

The Florida Agricultural Classified Use Appraisal Guidelines Adopted in 1982

NOTICE:

These Guidelines Are Out-of-Date

The existing Florida Agricultural Classified Use Appraisal Guidelines were adopted in 1982 and are now out-of-date due to various changes in law and industry references. Accordingly, the 1982 guidelines should not be used as any sort of standard for the development, reporting, or review of agricultural classified use valuations for ad valorem tax purposes. The Department has initiated the legal and professional research for updating the guidelines, which will be done using an open and public process with opportunities for public review and comments.

**Florida
Department of Revenue**

**CLASSIFIED USE REAL PROPERTY GUIDELINES
STANDARD ASSESSMENT PROCEDURES AND STANDARD MEASURES OF VALUE**

AGRICULTURAL GUIDELINES

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I. General Provisions

- (1) The procedures and data sources set forth in this section are to be used generally with the other agricultural sections in the Classified Use Real Property Guidelines of the Manual of Instructions.
- (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.
- (3) The assessment of real property that has been granted agricultural classification shall be in accordance with Section 193.461 (6) (a), F.S. (1979), which provides in pertinent part the following:
 - " . . . The property appraiser shall consider the following use factors only:
 1. The quantity and size of the property;
 2. The condition of said property;
 3. The present market value of said property as agricultural land;
 4. The income produced by said 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."
- (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: Market, Income and Cost.
- (6) The Property Appraiser may use the 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 of selecting the approach to be used. Whichever approach is used, care must be exercised to insure values thus generated do not exceed market values.
- (7) Due to the large number of parcels of property to be valued by the Property Appraiser each year, it is impracticable, if not impossible, for the Property Appraiser to appraise each parcel of property in the manner of a fee appraisal. Therefore, the Property Appraiser must utilize what is commonly referred to as the mass appraisal technique in valuing property within the county.
- (8) The Market Approach which should be considered by the Property Appraiser relies heavily on verified sales of similar properties in order for comparison 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 Florida Statutes, as contrasted to agricultural use combined with speculative use has 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.
- (9) The 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 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.
- (10) The Income Approach or capitalization of net earnings to land into an indication of value is the approach that is recommended and is used throughout this guide to appraise those properties given agriculture classification in accordance with Section 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.
- (11) Since arms-length market sales of land for agricultural use reflects the buyer's evaluation of the earning potential of the land, any land values computed on an income approach which 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 Section 193.461 (6) (a), F.S.
- (12) The Capitalization Rate expresses the relationship between net income to the land and value. Value is defined as the present worth of future rights to income. There are three basic methods to use to estimate the capitalization rate in an appraisal process. They are the band-of-investment, summation, and market comparison methods.
- (13) The Market Comparison method attempts to directly establish a capitalization rate by dividing the net income by the 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 use can be developed as comparables. There are many reasons for buying farm land 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 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 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.

- (15) The Summation Method attempts to estimate the capitalization rate by 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 to justify or explain why a rate 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.
- (17) The Band-Of-Investment method uses mortgage debt financing information to estimate a capitalization rate by weighting the fractional rates of mortgages and equity. Since 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.

- (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.

- (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. A typical agricultural operation may be confined within one county or embrace an area of several counties. Data used in 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 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 should be used.
- (20) In this guide, the land capability unit system of the Soil Conservation Service may be used as an alternative method where local production information is not available.
- (21) Yields shown in the SCS system are for a few representative crops and grasses and indicate the potential attainable with high level management and assumes normal growing seasons. They 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 his county. Detailed soil surveys of many counties have been published and are underway in others. A general soil map of each county is available for all counties. 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) The use of Soil Conservation Service data 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 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.
- (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, and this change may be incomplete and not readily discernable on January 1. 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.
- (26) Nonproductive land 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.
- (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 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.

Specific Authority 195.027, 195.032, 195.062 F.S.

Law Implemented 193.461 F.S.

History - New

II. Woodlands Section

- (1) Valuation Basis. This section describes a procedure for the appraisal of woodland on 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 formula in the income approach is:

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

- (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.
- (4) Woodland is considered to have two categories: Productive and Nonproductive. Productive woodland is defined as: land which is
- (1) 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.
- (5) Nonproductive woodland is defined as: nonproductive marshes, depleted mines, dumps, pits, lakes, ponds or other nonproductive or waste land.
- (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.
- (8) The primary factors influencing 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 cost of site preparation, planting and annual recurring expenses.
- (9) These three factors must be established by each Property Appraiser for his county in order to arrive at assessed value for woodlands.
- (10) Site Index. Productive capacity may be generally determined from site index yield tables for pine stands. Slash pine yield tables have been used throughout this Guide because slash pine is the predominant species under intensive management in the State.
- (11) Site index is defined as the average total height of the dominant or co-dominant trees (dominant stand) at either 25 or 50 years of age. Normally, 25-year site indexes (sometimes referred to as site quality) are applied to planted stands and 50-year indexes are applied to natural timber. A generally acceptable means of converting 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.
- (12) Site index is obtained by measuring the height of a representative tree and determining its age. This data is applied to a site index curve and a reading in feet is made. See tables 1 and 2 for site index curves.

- (13) The number of sample points required to establish 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 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 lower than average sites, 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. Site index should not change abruptly from parcel to parcel without an accompanying noticeable change in the timber, other vegetation, or the soil.
- (15) Where a parcel of land has no suitable trees to measure for site index, site index should be established by comparison with adjacent or neighboring tracts with similar soil. The Department of Revenue, County Forester or representative of the Division of Forestry, industry forester and other professional foresters will assist the Property Appraiser in establishing the indexes in these 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 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 cords per acre per year can be obtained from 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 and Bennett and Clutter's Per Acre Sawtimber, Pulpwood and Gum Yields - 25 year Basis from U.S.F.S. Research Paper SE-35.
- (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.
- (22) Stumpage Prices. Prices paid for stumpage vary considerably throughout the State. Historically, prices have been highest in the Northeast, lessening in the Northwest and 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 reason for this 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 final stumpage figure used in a county for forest land valuation should be established through a joint effort of the Property Appraiser and the Department of Revenue. However, the Department of Revenue shall obtain current local stumpage prices each year from property owners, industry representatives, timber brokers, Division of Forestry and other sources of reliable sales information. The price figure arrived at should be consistent, in the manner derived and by definition, with the price figures used in the preceding years.
- (26) Forest Management Expenses. Forest management costs associated with timber operations are of two types: annual recurring expenses and improvements to the land. The prorated (cost/rotation age) costs of site preparation and planting are the only improvements to land that should be included. Forest maintenance and protection from insects, disease, fire and natural disasters, are annual management costs.
- (27) Management costs will be derived by the Department of Revenue from cost data supplied to the Florida Division of Forestry from 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 to the Property Appraiser for use in the valuation of timberland.
- (28) Ad Valorem taxes are not to be included in the annual management cost since they are a component of the capitalization rate.
- (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 as follows:

<u>Class</u>	<u>(50 Year) Slash</u>
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
<u>Hardwood</u> or pine hardwood timberland classified by percentage of above site index classes, i.e. Timberland #2 75.	
<u>Swamp</u>	
<u>Nonproductive</u>	

- (30) For proper coding, See 12D-8.08, F.A.C.
- (31) Timber classification should be separated into the use categories of natural pine and planted pine. These two different methods of forest management are readily discernible on the ground and 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 Table 3 (Integrated Yield Data) for related use category (planted, natural) and site index, a value table may be constructed. 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 the section on stumpage prices.
- (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 rotation age selected for value table development reflects the most consistently used rotation periods in the particular counties by prudent forest land managers. See Table 4 for an example Value Table.
- (33) In summarizing the key factors in establishing value tables, the following is a review of terminology:
- (a) site index - measure of forest soil capability of productivity; established by the Property Appraiser.
 - (b) yield information - Table 3.
 - (c) local stumpage price - pulpwood price during calendar year applied as a 5 year average.
 - (d) local management costs - expenses incurred in managing natural pines and planted pines.
 - (e) capitalization rate - derived as set forth in the General Provisions of the Agricultural Section of the Guidelines.
 - (f) value tables - are locally derived by the Property Appraiser from the previous factors. Tables are revised through the use of updated prices 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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Specific Authority 195.027, 195.032, 195.062, F.S.

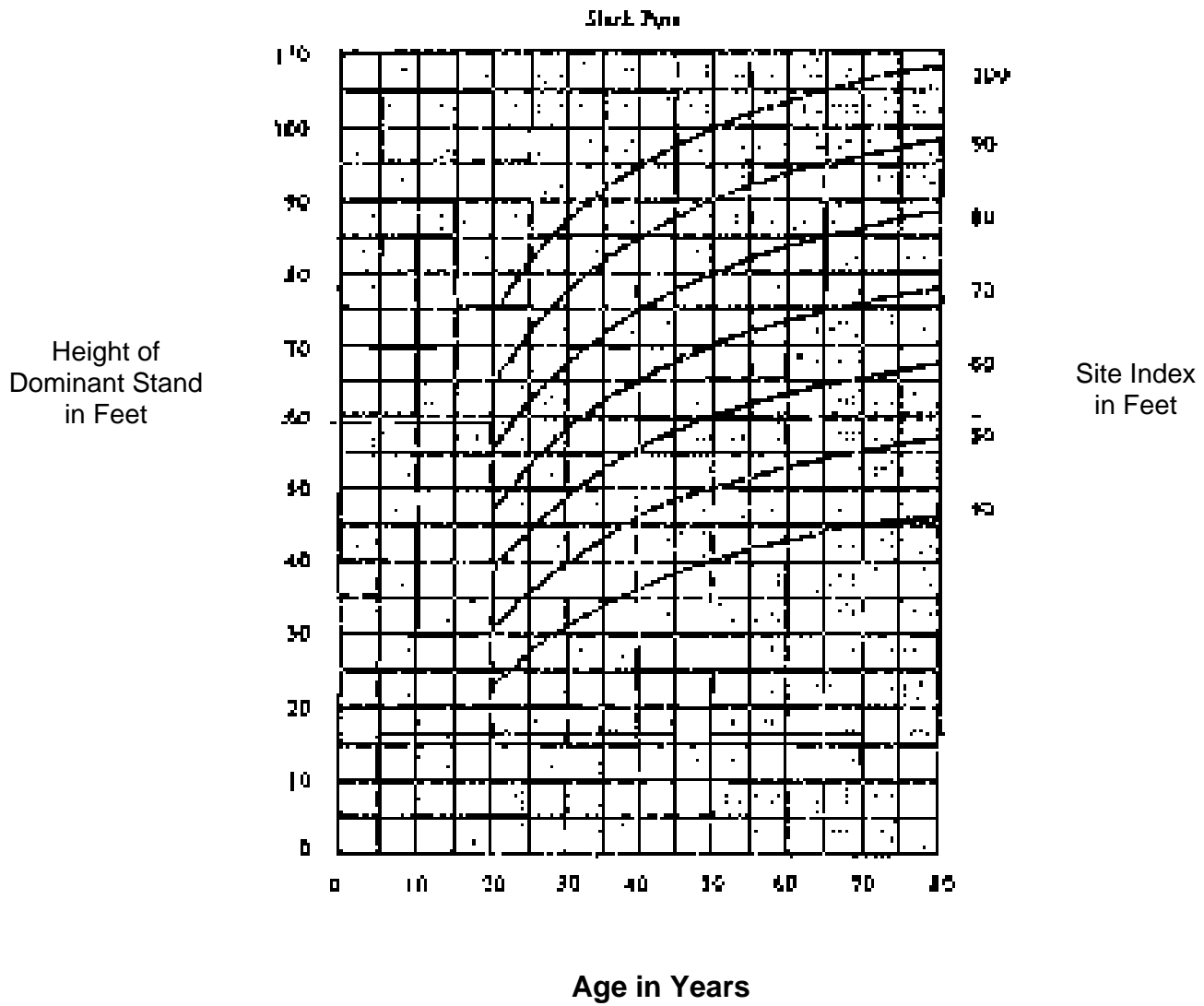
Law Implemented 193.461, F.S.

History – New

Table 1

Growth and Yields of the Southern Pines

Slash Pine



Slash pine: Height of the Dominant Stand

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, North Carolina

Table 2

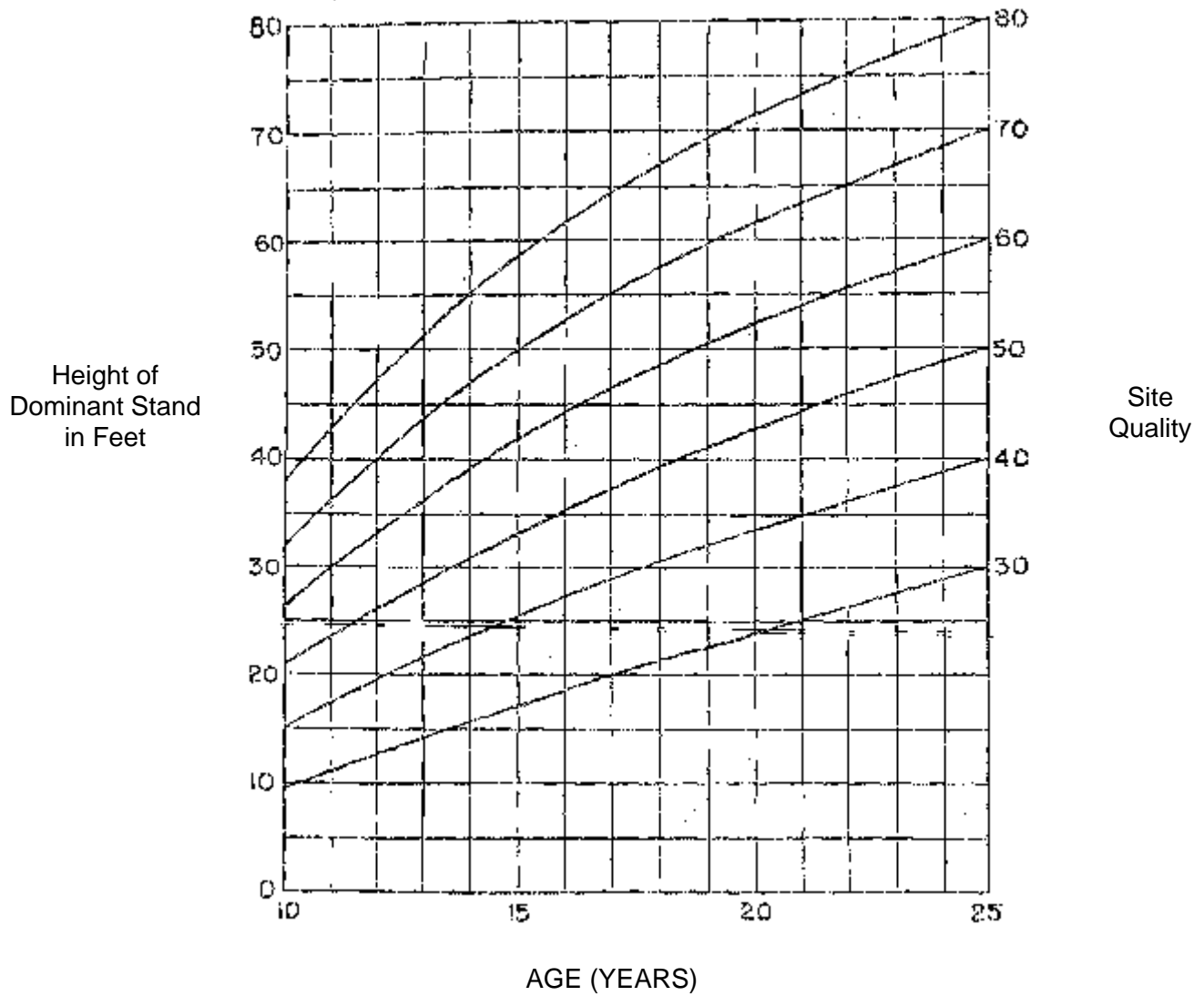


Figure 1. Site quality Curves for Slash Pine Plantations in Florida 25 year basis

Data from: Barnes and Ralston

Table 3

INTEGRATED YIELD DATA

PINE CLASSIFICATION @ 30 year rotation		SITE INDEX (50 yr.)	SITE INDEX (25 yr.)	YIELD (cfs)
Natural:	no. trees/ac given ¹	95 Avg.	75 Avg.	1.62 Timberland 1
Planted:	@ 400 trees/ac ²	90+	70+	1.98 “
Natural:	no. trees/ac given	85 Avg.	65 Avg.	1.28 Timberland 2
Planted:	@ 400 trees/ac	80-89	60-69	1.48 “
Natural:	no. trees/ac given	75 Avg.	55 Avg.	1.00 Timberland 3
Planted:	@ 400 trees/ac	70-79	50-59	1.10 “
Natural:	no. trees/ac given	65 Avg.	45 Avg.	.75 Timberland 4
Planted:	@ 400 trees/ac	60-69	40-49	* “
Natural:	no. trees/ac given	55 Avg.	35 Avg.	.55 Timberland 5
Planted:	@ 400 trees/ac	50-59	30-39	* “

*Note: 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.

¹Natural: number of trees per acre given in the table used in Growth and Yield of Natural Stands of the Southern Pines. Schumacher and Coile.

²Planted: 400 trees per acre selected from table used in Multiple Product Yield Estimates for Unthinned Slash Plantations . . . pulpwood, sawtimber and gum. Bennett and Clutter SE-35.

Table 5

NON-PINE VALUE TABLE

<u>CLASS</u>	<u>PHYSICAL CHARACTERISTICS</u>	<u>VALUE</u>	
Hardwood	Hardwood or pine hardwood mixtures on sites subject to stand conversion; high hammocks	75% at value for slash pine site index	
Swamp	Stream and river bottoms that flood, stream margins, bays, cypress ponds, swamp	\$30.00	Average value calculated from:; a .4 cd/ac/yr growth rate; \$7.50 cd stumpage rate; management cost of \$.25 ac/yr cap rate 10%*
Nonproductive	Permanent open sogs; permanent open water; borrow pits rights-of-way highway pipe and powerline; salt water marsh; spoil, dumps and pits	See General Provision Section	

*Growth and management figures for Florida's Timber 1910, U.S.O.A. F.S. Resource Bulletin SE-20.

III. Pasture Lands

- (1) The capitalized net income approach as set forth in the General Provisions of the Agricultural Guidelines is recommended for use in the valuation of agricultural pasture land.
- (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) Valuation Basis. This section describes a procedure for the appraisal of grazing land based primarily on yields. Pounds of beef produced is treated as the production unit. Beef yields are converted to dollar value; from which annual operating expenses are deducted and the resulting annual net income is capitalized.
- (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 pasture is typically fertilized and renovated from time to time and is grazed or harvested for hay or silage.
 - (d) Waste (nonproductive) includes acreage in depleted mines, dumps, pits, lakes, pond, and other non productive land.
- (7) On a statewide basis, the primary factor influencing pasture land values are:
 - (a) Productivity of soil - Productivity is reflected by higher yields on more productive soils.
 - (b) Market price of beef.
 - (c) Extent of land improvement.
 - (d) Annual expenses associated with different types of operation.
 - (e) Climatic conditions – supplemental feeding (if necessary) treated as additional expense.
- (8) In order to arrive at value for pasture land the Property Appraiser should determine these factors on a local basis.
- (9) Productivity of Soils. Expressed in terms of beef yields. Soil productivity and degree of land improvement are important factors influencing 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 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 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 his county and which of these are the most productive.
- (11) Published soil surveys are available to 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.
- (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.
- (14) Annual Expenses. Annual expenses such as feed, fertilizer, labor, machinery, transportation, veterinarian, 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.
- (19) Livestock Budgets. Livestock budgets prepared by economists with the Institute of Food and Agricultural Sciences can be used to obtain net return information if local producer records are not available. These budgets reflect income and expense summaries which consider investment and operating costs for machinery and equipment, building 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.
- (21) Value Table. The appraiser shall establish value tables for each general type of ranch operation found within the county (native range; semi improved pasture; and improved pasture).
 - (a) Determine the yields in pounds of saleable beef per acre from:
 1. Typically managed ranch operations within the county.
 2. Soil Conservation Service land capability unit system using Animal Unit Months as explained in the addendum following this section.
 - (b) Determine the expenses associated with the yields determined in (a) above.
 - (c) Determine the market price of beef on an annual basis. Apply the price of beef to the yields as determined in (a) above.
 - (d) Subtract the expenses as found in (b) above from the dollar value of beef in (c) above to obtain the net income.
 - (e) Add this resulting net income to the preceding 4 annual net income values and divide by 5 to give a rolling five year average net income.
 - (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.

- (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.
- (26) The Soil Conservation Service has compiled information on all soils in Florida. These compilations reflect study and observations by soil scientists, district conservationists and other skilled specialists over a period of years. Under the Land Capability System soils of similar productivity and profile characteristics are grouped together as a capability unit. Each 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. Soil surveys with land capability designations are available for less than one half of Florida's counties.
- (27) The basic measure of land capability for pasture and grazing land in the SCS system is an Animal Unit Month (AUM). 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 AUM rating of seven is interpreted to mean that one acre will provide sufficient forage to maintain one mature beef animal in normal health and growth for seven months. Since seven months is less than one year it would require more than one acre to carry one animal for one year. In the example of an AUM rating of seven would require 1.714 acres to carry one animal for one year ($1 \text{ acre} \times 12 \text{ months} \div 7 \text{ months per year} = 1.714 \text{ acres per year}$).
- (29) The Soil conservation Service 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 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 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 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 as opposed to that available for market. Death loss is loss from all causes expressed as a percent of the total herd number.

- (31) To derive the pounds of saleable beef produced per acre in this manner, 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 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. The net revenue is then divided by the capitalization rate in order to obtain the land value.
- (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

IV. Citrus Lands

- (1) In citrus land valuation, the variable factors affecting groves are numerous and complex; therefore, it should be recognized at the outset that few statements or descriptions are without exceptions. Rather, it is the intent here to set forth as succinctly and explicitly as possible meaningful parameters to encompass most grove situations and to assist in just and equitable valuations.
- (2) Broadly defined, there are three citrus producing areas within the state. These are the older established ridglands and rolling country of the Central Interior; secondly, the Indian River section of the Central and lower East Coast; and lastly, the flatwoods and marshes of Central and South Florida.
- (3) The Interior area notably is characterized by longer tree life, wider settings with fewer trees per acre, and the attainment of larger physical size in later maturity. Conversely, the Indian River area has, for the most part, significantly shorter tree life, much closer settings and will attain greater physical size in their early producing years. At maturity, however, these trees are seldom as large as those of the Interior. As to the flatwoods and marsh area, longevity, spacing, and size attained at any given age can most appropriately be thought of as intermediate. Obviously, the areas are also dissimilar in many other particulars, namely; terrain, susceptibility to diseases, insects, weather hazards and other features. Moreover, the quantity and quality of fruit are likely to be affected. Therefore, costs and prices reflected through the practices of typical managements are very important to recognize and incorporate in the determination of value schedules.
- (4) In view of the foregoing, it may be logically deduced that there are different economic lives representative of a typical grove for each of the areas. Economic life may be defined as the period over which a property will yield a return on and of the investment over and above the economic rent due to land. The precise length thereof is necessarily an appraisal judgment. Theoretically, economic life ends in a predetermined number of years. In practice, recycling of the better groves is usually continuous and unending. 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) 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 the best guide to determine yields for typical citrus trees in the interior. 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.
- (6) 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.
- (7) Value schedules are necessarily based upon certain premises. They are: 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 economic life. Then 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 classes of fruit. They are: late, early and mid-season oranges, mandarins and derivatives thereof, together with seedy and seedless grapefruit. These fruits represent those dominant in the industry, 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 further classifications should a locally significant fruit not be encompassed in the above.
- (9) The value schedule as prepared annually by the Property Appraiser is to be used only as a guide. 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 adjustments considered necessary and justifiable. 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. Disease of trunk and root system. Large cold sores evident. Skirts on trees high.	Trunks fairly uniform and pliable. Few limbs removed. Some cold damage indicated from past. Skirts on trees low.	Trunks uniform and supple showing evidence of growth 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.	Mostly standard.	Standard.
	<u>Poor</u>	<u>Average</u>	<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

- (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.
- (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.
- (d) Compute 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 grove acreage. Subtract net tree acres from gross grove acres. Multiply difference by the appropriate base land value. Sometimes this difference may be a composite of good, average and poor groveland. In this event, the land value used should be a weighted composite of the three. Sandsoaks, sandponds, bayheads, etc., are not to be construed as groveland and therefore, should have only a nominal value assigned. Any area that complements a grove or that is essential to its operation is groveland; and as before, valuation should be commensurate with quality.

- (e) Discern fruit varieties and their relative composition in the grove. Where the composition is mixed or cannot be accurately blocked off, a sound judgment of the proportionate composition must necessarily suffice.
 - (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 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. 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 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 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 citrus production levels increment at larger rates in early producing years, grove valuations increment correspondingly. Thus, it is most important in this period to have correct age estimates. 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.
 - (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 becomes relatively more important.
 - (h) Multiply the per-box fruit price by boxes produced per acre. 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.
 - (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 value simply by adding the value of net tree acres together with the value of the unplanted acreage and dividing by gross grove acres.
- (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 greater than normal susceptibility to a contingent hazard are examples of possible situations requiring adjustment. Should a reduction be made for these or similar reasons which are not apparent, the extent and justification in support thereof should be noted.
- (11) In order to add clarity to this section the procedures and formulae used are explained below.

(12) Fruit Price Computation

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 of the particular variety for the last 5 years.
- (b) Obtain average box production per acre for effective age of tree.
- (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 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:
 - 1. Ground and/or aerial application
- (d) Management (refers to expense of managing the grove)
- (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.
- (15) Subtract the production cost per acre from the gross income per 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.
- (17) Since citrus trees are a wasting asset, there may be a provision for recapture, in addition to the discount rate and the effective tax rate.
- (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 of the grove from the economic life.

$$\begin{array}{rclcl}
 50 \text{ years} & - & 20 \text{ years} & = & 30 \text{ years} \\
 \text{"economic life"} & & \text{"effective age"} & & \text{"remaining economic life"}
 \end{array}$$

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

$$\begin{array}{rclcl}
 1 & \div & 30 \text{ years} & = & .033 \text{ or } 3.3\% \\
 & & \text{"economic life"} & & \text{"recapture rate"}
 \end{array}$$

Base Land Value

- (19) This 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. The property appraisers should be able to discern this value from knowledgeable citrus growers and/or verified sales of land for grove development.

Specific Authority 195.027, 195.032, 195.062 F.S.

Law Implemented 193.461 F.S.

History - New

V. Croplands

- (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. The production (vegetation) obtained may be the result of a simple form of agricultural operation or one which is very concentrated, intense and complicated. The crops (vegetation) are annuals rather than groves, pastures, orchards, timber, etc. For purposes of this section, cropland is divided into field crops, which include corn (field corn), soybeans, tobacco, cotton and peanuts; and annual crops grown for fresh produce or processing which are generally called vegetables.
- (3) Basically, cropland has value because of its ability to generate income through productivity. As stated in the General Provisions of the Agricultural Guidelines, the income approach is recommended for use in appraising agricultural lands and is used in the cropland section for both field crops and vegetables. Furthermore, the prices and costs used should be accomplished by and compatible with the averaging technique set forth in the General Provisions of these Agricultural Guidelines.

Vegetables

- (4) 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 easier to obtain, 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 management level; and last but not least, rents are easier to use.
- (5) In using rental incomes, qualified rental agreements are to be used. Qualified rentals or leases are those bona fide arms length transactions between knowledgeable persons where the entire remuneration (money or services) is shown in the agreement. It should be recognized that rental agreements may be verbal. However, verbal agreements should be verified.
- (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.

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