**Capitalization Rate**

A basic capitalization rate is the sum of a property tax component and an interest rate component. In some jurisdictions, the capitalization rate can include a risk of flood component. Capitalization rate components are listed in Table 3 (Appendix C, Section 2).²¹

**Interest-rate component**

The interest-rate component of the capitalization rate is a weighted average of the long-term interest rates charged by Agricultural Credit Associations (ACA) serving Virginia. These data lag the tax year by 2 years. To reduce the variability of the annual use-value estimates, SLEAC elected to take a straight moving average of the weighted long-term interest rates over the 10-year period prior to a given tax year. For example, for TY2008 data for long-term interest rates are from 1997 to 2006. Therefore, the moving straight 10-year average of the long-term rate is 7.61 percent (Appendix C, Table 3 – line 2a). The same rate is used for all jurisdictions. This long-term interest rate average reflects an alternative return to owning agricultural land over an extended period of time. The same long-term interest-rate component used for agricultural land is also used for horticultural land.

**Property-tax component**

The property-tax component, also a moving straight 10-year average, is an average of the effective true real property tax rate published annually by the Virginia Department of Taxation. Property tax data lags the interest rate and net income data by three years. Therefore, the estimated property tax component applicable to TY2008 relies on data from the years 1996 to 2005. The property tax component used for agricultural land is also used for horticultural land. The sum of the interest rate and property tax rate equals the basic capitalization rate. For example, Prince Edward County’s property-tax component is 0.0043 which, when added to the long-term interest rate component, results in a capitalization rate of 0.0895 (Appendix C, Table 3 – line 2c).

**Risk component**

Agricultural enterprises are subject to numerous risks. However, the risks associated with input costs, crop yields, and prices received are adequately accounted for by the net return component since these risks occur on an across-the-board basis and do not reflect individual land risk situations. The two primary types of risks explicitly considered in the use-value methodology are related to rainfall, either a shortage or an excessive amount. An important difference between the two is that the risk associated with drought is not land-related while the risk associated with excessive rainfall is land-related. The risk of drought is assumed to be distributed uniformly within a jurisdiction and, therefore, does not warrant special attention.

Because the risk associated with an excessive rainfall is land-related, it can vary within a jurisdiction. The risk associated with excessive rainfall is lower crop yields caused by flooding. This situation mainly occurs in the southeastern part of the state but also occurs in other regions, usually to a lesser extent. Because this risk is borne by specific areas of land within a jurisdiction, a special use-value estimate based on a capitalization rate reflecting the risk of flooding is calculated.

The size of the risk component will vary depending on the period over which a total crop loss is expected on lands subject to the effects of flooding. Use-value methodology assumes that a total crop loss will occur on land at risk of flooding once every 20 years. Therefore, the land’s capitalization rate is increased by 5%. For example in Prince Edward County, the risk component is calculated to be 0.0040 (Appendix C, Table 3 – line 2d). Adding this component to the without-risk capitalization rate results in a with-risk capitalization rate of 0.0845 (Appendix C, Table 3 – line 2e).

The estimated use values of agricultural land are provided in Table 1a. The with-risk estimates should only be used when an individual land tract is known to have poor drainage which cannot be remedied by tiling or drainage ditches. Land devoted to horticultural use will rarely be subject to these conditions. For this reason, SLEAC elected not to consider the risk of flooding in the use-value estimates for horticultural crops.

**Calculating Use values**

Once a per-acre net return and capitalization rate for a jurisdiction have been estimated, calculating its use value is straightforward. The basic formula is

\[
\text{Use value} = \frac{\text{Net Return}}{\text{Capitalization Rate}}
\]

From this formula, changes in a use-value estimate are obvious. An increase in a jurisdiction’s use value is caused either by an increase in net return and/or a decrease in the capitalization rate. A decrease in use value is caused either by a decrease in the net return and/or an increase in the capitalization rate.