

Florida  
Agricultural Classified Use  
Real Property Appraisal Guidelines



**DRAFT – Coded**

*(1982 version to Draft 3 with highlighted coded changes from Draft 2 to Draft 3)*

Property Tax Oversight  
November 2023 ~~November 2022~~

**~~RULES OF THE STATE OF FLORIDA, DEPARTMENT OF REVENUE~~**

**~~CHAPTER 12D-51.001~~**

~~12D-51.001—Classified Use Real Property Guidelines, Standard Assessment Procedures and Standard Measures of Value, Agricultural Guidelines.~~

~~Pursuant to Section 195.062, F.S., these guidelines are adopted in general conformity with the procedures set forth in section 120.54, F.S., but shall not have the force and effect of rules and are to be used only to assist property appraisers in the assessment of agricultural property as provided by section 195.002, F.S. Copies of these guidelines may be obtained from the Department of Revenue, Property Tax Oversight Program, P.O. Box 3000, Tallahassee, Florida 32315-3000.~~

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**~~CLASSIFIED USE REAL PROPERTY GUIDELINES~~**

**~~STANDARD ASSESSMENT PROCEDURES AND STANDARD MEASURES OF VALUE~~**

**~~AGRICULTURAL GUIDELINE~~**

**~~I. General Provisions~~**

**~~II. Woodlands Section~~**

**~~III. Pasture Land~~**

**~~IV. Citrus Lands~~**

**~~V. Croplands~~**

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## 1.0 INTRODUCTION

1.1 Overview and Specific Authority. Section 195.002(1), Florida Statutes, 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), Florida Statutes (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:

- (a) Rules and regulations.
- (b) Standard measures of value.
- (c) 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), are available here: [floridarevenue.com/property/Pages/Cofficial\\_MOI.aspx](http://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 have considerable latitude for applying 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.

Property appraisers can achieve valid agricultural classified use assessment valuations of real property in different ways while adhering to professionally accepted appraisal practices and appropriate appraisal methodologies. 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." However, General application of the principles detailed in these guidelines, even among counties experiencing different market conditions or varying resources, should yield similar results 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), 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, another feature of Florida's property tax system. For more information, the VAB training materials are available on the Department's website: [floridarevenue.com/property/Pages/VAB.aspx](http://floridarevenue.com/property/Pages/VAB.aspx)

#### **1.4 Context of These Guidelines Uses for Which These Guidelines Are Not Intended.**

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 should not be used as the basis for the legal rights or responsibilities of participants in the real property appraisal process for ad valorem tax purposes in the State of Florida.

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 may 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, but only to the extent that those other sources do 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 procedure to be used in 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** I. General Provisions

**2.1 Overview.** (4) The procedures and data sources set forth in this section are to be used generally with in the context of the other agricultural sections in these guidelines the Classified Use Real Property Guidelines of the Manual of Instructions.

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) 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.

1. In determining whether the use of the land for agricultural purposes is bona fide, the following factors may be taken into consideration:
  - a. The length of time the land has been so used.
  - b. Whether the use has been continuous.
  - c. The purchase price paid.
  - d. Size, as it relates to specific agricultural use, but a minimum acreage may not be required for agricultural assessment.
  - e. 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, reforestation, and other accepted agricultural practices.
  - f. Whether the land is under lease and, if so, the effective length, terms, and conditions of the lease.
  - g. Such other factors as may become applicable.

Chapter 12D-5, F.A.C., sets forth the procedure to be used in 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." Agritourism is a rapidly expanding industry in Florida. Section 570.86, F.S., defines agritourism to mean any agricultural-related activity consistent with a bona fide farm, livestock operation, ranch, or working forest which allows members of the public to view or enjoy recreational or educational activities. Such activities may commonly include things like aquaculture, farmers markets, berry picking, horseback riding, farm tours, etc.

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 relates directly to agricultural production. For more information on Florida agritourism, visit [www.followfreshfromflorida.com/agritourism](http://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) The procedure to be used in classifying real property as agricultural land for purpose of ad valorem tax in accordance with Section 193.461, F.S. (1975), is set forth in Chapter 12D-5, F.A.C., which is included in the Manual of Instructions.~~

**2.2 Agricultural Factors.** ~~(3) The assessment of~~ Once the real property that has been granted agricultural classification, the assessment shall be made in accordance with s. 193.461(6), F.S. (1979), which states provides in pertinent part the following:

(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 ~~said the~~ property;
3. The present market value of said property as agricultural land;
4. The income produced by ~~said 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 Department of Agriculture and Consumer Services pursuant to s. 570.93 or s. 403.067(7)(c), 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.

~~(4) The agricultural section of the Classified Use Real Property Guidelines of the Manual of Instructions is intended to provide a method or procedure whereby Section 193.461 (6) (a), F.S. (1975), may be implemented in accordance with Sections 195.032 and 195.062, F.S. (1976 Supp.).~~

~~(5) Agricultural land has value because of its productivity and ultimately from its 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 Market, income, and cost.~~

~~(6) The property appraiser may use the sales comparison Market, 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 the discretion in of selecting the approach to be used. Whichever approach is used, care must be exercised to ensure value conclusions insure values thus generated do not exceed market values (see s. 193.441(1), F.S.).~~

~~(7) Due to the large number of agricultural parcels of property 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 must utilize what is commonly referred to as the a mass appraisal technique in valuing system to value agricultural property within the county.~~

**2.2.1 The Sales Comparison Approach.** ~~(8) The Market Approach which should be considered by the Property Appraiser The sales comparison approach relies heavily on verified sales of similar properties in order to make for comparisons to be made. However, that market must be limited to the market for comparable agricultural properties. Generally, the sale of land in Florida the past few years strictly for bona fide agricultural use, as defined by s. 193.461(3)(b), F.S. Florida Statutes, as in contrasted to agricultural use combined with speculative use has other property rights, is not been of sufficient volume 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 one 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.** ~~(9)~~ The cost approach ~~Cost Replacement 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, using the procedures set forth in the Cost Approach Section found in the General Real Property Guideline and their value added to the agricultural value of the land.

**2.2.3 The Income Approach.** ~~(10)~~ The income approach, or capitalization of net earnings to land into as an indication of value, ~~is the approach that is recommended and is used throughout this guide~~ these guidelines to value agricultural classified use appraise those properties given agriculture classification in accordance with s. 193.461, F.S. (1975). However, it is recognized that this is not the exclusive method of valuing agricultural lands. See *St. Joe Paper Co. v. Brown*, (Fla. 1969) 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.

~~(11)~~ The income approach ~~Since arms-length market sales of land for agricultural use reflects the a buyer’s~~ and seller’s evaluation of the earning potential of the land. Any land values computed on an income approach which that exceed market sales 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.

~~(12)~~ The capitalization rate expresses the relationship between net income from ~~to~~ the land and value. Value is defined as the present worth of future rights to income. There are three basic methods ~~to used~~ to estimate the capitalization rate in an appraisal process. They are the market comparison, summation, and the band-of-investment (BOI) ~~band-of-investment, summation, and market comparison 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.** (13) The market comparison method attempts to directly establish a capitalization rate by dividing the net income by the sale sales 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 use 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 farmland other than the desire to receive a current income stream. These include but are not limited to the following:

- (a) Desire to gain the status of landowner.
- (b) Opportunity to live in a rural setting the country and avoid the social ills of the city.
- (c) Desire to live near relatives or reclaim a family homestead.
- (d) Gaining of income tax advantage.
- (e) Opportunity to provide a hedge against inflation.
- (f) Spreading of fixed costs by through the more efficient use of machinery.

(14) ~~The second reason why this method may be unsuitable is that it may produce a market value rather than a (agricultural) "use" value.~~

**The Summation Method.** (15) The summation method attempts to estimate the capitalization rate by summing adding up the individual components of the capitalization rate. These components are:

- (a) The safe rate is the rate obtainable with the most safety and the least risk.
- (b) 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.
- (c) 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.
- (d) 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.

(16) The summation method provides a theoretical presentation of investors' desired returns, risks, liquidity, management, and other rates, to justify or explain why a selected capitalization rate is used in the valuation of real property is in excess of the "safe" rate. Nevertheless, 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.** (17) The BOI ~~Band-Of-Investment~~ 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 the Columbian District of the Federal Land Bank is the major agricultural real estate lender in Florida, it would be appropriate to use their typical loan to value ratio and interest rate ~~as of January 1,~~ in the mortgage portion of this method. The equity rate can be obtained by



comparing equity yields on similar risk investments. ~~A source for this information could be the yield, as of January 1, of Federal Farm Credit Bond Yields;~~ 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 [farmcreditfunding.com](http://farmcreditfunding.com).

The BOI is a straightforward calculation built from four different components. These components include the loan-to-value (LTV) ratio, the prevailing interest on debt financing, the expected return on equity, and 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.

| <b>Band-of-Investment Capitalization Rate Calculation</b> |   |  |
|---|---|--|
| $MR_m + ER_e = R_o$                                       |   |  |
| <b>Where:</b>   |   |  |
| $M$   | ≡ | 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  |

(18) In an example of a hypothetical case these components would be used in the Band of investment method as follows:

Mortgage 70% financing X 10% interest = 7.0%

Equity 30% equity X 14% yield = 4.2% Total Discount Rate 11.2%

\*Local Millage Rate 1.5%

Overall Capitalization Rate 12.7%

\*The individual county ad valorem millage rate, expressed as a percentage should be added to the discount rate to establish the final capitalization rate to be used. This should be done regardless of which method is used unless ad valorem taxes are handled as an expense item when estimating net income.

**2.2.4 Data Sources.** (19) Production, income, expense, acreage, and other data should be based on a typical operation. Typical is defined as (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 this section were obtained from the Florida Department of Agriculture, the Institute of Food and Agricultural Sciences, United States Department of Agriculture publications and other authoritative sources which reflect typical 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 as contrasted to the typical operator. Until such time as the property appraiser can justify and



~~verify typical net income from typical operators in his county or the area concerned. These publications data sources should be used with appropriate adjustments for the each county.~~

~~(20) In these guidelines this guide, the land capability unit system of the Soil Conservation Service USDA's Natural Resources Conservation Service (NRCS) [Web Soil Survey](#), may be used as an alternative method where local production information is not available. (21) Yields shown in the SCS system these soil surveys are for a few representative crops and grasses and indicate the potential attainable with high-level management and assume assumes normal growing seasons. They 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. Therefore, in order to obtain typical yields from typical operations, the Soil Conservation Service recommends their yields be adjusted by 85 percent.~~

~~(22) The property appraiser should be familiar with the most important soil types in the his county. Data on soil types may be obtained from NRCS's Web Soil Survey website. Detailed soil surveys for of many counties have been published and are underway in others. A general soil map of each county is available for all counties. 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. Data on soil types may be obtained from the District Conservationist (DC), of the Soil Conservation Service located in most counties.~~

~~(23) 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. The In the absence of local data, an appraiser's use of Soil Conservation Service published soil data may be a professionally accepted appraisal practice. does not infer the property appraiser become a soil scientist. However, he must be cognizant of the important role of soil quality in the assessment of agricultural lands.~~

~~(24) Attached to this general section are sections dealing with the four major agricultural land uses within the State. 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 general provisions and so much of those specific provisions set forth hereafter as may logically apply. For instance, lands used for dairy purposes should be valued according to the principles contained in the pasture section, even though the pasture section generally deals with the more typical cow-calf operation.~~

**2.2.5 Value Consistent with Use.** ~~(25) It should be noted that it is an accepted agricultural practice in some areas to obtain more than one crop from the same field each year. Where this is typical, it should, of course, be recognized in order to arrive at a total net income. Also, for land conservation purposes, land may be permitted to lie fallow on an occasional basis. Likewise, 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. In these instances, the land would not lose its agricultural classification, and using his discretion, The property appraiser should value the lands in a manner consistent with reason according to 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.** (26) Nonproductive land, or wasteland, has some value and may contribute to the value of the surrounding productive land, but obviously is not subject to valuation by the income approach. The property appraiser should, therefore, 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.** (27) In order 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, it is recognized that a number of several years of historical data on cost and income should be considered. However, due to lack of historical data or lack of research on a particular technique, it is recommended by the Department that a simple five year (5) moving average be used until more data are available or further research can be accomplished to justify modification of the simple five year average concept. 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](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 before the January 1 assessment date, 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](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 (VAB) 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*

Specific Authority 195.027, 195.032, 195.062 F.S. Law Implemented 193.461 F.S. History – New

### **3.0 TIMBERLAND II. Woodlands Section**

**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 (4) Timberland Valuation Basis.** This section describes a procedure for the assessment appraisal of timberland woodland based on potential net income from the basis of average annual growth potential from seedling to economically mature timber. ~~Actually, 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. Basically, 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.

~~(2) Currently, pines are the primary species in approximately 65% of Florida's 16 million acres in woodlands. “Actually, 93% of Florida's timber is grown in the northern part of the State, roughly north of Disney World; and all indications are that this proportion may be even higher at the turn of the century.”\* Of the acreage devoted to growing pines, approximately 25% is in plantation. About 3 to 4 percent of these plantations are 'old field' plantations; the balance is in forest site plantations. The primary products derived from these operations are pulpwood, sawtimber, poles, logs and bolts. \* Timber for Florida Today and Tomorrow, A Summary Report; Walter Smith, Division of Forestry, 1974.~~

~~(3) A large portion of fresh water swamp land in Florida is growing usable hardwood or cypress. Upland hardwoods are also prevalent in many areas. Generally, the hardwood and cypress industry in Florida has consisted of harvesting whatever trees were available of sufficient size and quality with minor emphasis toward management of timber — on these areas.~~

**3.3 Timberland Categories.** (4) For taxation purposes, timberland woodland is considered to have two categories: productive and nonproductive. Productive timberland woodland is generally understood in the agricultural industry to include land that is: defined as: land which is

- (4) Producing or is physically capable of producing usable crops of wood,
- (2) Economically accessible now or in the foreseeable future, and
- (3) 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.

~~(5) Nonproductive timberland woodland is generally understood in the agricultural industry to include defined as: 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.~~

~~(6) This definition of woodland includes land from which the timber has been removed, but which has, for bona fide forestry reasons, not yet been replanted. It excludes homesites or building areas which are occupied by trees for ornamental purposes.~~

~~(7) In addition to the value of the growth, the values of naval stores and range pasture usage can be considered and added where applicable.~~

**3.4 Factors Influencing Timberland Values.** ~~(8) The primary factors influencing timberland woodland values are:~~

- ~~• (a) Productivity of soil expressed as site index.~~
- ~~• (b) Local stumpage prices in the area. These vary considerably in different areas of the State.~~
- ~~• (c) Management costs which include costs of site preparation, planting, and annual recurring expenses.~~

~~(9) These three factors must be evaluated and established by each property appraiser for the his county in order to arrive at assessed value for timberland woodlands.~~

**3.4.1 Determining Productive Capacity/Site Index.** ~~(10) 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 this Guide because slash pine has historically been is the predominant species under intensive management in the state.

~~(11) The site index is defined as the average total height of the dominant and/or co-dominant trees (dominant stand) will attain at either 25 or 50 years of age. Normally, 25-year site indexes (sometimes are referred to as site quality) are applied to planted stands and 50-year indexes are applied to natural timber. As shown in addendum B, which is an excerpt from *Growth and Yields of Natural Stands of the Southern Pines* (cited above), an A generally acceptable way to~~

means of converting 25-year 22-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.

(12) 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 and a reading in feet is made. 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 tables 1 and 2 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.

(13) 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. Most Some parcels may be represented by a single pine site index figure, but this figure must be representative of the parcel as a whole and not the result of an isolated sample.

(14) 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 sites 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 the 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.

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

(16) ~~Many company and individual forest land managers have site index information on their property which they will furnish upon request. The property appraiser should realize that his application of site index information to reflect value on an entire parcel is subject to some judgment and it is an estimate of value. The property appraiser, with the assistance of the Department of Revenue, should familiarize himself with the technique of obtaining site index.~~

(17) Steps in taking a site index on a field inspection of a parcel would be as follows:

- (a) selection of dominant or representative slash pine tree.
- (b) Measure the height (hypsometer, altimeter or clinometer).
- (c) Determine age (increment sample).
- (d) Plot age and height on the site index curve to find the site index.

(18) Site index information for sand pine, longleaf pine and loblolly pine can be related to a standard slash pine site index.

(19) Five site index classes for productive pine timberland shall be used as set out in this guideline. 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 increments on a 50-year basis with a range of 50 feet to 90 feet and over.

(20) Yields. The annual growth increment expressed in tons cords per acre per year can be obtained from addendum D Table 3 which gives yields for the five established index classes. The yield tables used for this purpose were 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 U.S.F.S. 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.

(21) In addition to natural pine and planted old fields, there is the timber type referred to as forest site plantation. These are plantations established with various amounts of site preparation and in recent years planted with seedlings with improved growth characteristics. Although no published yield tables for forest site plantations are available, preliminary studies have shown that yields from these plantations fall near midpoint between yields of old field plantations and those of well stocked natural stands. Calculated yield figures from these sources are presented in Table 3, Integrated Yield Data.

**3.4.2 Stumpage Value.** (22) According to IAAO's 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 Northwest and lowest least 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. (23) 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 being the relative stability of pulpwood prices over the years and its strong influence on the wood-using industries.

(24) The development of stumpage prices and timber stand management costs should be accomplished by and compatible with the averaging techniques as set forth in the General Provisions.

(25) The selected final stumpage price figure used in a county for timberland forest land valuation may should be established from landowner sales, timber buyer surveys, local timber pricing publications, and through a joint effort of the property appraiser and the Department of Revenue. However, The Department of Revenue obtains shall obtain current local stumpage prices each year from property owners, industry representatives, timber brokers, the Florida Forest Service Division of Forestry, 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 The price figure arrived at should be consistent, in the manner derived and by definition, with the price figures used in the preceding years.



**3.4.3 Management Costs.** ~~(26) Forest Management costs associated with timber operations are of two types: annual recurring expenses and improvements to the land and annual recurring expenses. The improvements to the land prorated include annualized costs (cost/rotation age) costs of for site preparation, seedlings, and planting are the only costs for improvements to land that should be included. Forest maintenance and protection from insects, disease, fire, and natural disasters are annual recurring expenses management costs.~~

~~(27) Management costs may be acquired will be derived by the Department of Revenue from cost data supplied by the Florida Forest Service Florida Division of Forestry from, 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. An average cost figure will be provided Upon request by, the Department of Revenue will provide a typical cost figure to the property appraiser for use in the valuation of timberland.~~

~~(28) Ad valorem taxes are a component of the capitalization rate and are not to be included in the annual management cost since they are a component of the capitalization rate.~~

**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/Cofficial\\_CompleteSubRollEval.aspx](https://floridarevenue.com/property/Pages/Cofficial_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. ~~(29) Value Tables. The Property Appraiser should establish value tables for the site index ranges within the county. The timberland classes with their respective site index ranges are:~~

| <b>Class</b> | <b>(50 Year) Slash</b>  |
|--------------|-------------------------|
| 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, i.e. Timberland #2-75.~~

~~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.~~

~~(30) For proper coding, See 12D-8.08, F.A.C.~~

~~(31) 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 by the use of aerial photography. The two methods are different in reference to yields, prices paid and costs of establishment and maintenance. By using the yield figures given in addendum D Table 3 (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 previously ~~in section 3.4.2 of these guidelines in the section on stumpage prices.~~

**3.6 Local County Value Tables.** ~~(32) The construction of local county value tables for the five site index categories is predicated on reasonable forest management practice in regard to number of stems per acre. 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 particular counties 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. See Table 4 for an example Value Table.

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.** ~~(33) In summarizing the key factors in establishing value tables, the following is a review of terminology~~ Key elements and terminology in timberland valuation include:

- ~~(a) 50-year~~ site index – measure of forest soil capability of productivity; established by the property appraiser.
- ~~(b) Yield~~ information – see addendum D Table 3.
- ~~(c) 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.

- ~~(d) 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-~~
- ~~(e) Capitalization rate – derived as described set forth in section 2 of these guidelines the General Provision of the Agricultural Section of the Guidelines.~~
- ~~(f) Value tables – are locally derived by the property appraiser based on the five factors described above from the previous factors. Tables are revised using through the use of 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.~~

~~(34) Consideration of all factors in Section 193.461(6), Florida Statutes, will normally be reflected in the above approach to value. Factors other than site index and degree of land improvement will usually have a minor effect on agricultural value, however, when the County Property Appraiser determines that a particular parcel varies significantly from the norm, a further adjustment may be made on an individual table.~~

~~(35) A non-pine table of value is included for hardwood and swamp land based on potential local prices, costs, and market information. Since hardwood forest land is rarely managed in the State it may be best represented by a percentage of pine valuation if on a good pine site. However, much of the forest land that will be classed as hardwood will be productive swampland in most counties. See Non Pine Value Table 5.~~

~~(36) Nonproductive lands have some value and may contribute to the value of surrounding woodlands but obviously 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 woodlands.~~

~~(37) Assessment Procedure. Primary emphasis should be placed on the income approach with adjustments made to reflect other factors where a variation from the norm is noted. The two sources of income data for timber operations are calculated net income and annual rental. Although reliable, rental information is difficult to obtain for bona fide timber operations, when available it lends itself readily to the capitalization process, because such income is usually a net income, with the exception of taxes which are considered in the Capitalization rate.~~

~~“Literature Cited”~~

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~~Law Implemented 193.461, F.S. History—New~~

~~Table 1 is now Addendum B~~

~~Table 2 is now Addendum C~~

~~Table 3 is now Addendum D~~

~~Table 4 is now Addendum E~~

~~Table 5 is now Addendum F~~

## **4.0 PASTURE LAND III. Pasture Lands**

**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.** (1) The capitalized net income approach as set forth in the General Provisions of the Agricultural Guidelines described in section 2 of these guidelines is recommended for use in 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.

(2) Considerable acreage is devoted to livestock operations in Florida. These grazing lands encompass all acreage irrespective of the state of development which is or typically would be utilized for the production of grass and herbage. Within this vast acreage are numerous variables and operational diversities which relate principally to soils, climate and responsiveness to typical herd management. In seeking a valuation basis it is imperative that these diversities together with their underlying variables be reconciled insofar as possible. This can best be accomplished by the derivation of defensible valuation data incorporated into an appraisal system designed for easy administration. Knowledgeable appraisers recognize that specific data applicable to every type and level of operation is a practical impossibility. Rather it is more feasible and doubtlessly more correct to derive representative models for guides. Each model may be typical of numerous field properties. It should be based on supportive data compatible with the data of all other models and within established, operation parameters.

(3) Model guide inputs such as price, rate and expense are of course subject to annual update. The models when completed will have been derived from logical premises encompassed within reasonable operation parameters. Each value for each condition level should rest on supportable data and exhibit a consistent and equitable relationship with all other levels. Using models as herein derived should in no way absolve or limit the field appraiser from applying discretionary adjustments to individual properties where conditions warrant.

**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.** ~~(4) Valuation Basis.~~ This section describes a procedure for the appraisal of grazing land based primarily 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.

~~(5) Pasture land is defined as: Land under fence which is used for the production of herbage or grasses and the use of livestock grazing or feeding.~~

~~(6) Pasture land is considered to have four classes as follows:~~

~~(a) *Range Pasture*—raw, unimproved, native pasture used for grazing livestock.~~

~~(b) *Semi-improved Pasture*—is 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.~~

~~(c) *Improved Pasture*—is land that has been cleared, limed, drained and seeded to legumes and/or grass mixtures. Such grasses include but are not limited to bahia grass, bermuda grass, pangola~~

etc. This improved pasture is typically fertilized and renovated from time to time and is grazed or harvested for hay or silage.

~~(d) Waste Pasture (nonproductive) includes acreage in depleted mines, dumps, pits, lakes, pond, and other non-productive nonproductive land.~~

~~(7) On a statewide basis, the primary factors influencing pasture land values are:~~

- ~~• (a) Productivity of the soil – Productivity is reflected by higher yields on more productive soils.~~
- ~~• (b) Market price of beef.~~
- ~~• (c) Extent of pasture land improvement.~~
- ~~• (d) Annual expenses associated with different types of operation.~~
- ~~• (e) Climatic conditions – Additional expenses (including supplemental feeding, if necessary) treated as an additional expense.~~

~~(8) In order To arrive at value for pasture land, the property appraiser should determine these factors on a local basis.~~

**4.4.1 (9) Productivity of Soils.** Soil productivity is expressed in terms of AUM, as described in sections 4.4.6 through 4.4.7 ~~beef yields~~. Soil productivity and degree of land improvement are important factors influencing ~~thee~~ the value of grazing land. ~~This has been verified by consultations with the United States Soil Conservation Service, The University of Florida Soils Sciences Department and the University of Florida Food and Resource Economics Department.~~ While most ~~soi4s~~ 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 ~~it~~; 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.

~~(10) The property appraiser should be familiar with the most important soil types in the his county and which of these are the most productive. (11) Published [NRCS soil surveys](#) are available to the property appraisers and should be utilized to the best advantage. Data on soil types can be secured from County Extension Directors or from the District Conservationist (S.C.S.) in counties without soil surveys. 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.

~~(12) These comments are presented with the idea that major soil types should be considered, if possible. Comments do not infer that appraisers become soil scientists or use soil types to supplant the income approach to assessment of pasture land. It is a tool to improve expertise in assessment of Agricultural land.~~

~~(13) Market Price of Beef. Market prices for all grades and types of beef may be obtained either, locally or from the Florida Crop and Livestock Statistical Reporting Service.~~

**4.4.3 (14) 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.

~~(15) Climatic Conditions. Climatic influences includes among other things, the length of growing season, average mean temperature, the amount and distribution of rainfall, the occurrence or non-occurrence of frost, and if it occurs the frequency of such occurrence. Adjustments for climatic conditions will generally be made on a statewide basis since variation from one area of a county to another will probably not have any significant influence on value.~~

~~(16) Two sources of income data for pasture operations are calculated: net income and annual rental. Annual rental information, if it can be obtained and verified, can prove to be an excellent indicator of what the actual return to the land really is. If unqualified, however, rental information can be misleading in that often, pasture land is rented for a nominal sum while the owner awaits an alternate use for the land.~~

~~(17) Yield and related expense information may be secured from sources such as: (a) Producer records (b) Research data (c) livestock budgets~~

~~(18) Producer Records. Producer records, although difficult to, obtain. can give highly accurate data where good records are maintained.~~

**4.4.4 (19) Livestock Budgets.** Livestock budgets prepared by economists with the Institute of Food and Agricultural Sciences IFAS can be used to obtain income net return information if local producer records are not available. These budgets reflect income and expense summaries which 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.

~~(20) 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 (21) 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) ~~(a)~~ Determine the yields in pounds of saleable beef per acre from:
  - 1. Typically managed ranch operations within the county.
  - 2. Soil Conservation Service NRCS land capability unit system using Animal Unit Months ~~(AUM)~~ as explained in the addendum following this section below.
- 2) ~~(b)~~ Determine the expenses associated with the yields determined in ~~(a)~~ above step 1.
- 3) ~~(c)~~ Determine the market price of beef on an annual basis. Apply the price of beef to the yields as determined in ~~(a)~~ above step 1.
- 4) ~~(d)~~ Subtract the expenses as found in ~~(b)~~ above step 2 from the dollar value of beef found in ~~(c)~~ above step 3 to obtain the annual net income. ~~Add this resulting net income to the preceding 4 values and~~

~~(e)~~ divide by 5 to give a rolling five-year average 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. ~~(f)~~ Divide the average net income value computed in ~~(e)~~ by the capitalization rate to get the classified use value. ~~(g)~~ Values for the various types of operations as determined above shall be compiled into basic tables and, applied to all range and pasture land within the county. See the value schedule in addendum H.

~~(22)~~ 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 particular parcel varies significantly from the norm, a further adjustment may be made on an individual basis.

~~(23)~~ It should be noted that often native pasture in one area of the state will produce substantially more than native pasture in another area and may even produce as much as some improved pasture.

~~(24)~~ Nonproductive land has some value and may contribute to 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. Nonproductive land should never exceed the value of the least productive range land.

#### **Addendum**

~~(25)~~ One of the basic factors in deriving agricultural pasture land values is the production of pounds of saleable beef. Where adequate local information is available use of the Soil Conservation Service (SCS) land capability unit system may be helpful in establishing production levels for the pasture conditions set forth, however, such information must be supportable and verifiable.

**4.4.6 NRCS Soil Capability and Animal Unit Month (AUM).** ~~(26)~~ The Soil Conservation Service (SCS) 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 Land Capability 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 less than one-half most of Florida's counties.

~~(27)~~ The basic measure of land capability for pasture and grazing land in the SCS NRCS system is an Animal Unit Month ~~(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. One Animal Unit Month may be defined as forage production sufficient to meet the feed requirements for normal health and growth of one animal unit for one month. (28) The animal unit comparison is based on one mature beef bull or cow with calf to four months of age. Thus, an A 7-AUM rating of seven is interpreted to mean that one acre will provide sufficient forage to maintain one mature beef animal cow-calf or bull in normal health and growth for seven months of the growing season. Since seven months is less than one year it would require more than one acre to carry one animal for one year. The operator would need to provide food for 5-months of the year.

In the example of an (28) AUM rating of seven would require 1.714 acres to carry one animal for one year (1 acre x 12 months ÷ 7 months per year = 1.714 acres per year).

(29) The Soil Conservation Service 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. ~~Before the yield values can be used for establishing ad valorem values, they need to be adjusted~~ These yields should be adjusted as necessary to reflect local conditions under typical management with current production practices, type and condition of vegetation, and level of pasture or range improvement. For example, since fertilizer prices have increased about 50 percent faster than beef cattle prices during the last decade many producers have reduced their fertilization program and thereby reduced the carrying capacity of their pastures. Production records of local ranches should be used to establish the AUM ratings for the land capability units. The AUM rating should reflect the pounds of saleable beef produced per acre. This net production level should reflect the typical level of management.

(30) In the absence of local production information, the Soil Conservation Service 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 SCS NRCS calculates total beef pounds by multiplying the AUM rating times 51.0. Total beef production is then adjusted to account for:

- (1) Percent calf crop;
- (2) Typical level of management;
- (3) Herd maintenance; and
- (4) 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.** (31) To derive the pounds of saleable beef produced per acre in this manner, use the following equation would be used:

#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

~~(32)~~ The pounds of saleable beef is 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 ~~revenue~~ income. The net ~~revenue~~ income is then divided by the capitalization rate in order to obtain the land value as explained above using a 5-year average.

~~(33) Values obtained by computation on Soil Conservation Service AUM ratings must be checked and verified against typical ranch operations in the area.~~

~~Specific Authority 195.027, 195.032, 195.062 FS.~~

~~Law Implemented 193.461 F5.~~

~~History - New~~

DRAFT

## **5.0 CITRUS LAND** ~~I.V. Citrus Lands~~

**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.** ~~(1) In citrus land valuation, the variables factors affecting groves are numerous and complex; therefore, it should be recognized at the outset that few statements or descriptions are without~~ there are many exceptions. Rather, it is the intent here ~~These guidelines intend to set forth as succinctly and explicitly set forth as possible meaningful parameters to encompass most grove situations and to assist in just and equitable valuations.~~

**5.3 Citrus Producing Areas.** ~~(2) Broadly defined, There are three citrus producing areas within the state; These are the older established~~ 1) ridge lands and rolling country of the central interior; ~~secondly, the~~ 2) Indian River section of the central and lower east coast; and ~~lastly, the~~ 3) flatwoods and marshes of central and south Florida.

~~(3) The Interior area notably is~~ Groves in the interior are characterized by longer tree life, wider settings with fewer trees per acre, and the attainment of larger physical tree sizes in later maturity. Conversely, citrus trees in the Indian River area ~~has, for the most part, have~~ significantly shorter tree life, much closer settings and will attain ~~lives while attaining~~ greater physical size ~~earlier~~ in their early-producing years. At maturity, however, these trees are seldom as large as those of the interior. ~~As to The trees of the flatwoods and marsh area have intermediate longevity, spacing and size, longevity, spacing, and size attained at any given age can most appropriately be thought of as intermediate. Obviously, The areas are also dissimilar differ in many other other particulars, namely; terrain, susceptibility to diseases, insects, weather hazards and other features. Moreover, Local factors affect the quantity and quality of fruit produced are likely to be affected. Therefore, local costs and prices reflected through the practices of typical managements are very 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.** ~~(4) In view of the foregoing, it may be logically deduced that there are different economic lives representative~~ Given the variations in local conditions, the economic life of a typical grove ~~differs~~ for each area of the state areas. Economic life ~~may be defined as is~~ the period over which a property will yield a return on and of the investment over and above the land's economic rent due to land. **The precise length thereof of this period is necessarily an appraisal judgment. 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, it is suggested that economic lives of 50 and 40 years

are most applicable for the Interior and 30 years for the Indian River and the flatwood areas.

**5.5 Determining Typical Yield.** ~~(5)~~ 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 Institute of Food and Agricultural Sciences is recommended as USDA's National Agricultural Statistics Service (NASS) in the annual *Florida Citrus Summary* is the best guide to establish baseline typical yields ~~determine yields for typical citrus trees in the interior~~ (available at: [www.nass.usda.gov/Statistics by State/Florida/Publications/Citrus/](http://www.nass.usda.gov/Statistics%20by%20State/Florida/Publications/Citrus/)).

~~This data should be adjusted when applied to the Indian River and flatwood areas. These data establish high, low and average tree yields for various citrus varieties by age. Production estimates based on field observations should never exceed these yield per acre parameters. 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.** ~~(6)~~ The property appraiser should develop annual value schedules using the income approach ~~should be developed annually by the Property Appraiser~~. 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.** ~~(7)~~ Value schedules are necessarily based upon certain premises. They 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, ~~ages of peak output, and the length of~~ and economic life. ~~Then~~ 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.

~~(8)~~ In Florida, the vast majority of citrus acreage is devoted to the production of five a few classes of fruit. They are:

- ~~late, Early and, mid-season, and late oranges,~~
- ~~Mandarins varieties and derivatives thereof, together with seedy and seedless~~
- ~~Grapefruit varieties.~~

These fruits represent those are dominant in the industry, 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 ~~specifically is not prohibited from using~~ may include further classifications should a locally significant fruit not be encompassed in the dominant classifications above.

~~(9) The annual value schedule as prepared annually by the Property Appraiser is to be used only as a guide. It is the responsibility of the property appraiser to recognize In application this will permit recognition of local situations requiring a departure from the schedule. It is the responsibility of the Property Appraiser to recognize these situations and make the appropriate~~ The property appraiser should make necessary and justifiable adjustments considered necessary and justifiable.

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 compiled 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).

To assist him in applying these adjustments, the following procedure is suggested:

(a) — ~~Establish a visual image of good, average and poor groves consistent with the description set forth below. These are reflective of a broad assortment of conditions including management, adaptability, diseases, damages and deficiencies.~~

**MATURE GROVE CONDITION**

|               | <u>Poor</u>                                 | <u>Average</u>                     | <u>Good</u>  |
|---------------|---|------------------------------------|--|
| <u>Trunks</u> | Very hard trunks. Many large limbs removed. | Trunks fairly uniform and pliable. | Trunks uniform and supple showing evidence of growth |

|                |   |   |  |
|----------------|---|---|--|
|                | Disease of trunk and root system. Large cold sores evident. Skirts on trees high. | Few limbs removed. Some cold damage indicated from past. Skirts on trees low. | cracks. No visible signs of cold damage. Trees full skirted. |
| <u>Foliage</u> |   |   |  |
| Color          | Defoliation due to deficiencies, disease, and insects.                            | Some deficiencies, disease, insect damage.                                    | Dark green   |
| Density        | See through tree with ease.   | See through tree with difficulty.   | Heavy.   |
| Size           | Mouse eared.<br><u>Poor</u>   | Mostly standard.<br><u>Average</u>  | Standard.<br><u>Good</u>                                     |
| <u>Tree</u>    |   |   |  |
| Uniform        | Missing trees—more than 5%  | Uniform, some resets—2-5%   | Uniform, very few resets—less than 2%                        |
| Size           | Many different  | 20-35'  | 20-35'   |
| <u>Soils</u>   |   |   |  |
| Elevation      | Very flat or excessively steep  | Moderately rolling  | Moderately rolling, nearby lakes; drained.                   |
| Color          | Very white or mucky   | Grey  | Red, brown or black  |

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

- 1) ~~(b) Determine the region as characteristically defined.~~ The Indian River region is distinct, but in locations where the interior and flatwoods merge, a discretionary judgment must be made.
- 2) ~~(c) Estimate the length of economic life. A thirty-year life schedule adequately represents most groves in Indian River and the Flatwoods, but fifty and forty-year life schedules are needed to equitably represent the grove conditions encountered for the Interior.~~ 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) ~~(d) Compute acreage the gross grove acreage (all acreage plantable to citrus). To obtain net tree acres, subtract all areas in skips, pushups, and non-bearing trees from the gross. Subtract net tree acres from gross grove acres. The planted grove acreage may include small ancillary portions such as turning rows and perimeter driveways. Multiply difference this acreage by the appropriate base land value of each category. Skips and pushed trees should be classified as citrus base land and multiplied by the base land rate. Sometimes this difference may be a composite of good, average citrus and poor groveland. In this event, the land value used should be a weighted composite of the three. Sandsoaks, sandponds, bayheads, wetlands, etc., are not to be construed as groveland citrus land and therefore, should have only a nominal or nonproductive value assigned. Any area that complements a grove or that is essential to its operation is groveland; and as before, citrus land; valuation should be commensurate with quality citrus base land.~~

- 4) ~~(e) Discern fruit varieties and their relative composition in the grove.~~ Where the composition is mixed or cannot be accurately blocked off, an estimate sound judgment of the proportionate composition must be determined necessarily suffice.
- 5) ~~(f) Ascertain effective tree age.~~ Effective tree age is developed by estimating the remaining years of economic life. ~~For a given tree or block of trees it may be defined as the age of a similar and typical~~ 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-five years provided correct judgments have been made with respect to ~~area and 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 ~~would be~~ 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 older than twenty-five years. Where there is uniformity of tree size, effective age is most easily estimated. Otherwise, a sound judgment must ~~again~~ be relied on in categorizing age groups by variety. ~~Inasmuch as~~ Because citrus production levels increase increment at larger rates in early producing years, grove valuations should increase increment correspondingly. ~~Thus, It is most important in this period 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 young tree is easily discernable plus or minus one year; in the plateau of maturity, plus or minus 2 ½ years; and thereafter, plus or minus 5 years tree is generally discernable.
- 6) ~~(g) Estimate fruit production in boxes per net or gross tree acre,~~ depending on which procedure is used as previously described in Paragraph (4). Average yields per tree by age and variety will prove a very useful guide particularly, if the ~~earlier tree descriptions~~ are taken into consideration. Moreover, it is well to remember that 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) ~~(h) Multiply the per-box fruit price by boxes produced per acre.~~
- 8) ~~Deduct production expenses corresponding to effective age.~~ When yields significantly depart from the average indicated, production cost should be proportionately raised or lowered within high and low cost parameters.
- 9) ~~(i) Divide net income thus derived by the applicable capitalization rate.~~ The result is value per net tree acre.
- ~~(j) The Property Appraiser may at his discretion estimate the gross per acre simply by adding the value of net tree acres together with the value of the unplanted acreage and dividing by gross grove acres.~~

**5.7 Value Adjustment.** ~~(10) Values derived by the foregoing procedure may in certain situations warrant consideration for reductions. Badly mixed age groups and fruit types, sparse or non-contiguous groups of trees and~~ 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 are examples of possible situations requiring adjustment. Should. When a value reduction be made for these or similar reasons which are not apparent is made, the extent of adjustment and justification into support thereof should be noted 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. (11) In order to add clarity to this section the procedures and formulae used are explained below:

**(12) Fruit Price Gross Income Computation Formula:**

$$\begin{aligned} & \text{Dollars per box} \\ & \times \text{boxes per acre} \\ & = \text{Gross Income per Acre} \end{aligned}$$

Formula:  $\frac{P_i \times Y_i}{X} = AP$

Where:  $P_i$  = Price per box by year  $X$  = Total number of boxes over 5 year period  
 $Y_i$  = Boxes produced by year  $AP$  = Average Price per box

- (a) Compute the average price dollars per box of the a particular variety for the last 5 years. using the 5-year average dollars per box of that variety
- (b) Obtain average box production per acre for effective age of tree- for that variety
- (c) Compute the average gross return per acre by multiplying the average 5-year price by the average boxes per acre.

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

- (a) Labor, power, and equipment:
 

|                                  |  |
|----------------------------------|--|
| -1.Cultivation                   | -2.Irrigation                                  |
| -3.Pruning                       | -4.Hedging and topping                         |
| -5.Cold protection               | -6.Tree and bush removal                       |
| -7.Site preparation and planting | -8.Cost and maintenance of power and equipment |
| -9.Banking and unbanking         |  |
- (b) Fertilizers and lime
- (c) Spray and dust (ground and/or aerial application)
- (d) Production management (refers to expense of managing the grove)
- Business management
- (e) Miscellaneous

~~NOTE: Caretaker costs as supplied by Brooke Data (Economic Information Report 58) include the above items. These costs are also the easiest to document.~~

(14) 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.** (15) 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. (16) Capitalize this net income into value per acre by dividing the net income by the capitalization rate.

**5.10 Recapture.** (17) 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.”

(18) 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 by 4 to find the recapture rate.

$1 \div 30 \text{ years "remaining economic life"} = .033 \text{ or } 3.3\% \text{ "recapture rate"}$

**5.11 Base Land Value.** (19) Base land value should be reflective of the land’s suitability for producing citrus in its existing condition. ~~Costs incurred to engineer or develop raw acreage (i.e., clearing, perimeter ditches, etc.) to the point of bedding should be included in the base land value.~~ This is a theoretic value based on the income ability of the land with all



improvements in place for growing citrus. The property appraisers should be able to discern this value from knowledgeable citrus growers and/or ~~verified sales of similar land for grove development.~~ uses given the same type of inputs to the land in preparation for production.

~~Specific Authority 195.027, 195.032, 195.062 F.S.~~

~~Law Implemented 193.461 F.S.~~

~~History New~~

DRAFT

## **6.0 CROPLAND (Vegetables and Field Crops) V. Croplands**

**6.1 Cropland Defined.** (1) This section describes, the procedure used in the guidelines for the appraisal of cropland for ad valorem tax purposes in Florida. (2) Cropland is land (soil) capable of producing vegetation useful to man when it is cultivated to some degree. 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 (vegetation) obtained may be the result of a simple form of agricultural operation or one which that is very concentrated, intense and complicated. The Field crops (vegetation) are annuals rather than groves, pastures, orchards, timber, etc. For purposes of this section, Cropland is divided into includes field crops – which include such as corn (field corn), soybeans, tobacco, cotton, and peanuts, etc.; and annual crops grown for fresh produce or processing, which are generally called vegetables.

**6.2 Cropland Valuation.** (3) Basically Cropland has value because of its ability to generate income through productivity. As stated described in the General Provision of the Agricultural Guidelines section 2 of these guidelines, the income approach is recommended for use in appraising assessing agricultural lands and is used in the for cropland section valuation for both field crops and vegetables. Furthermore, the prices and costs used should be accomplished by and compatible with the derived using the 5-year averaging technique set forth described in the General Provisions of these Agricultural Guidelines section 2 of these guidelines.

### Vegetables

**6.3 Income from Cropland.** (4) 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. There are two generally acceptable methods of obtaining income from croplands: rental of the land to another and operation of the property by the owner. In either instance, the proper income to be used is that of a TYPICAL renter or owner. Preferably, Rental income instead of owner-operated income is used for vegetables if possible for several reasons. First, rental income is preferable since it is easier to obtain, and it more closely approximates income attributable to the land only; lessees (Renters often form a competitive market among themselves with the resulting rents they are willing to pay tending to represent a TYPICAL typical management level; and last but not least, rents are easier to use. 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.** ~~(5) In using rental incomes, qualified rental agreements are to be used. Qualified rentals or leases are those bona fide armslength transactions between knowledgeable persons where the entire remuneration (money or services) is shown in the agreement.~~ 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 ~~It should be recognized that rental for agricultural use of the land only, less any management fee.~~ Rental agreements may be verbal. ~~However, verbal agreements should 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."

~~(6) Owner-operated income may be used if rental income does not encompass the local situation and provided the input data is justified and verified. There may be situations where both incomes should be used in the same county but for different vegetables. It is in this concept of capitalizing net incomes in the Income Approach that vegetable land in Florida will be appraised by the Property Appraiser for ad valorem tax purposes. Care must be exercised, however, to ensure values thus generated do not exceed market value.~~

~~(7) A reliable source for actual vegetable land rent (income) by counties and/or areas is contained in the agricultural economics report published annually by the University of Florida entitled, "Costs And Returns from Vegetable crops in Florida—With Comparisons." It may be obtained from local Agricultural Agents or the Department of Agricultural Economics, Florida Agricultural Experiments Stations, Institute of Food and Agricultural Experiments Stations, Institute of Food and Agricultural Sciences, University of Florida, Gainesville.~~

~~(8) The acreage in one vegetable is not the same in all counties. Furthermore, all counties do not produce the same vegetables. Therefore, the acreage used or devoted to each vegetable for each county is a factor in determining appropriate rent (income). An excellent source for acreage utilized annually by counties and/or areas for each vegetable is the Florida Department of Agriculture and Consumer Services publication, "Florida Agricultural Statistics—Vegetable Summary 19", as compiled by the Florida Crop and Livestock Reporting Service in cooperation with the United States Department of Agriculture. This publication may be obtained locally from the County Agricultural Agent or by contacting the Florida Crop and Livestock Reporting Service, 1222 Woodward Street, Orlando.~~

~~(9) The acreage for each vegetable is obtained as above for each of the years under study and each year is multiplied by the rent (income). These annual results are added and the sum divided by the total acreage to obtain the rent (income) per acre.~~

~~(10) A composite rent per acre for all vegetables is obtained by multiplying the rent (income) for each vegetable by its total unweighted acreage and dividing the sum of the result by the sum of the acreages over the period under study.~~

~~(11) An indication of value using the Income Approach involves the capitalization of income (rent). Since the income (rent) has been determined, it now becomes necessary to develop a capitalization rate. In the Vegetable portion of the Cropland Section, the rent (income) obtained should be used as the income to be capitalized. The general approach to develop a capitalization rate for agriculture has been set forth earlier in the General Provisions of the Agricultural Section, but it is necessary here to consider the risk factor used for vegetable land. Risk will differ depending on the income being capitalized—rent or owner-operated. If the income to be capitalized is rent, the risk to the land owner is less or lower than property which is owner-operated.~~

~~(12) At this stage, the composite rent (income) and capitalization rate have been determined. To calculate the value, the income (rent) is divided by the capitalization rate.~~

### Field Crops

~~(13) Land used to produce field crops should be appraised for ad valorem tax purposes in Florida by the Income Approach method. Since this approach has been discussed in the General Provisions of these Agricultural Guidelines, it is only necessary here to relate the method as it applies to Field Crops.~~

~~(14) At the outset, owner-operated income is recommended for use to appraise field crop land instead of rental income, although rental income may be used where appropriate and supportable. However, whichever type income is used, it should be used throughout the county for all field crops. Cost data used may be obtained from the Institute of Food and Agricultural Sciences of the University of Florida Agricultural Research and Education Centers. Local grower information should also be used where~~

supportable and verified.

(15) — A composite net income of typical corn and soybean farmers is recommended instead of separate net incomes for each individual crop grown in a county because corn and soybeans are the typical field crops grown throughout the field crop producing areas of the State. Individual values may be obtained for those particular crops other than corn or soybeans and that are considered typical for the county.

(16) — Prices used to determine field crop gross income may be obtained from Florida Agricultural Statistics published annually by the Florida Crop and Livestock Crop Reporting Service. Prices will be based on the five years immediately prior to the year of the study.

(17) — Prices as determined above are multiplied by the yield per acre to obtain gross income per acre. Yields are obtained from the Soil Conservation Service Land Capability Unit Descriptions Manual, where available. The District Conservationist in each county may also supply pertinent yield information for local situations. Local grower production records should also be used where the same are verifiable.

(18) — The gross income per acre is next multiplied by the harvested acreage as documented by the Florida Agricultural Statistics for the period under study. This result is the total gross income of the particular crop being studied in the county for the period studied. To obtain the average gross income per acre, the sum of each annual total income is divided by the sum of the acreages. The cost per acre is determined using the same procedure.

(19) — Costs per acre are subtracted from gross income per acre to obtain the net income per acre. The procedure is applied separately to corn and soybeans and results in individual net incomes per acre for corn and soybean.

(20) — Since a composite net income per acre should be used, the net incomes for corn and soybeans are converted by:

- (1) — Multiplying the weighted acreages of both, as already determined, by their respective gross incomes per acre;
- (2) — dividing the sum of the results by the sum of the weighted acreages;
- (3) — follow the same procedure in (1) and (2) to determine costs; and
- (4) — subtract the cost obtained in (3) from the gross income in (2). The difference is the composite net income per acre. This is next capitalized into value by dividing it by the capitalization rate.

Specific Authority 195.027, 195.032.

195.062 FS. Law Implemented 193.461

FS.

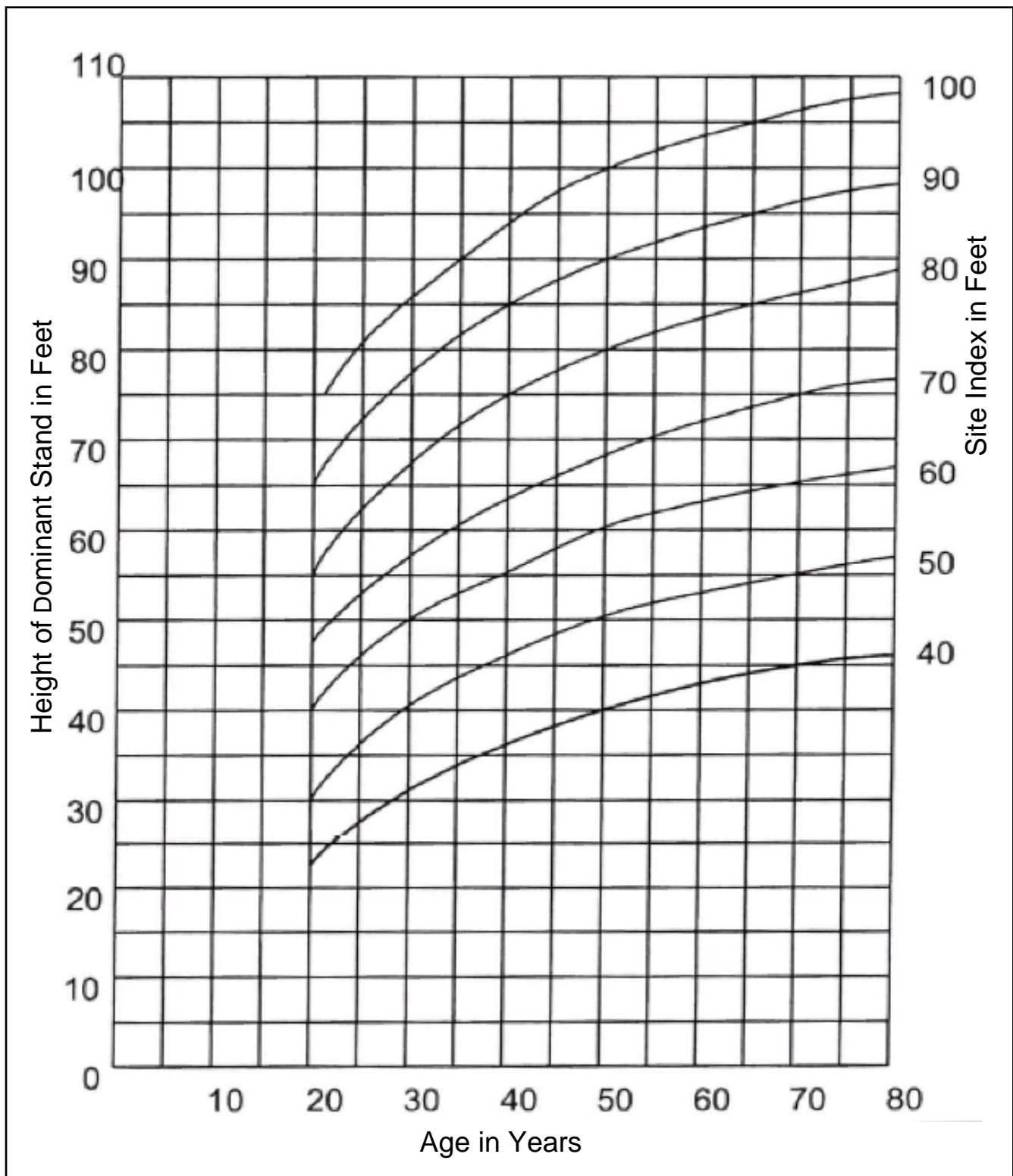
History — New Approved by Governor and Cabinet December 7, 1982 Filed with secretary of State December 10, 1982 Effective December 30, 1982

**Addendum A – Band-of-Investment (BOI) Example [REPLACES OLD SECTION II.18]**

| <b>Band-of-Investment Capitalization Rate Calculation</b> |   |   |
|---|---|---|
| $MR_m + ER_e = R_o$                                       |   |   |
| <b>Where:</b>   |   |   |
| M   | = | Loan-to-value ratio (LTV)   |
| $R_m$   | = | Mortgage constant<br>(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   |

| <b>Band-of-Investment Capitalization Rate Example</b>   |  |
|---|--|
| <b>In the examples below the following are assumed:</b> |  |
| 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<br><i>For example:</i> 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.<br><i>Placing these figures into the APR formula results in:</i><br>$APR = \$7,500 / \$147,000 = .05102$ or 5.1%  |
| $R_m$<br>(mortgage constant)                            | = The annual payment (calculated using the APR) / The gross loan<br>The mortgage constant is calculated by using the APR not the loan interest rate.<br><i>For example:</i> 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.<br><i>Placing these figures in the <math>R_m</math> formula results in:</i><br>$R_m = \$12,138.66 / \$150,000 = 0.0809$ or 8.09% |
| $R_e$<br>(equity yield rate)                            | = FFCBFC January 20-year bond rate + $R_m$<br><i>Placing these figures in the <math>R_e</math> formula results in:</i><br>$R_e = 2.1\% + 8.09\% = 10.19\%$   |
| $R_o$<br>(BOI capitalization rate)                      | = $MR_m + ER_e$<br><i>For example:</i> The capitalization rate with 75% mortgage and 25% equity would then be calculated as follows:<br>$(75\% \times 8.09\%) + (25\% \times 10.19\%)$<br>$R_o = 0.060675 + 0.025475 = 0.08615$ or 8.62%*<br>*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.   |

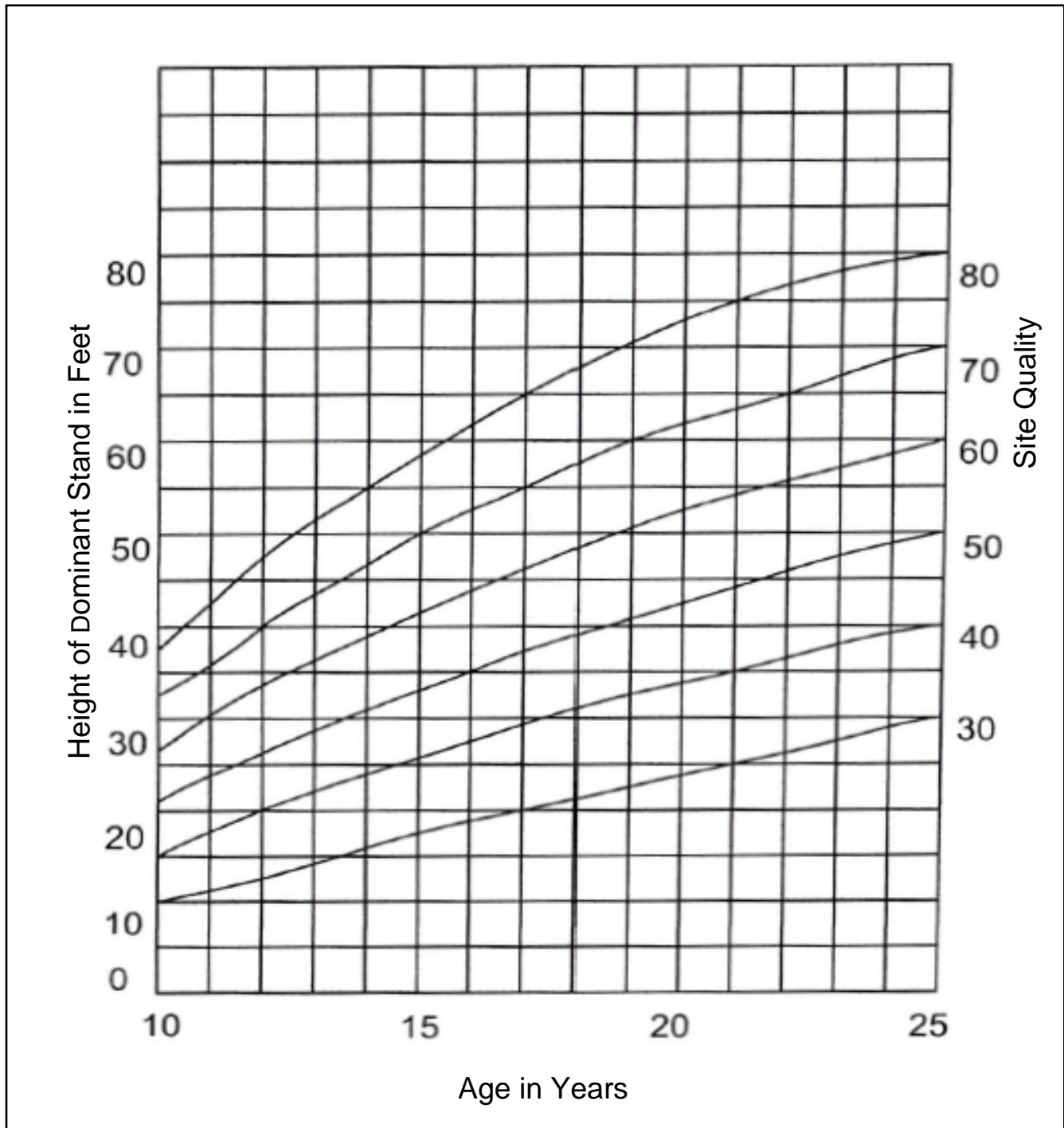
**Addendum B – Growth and Yield of the Southern Pines, Slash Pine [OLD TABLE 1]**



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**  
[OLD TABLE 2]



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** [OLD TABLE 3 with updates]

| PINE CLASSIFICATION<br>@ 30 year rotation |                    | SITE INDEX<br>(50 yr.) | SITE INDEX<br>(25 yr.) | YIELD<br>(cords) | YIELD<br>(tons)* | CLASS        |
|---|--------------------|------------------------|------------------------|------------------|------------------|--------------|
| Natural:                                  | no. trees/ac given | 95 Avg.                | 75 Avg.                | 1.62             | 4.50             | Timberland 1 |
| 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 [OLD TABLE 4 with updates]**

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   | YIELD **   | x | PRICE / | = | GROSS  | - | COST **  | = | NET    | ÷ | CAP  | 5-Year Average |
|-------------------------|--------------|------------|---|---------|---|--------|---|----------|---|--------|---|------|----------------|
|                         | (50 Yr.)     | Tons/ac/yr |   | TON     |   | INCOME |   | PER ACRE |   | INCOME |   | RATE | VALUE          |
| <b>Timberland No. 1</b> | <b>90 +</b>  |            |   |         |   |        |   |          |   |        |   |      |                |
| Natural                 | (95 Avg.)    | 4.50       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| Planted                 |              | 5.49       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| <b>Timberland No. 2</b> | <b>80-89</b> |            |   |         |   |        |   |          |   |        |   |      |                |
| Natural                 | (85 Avg.)    | 3.55       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| Planted                 |              | 4.11       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| <b>Timberland No. 3</b> | <b>70-79</b> |            |   |         |   |        |   |          |   |        |   |      |                |
| Natural                 | (75 Avg.)    | 2.78       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| Planted                 |              | 3.05       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| <b>Timberland No. 4</b> | <b>60-69</b> |            |   |         |   |        |   |          |   |        |   |      |                |
| Natural                 | (65 Avg.)    | 2.08       | x | =       |   | 0.00   | - | =        |   | 0.00   | ÷ | =    |                |
| Planted                 |              |            |   |         |   |        |   |          |   |        |   |      |                |
| <b>Timberland No. 5</b> | <b>50-59</b> |            |   |         |   |        |   |          |   |        |   |      |                |
| 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 [OLD TABLE 5 with updates]**

| <b>Non-Pine Value Table</b> |   |                  |                        |   |              |
|-----------------------------|---|------------------|------------------------|---|--------------|
| <u>Yield/acre/ton</u>       |   | <u>Price/Ton</u> | <u>Management Cost</u> | <u>Caprate</u>  | <u>Value</u> |
| 1.11                        | x   |                  | -                      | /   | =            |
|                             |   |                  |                        |   |              |
| <b>DESCRIPTION</b>          |   |                  | <b>NOTES</b>           |   |              |
| <b>Hardwood</b>             | 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. |              |
| <b>Swamp</b>                | Stream and river bottoms that flood, stream margins, bays, cypress ponds and swamps all considered nonplantable.                              |                  |                        | Calculated using the formula above.   |              |
| <b>Non-Productive</b>       | 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.   |              |

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**Addendum G – Agricultural Rental Analysis Example, Cropland/Pasture Land [NEW]**

| <b>AGRICULTURAL RENTAL ANALYSIS</b>                           |                                 |                |                       |
|---|---------------------------------|----------------|-----------------------|
| <b>Cropland or Pasture</b>                                    |                                 |                |                       |
| <b>Rental Letter Seq.</b>                                     | <b>Rent Per Acre*</b>           | <b>Acreage</b> | <b>Rent x Acreage</b> |
| 1   | \$30.00                         | 40             | \$1,200               |
| 2   | \$30.00                         | 60             | \$1,800               |
| 3   | \$45.00                         | 20             | \$900                 |
| 4   | \$32.00                         | 120            | \$3,840               |
|   |                                 |                |                       |
|   |                                 |                |                       |
| <b>TOTALS</b>   | <del>                    </del> | 240            | \$7,740               |
| <b>WEIGHTED RENT</b>  |                                 |                |                       |
| <u>                    <b>\$32.25</b>                    </u> |                                 |                |                       |
| * 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 [NEW]**

| APPRaisal SCHEDULE: |                 |            | CROP [ <u>x</u> ]      | PASTURE [ <u>X</u> ]  |          |                    |
|---------------------|-----------------|------------|------------------------|-----------------------|----------|--------------------|
| COUNTY              | <u>ANY</u>      |            | <u>20xx</u>            | IDS                   |          | CAP RATE           |
| Type                | Code/<br>Symbol | Capability | Gross<br>5 Yr Avg Rent | Net*<br>5 Yr Avg Rent | Cap Rate | Indicated<br>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.

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