 5-year averaging technique described in section 2 of these guidelines.

6.3 Income from Cropland. Two methods of obtaining income from cropland are operational budgets for growing crops and land rents for growing crops. Operational budgets can be difficult to use since there are many different types of crops grown as well as methods of growing them. Rental income is preferable since it is easier to obtain, and it more closely approximates income attributable to the land only. Renters often form a competitive market among themselves with the resulting rents they are willing to pay tending to represent a typical management level. See 6.6 Irrigated Land Valuation.

6.4 Use of Budgets in Valuation. Owner-operated budgets may be used if rental income does not encompass the local market area. The budgets used should be for typical annual crops grown within the county. The net income derived should represent a typical net income for the production level or capability class of the soil. Income for one-time or rotated specialty crops should not be used unless it reflects the typical market. Exercise care to ensure values generated do not exceed market value.

6.5 Use of Qualified Rental Agreements for Valuation. Annual countywide rental surveys should be conducted because the responses represent the agricultural rental market for the county. In order to derive a meaningful unit of comparison, the rents collected should be sorted based on the capability unit of the soils. The NRCS soil survey for each Florida county lists the capability class for each soil type. The soil types can be found using the maps listed in the soil surveys or can be found using the GIS mapping supplied by the Department. The typical rent per acre indication is obtained by the weighting of the selected net rents (net income) for each production level or capability class to be valued. See addendum G for an example of cropland

rental analysis. The rents considered should be for agricultural use of the land only, less any management fee. Rental agreements may be verbal and must also be verified. Reliable sources for cropland rent (income) by county may be obtained from local agricultural agents or the Department's countywide surveys.

The selected rent value should be reconciled using other statistical measures such as the mode and median of the rents collected. Previous years' selected rents should be compared to the current year's rents. The selected rent should not vary by large percentages from one year to the next. Increasing or decreasing rents will show a trend in the agricultural market and using the 5-year averaging method should smooth large value changes from year to year.

To calculate the value, the current typical net rent is averaged with the previous four years' typical net rent then divided by the 5-year overall capitalization rate. Values for the various soil classifications as determined above shall be compiled into basic tables and applied to all cropland within the county. See addendum H for an example of a cropland valuation table.

6.6 Irrigated Land Valuation. Agricultural producers face many challenges to produce crops. Irrigation is used to supplement annual rainfall and act as insurance during drought periods. When estimating net income using a budget, the cost of irrigation equipment and its use should only be included if irrigation use is typical for the county. Other costs and yields that are used in a budget should also be typical for the county. NRCS county soil surveys list yields that are based on adequate irrigation for typical crops. In the absence of local yields, these yields should be used. Rents that are collected that state "irrigated rent" should be scrutinized to ensure the rent is a net-rent to the landowner.

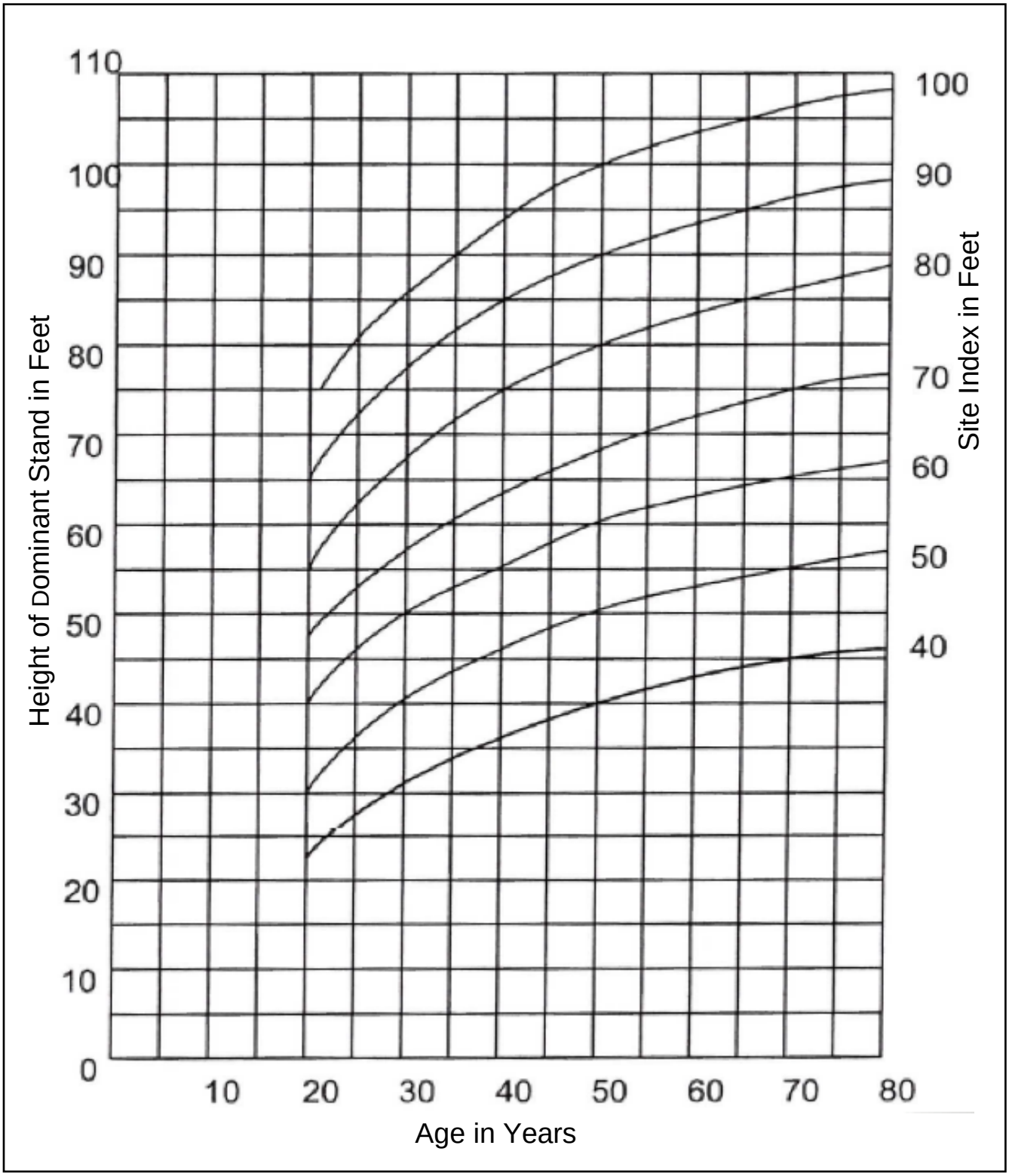
Regarding irrigation systems, s. 193.461(6)(c)1, F.S., states: "For purposes of the income methodology approach to assessment of property used for agricultural purposes, irrigation systems, including pumps and motors, physically attached to the land shall be considered a part of the average yields per acre and shall have no separately assessable contributory value."

Addendum A – Band-of-Investment Example

Band-of-Investment Capitalization Rate Calculation		
$MR_m + ER_e = R_o$		
Where:		
M	=	Loan-to-value ratio (LTV)
R_m	=	Mortgage constant (calculated using the annual percentage rate (APR) and available loan funds)
E	=	Required equity percentage of the loan (1 – LTV)
R_e	=	Equity yield rate (mortgage constant plus the FFCBFC January 20-year bond rate)
R_o	=	BOI capitalization rate

Band-of-Investment Capitalization Rate Example		
In the examples below the following are assumed:		
M (LTV)	=	.75 or 75% (*$200,000 needed; the bank will loan 75% or $150,000*)
E (required equity)	=	.25 or 25% (*The bank requires 25% equity or $50,000*)
Loan term	=	20 years
Gross loan	=	$150,000
Loan fees	=	$3,000
Loan interest rate (i)	=	.05 or 5%
FFCBFC bond rate	=	.021 or 2.1%
APR	=	Amortized first year's interest / Loan Available funds *For example:* A $150,000 loan that included $3,000 loan fees would give $147,000 of available funds. If the interest payable is based on the gross loan amount then at 5% annual interest with annual payments, the required annual interest payment would be, $150,000.00 x 0.05 = $7,500. *Placing these figures into the APR formula results in:* APR = $7,500 / $147,000 = .05102 or 5.1%
R_m (mortgage constant)	=	The annual payment (calculated using the APR) / The gross loan The mortgage constant is calculated by using the APR not the loan interest rate. *For example:* Solving for the annual, end of period payment (one annual payment in this example) for the 20-year, $150,000 loan and substituting the APR of 5.1% for "i" results in annual payments of $12,138.66. NOTE: To calculate the annual payment using an HP 12C calculator, enter the following: f, CLx; n = 20; i = 5.1; PV = 150,000; PMT. *Placing these figures in the R_m formula results in:* R_m = $12,138.66 / $150,000 = 0.0809 or 8.09%
R_e (equity yield rate)	=	FFCBFC January 20-year bond rate + R_m *Placing these figures in the R_e formula results in:* R_e = 2.1% + 8.09% = 10.19%
R_o (BOI capitalization rate)	=	$MR_m + ER_e$ *For example:* The capitalization rate with 75% mortgage and 25% equity would then be calculated as follows: (75% x 8.09%) + (25% x 10.19%) R_o = 0.060675 + 0.025475 = 0.08615 or 8.62%* *The county ad valorem millage rate, expressed as a percentage, should be added to the 5-year average capitalization rate to establish the overall capitalization rate. The Department recommends property appraisers use the current year county millage rate without adjustment for 5-year averaging.

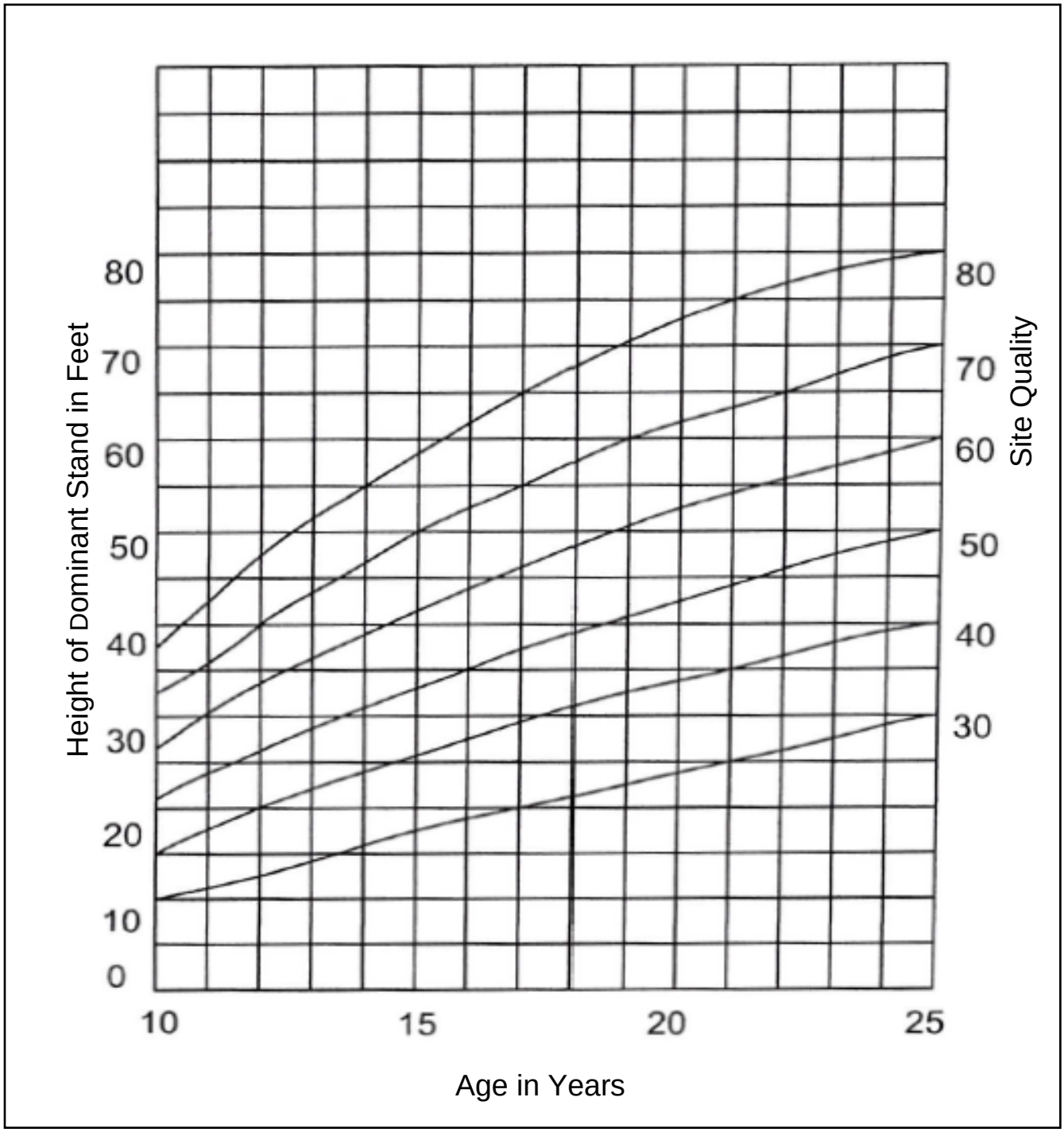
Addendum B – Growth and Yield of the Southern Pines, Slash Pine



Data from “Growth and Yields of Natural Stands of the Southern Pines” by

F.X. Schumacher and T.S. Coile. Copyright 1960 by T.S. Coile, Inc., Durham, NC

Addendum C – Site Quality Curves for Slash Pine Plantations in Florida, 25-Year Basis



Data from University of Florida, School of Forestry, Growth and Yield of Slash Pine Plantations in Florida, Research Report No. 3, by Robert L. Barnes, May 1955

Addendum D – Integrated Yield Data for Planted and Natural Pines

PINE CLASSIFICATION @ 30 year rotation		SITE INDEX (50 yr.)	SITE INDEX (25 yr.)	YIELD (cords)	YIELD (tons)*	CLASS
Natural:	no. trees/ac given	95 Avg.	75 Avg.	1.62	4.50	Timberland I
Planted:	@ 400 trees/ac	90+	70+	1.98	5.49	"
Natural:	no. trees/ac given	85 Avg.	65 Avg.	1.28	3.55	Timberland 2
Planted:	@ 400 trees/ac	80~89	60-69	1.48	4.11	"
Natural:	no. trees/ac given	75 Avg.	55 Avg.	1	2.78	Timberland 3
Planted:	@ 400 trees/ac	70-79	50-59	1.1	3.05	"
Natural:	no. trees/ac given	65 Avg.	45 Avg.	0.75	2.08	Timberland 4
Planted:	@ 400 trees/ac	60-69	40-49	**	**	"
Natural:	no. trees/ac given	55 Avg.	35 Avg.	0.55	1.53	Timberland 5
Planted:	@ 400 trees/ac	50-59	30-39	**	**	"

*The YIELD (tons) is converted from cords by a factor of 2.775 tons per cord.
**No yield information is given for SI 50 and 60 (50 yr.) in the Bennett and Clutter SE-35; the volumes above are from Coile and Schumacher natural slash pine tables.

Natural: number of trees per acre given in the table used in Growth and Yield of Natural Stands of the Southern Pines. Schumacher and Coile.

Planted: 400 trees per acre selected from table used in Multiple Product Yield Estimates for Unthinned Slash Plantations. Bennett and Clutter SE-35.

Addendum E – Timberland Value Schedule

TIMBERLAND VALUE SCHEDULE, 5-Year Average

PINE

Total Annual Cost per Acre:

Natural _____ =Management. **IDS Year:** _____ **Price/Ton:** _____

Planted _____ =Management + (siteprep&plant/30yrs) **County:** _____ **Cap Rate:** _____

CLASSIFICATION	SITE INDEX (50 Yr.)	YIELD ** Tons/ac/yr	x	PRICE / TON	=	GROSS INCOME	-	COST ** PER ACRE	=	NET INCOME	÷	CAP RATE	=	5-Year Average VALUE
Timberland No. 1	**90 +**													
Natural	**(95 Avg.)**	**4.50**	x		=	0.00	-		=	0.00	÷		=	
Planted		**5.49**	x		=	0.00	-		=	0.00	÷		=	
Timberland No. 2	**80-89**													
Natural	**(85 Avg.)**	**3.55**	x		=	0.00	-		=	0.00	÷		=	
Planted		**4.11**	x		=	0.00	-		=	0.00	÷		=	
Timberland No. 3	**70-79**													
Natural	**(75 Avg.)**	**2.78**	x		=	0.00	-		=	0.00	÷		=	
Planted		**3.05**	x		=	0.00	-		=	0.00	÷		=	
Timberland No. 4	**60-69**													
Natural	**(65 Avg.)**	**2.08**	x		=	0.00	-		=	0.00	÷		=	
Planted														
Timberland No. 5	**50-59**													
Natural	**(55 Avg.)**	**1.53**	x		=	0.00	-		=	0.00	÷		=	
Planted														

** Yields are converted from cords per acre to tons per acre by a factor of 2.775 tons per cord.

All costs and yields assume Slash Pine, per acre, and annualized over a 30-year rotation.

Addendum F – Non-Pine Value Table

Non-Pine Value Table

Yield/acre/ton		Price/Ton		Management Cost		Caprate		Value
1.11	x		-		/		=	

	DESCRIPTION		NOTES
Hardwood	Hardwood or Pine-Hardwood mixtures on sites subject to stand conversion; high hammocks.	_____	Valued by a percentage of the value calculated for the selected Slash Pine site index in the Timberland Value Schedule.
Swamp	Stream and river bottoms that flood, stream margins, bays, cypress ponds and swamps all considered nonplantable.	_____	Calculated using the formula above.
Non-Productive	Permanent open sogs; permanent open water; borrow pits; highway, pipe, and powerline rights-of-way; salt water marsh; spoil, dumps, and pits.	_____	Non-Productive should be less than Swamp value.

Addendum G – Agricultural Rental Analysis Example, Cropland/Pasture Land

AGRICULTURAL RENTAL ANALYSIS

Cropland or Pasture

Rental Letter Seq.	Rent Per Acre*	Acreage	Rent x Acreage
1	$30.00	40	$1,200
2	$30.00	60	$1,800
3	$45.00	20	$900
4	$32.00	120	$3,840
TOTALS		240	$7,740

WEIGHTED RENT **$32.25**

* Net rent to owner before deducting management fee

NOTE: This is an example scenario. In this example, the appraiser determined these rents to be the best comparable rents for the subject property, and the weighted mean is calculated. The selected rent should be reconciled using other statistical measures such as the mode and median. For context, see sections 4.3 and 6.5 of these guidelines.

Addendum H – Cropland and Pasture Land Value Schedule

APPRAISAL SCHEDULE: **CROP [_x_]** **PASTURE [_X_]**

COUNTY ANY **20xx** **IDS** _____ **CAP RATE**

Type	Code/ Symbol	Capability	Gross 5 Yr Avg Rent	Net* 5 Yr Avg Rent	Cap Rate	Indicated Value
Cropland 1	5100 CNF	I				
Cropland 2	5200 CNF	II				
Cropland 3	5300 CNF	III				
Pasture 1	6100 PIA	10-13 AUM				
Pasture 2	6200 PIA	7-9 AUM				
Pasture 3	6300 PIA	5-6 AUM				

*Net Rent is Gross Rent less Management Fee. Management Fee for rents is owner incurred costs of incidentals and lease broker fees where applicable. It represents a small amount per acre to cover management cost in concluding and collecting rent.

*A Management Fee of **x%** is indicated typical of rented local farm operations.