Chapter B14 – STANDARD FOR VALUATION FOR INSURANCE COVER, COMPULSORY SALE AND COMPENSATION

Purpose

The purpose of this standard is to describe the method for establishing the value of a tree crop for the purpose of insurance cover, compulsory sale and compensation.

STANDARD B14.1

The value of a crop for the purposes of insurance cover, compulsory sale and compensation shall be calculated as the value of compensation that will put the crop owner in the same financial position, after allowing for any tax payable by them on that compensation, as they would have been assuming no loss and retained ownership of the crop.

GUIDANCE NOTES ON VALUATIONS FOR INSURANCE COVER, COMPULSORY SALE AND COMPENSATION

Scope

It is possible for losses to be associated with different factors in forestry; for example loss of tree crop, loss of carbon, firefighting cost, cleanup cost, re-establishment cost, business interruption, and claim preparation. The focus of this standard is on the tree crop.

Background

When a crop owner is forced to exit a forest investment through loss of the crop to damage (e.g. fire) or through some form of compulsory forest acquisition, then the market value of the crop should not be used as the value for compensation purposes. This is because one essential prerequisite of market value does not hold in that the 'seller' is not a willing party to the 'transaction'. The appropriate value in such cases is the value that places the forest owner back in the same position as they were prior to the loss.

In situations such as fire loss and compulsory sale, forest owners are essentially forced to enter into a transaction and put into a tax position that they would not otherwise face. The excess of any compensation over the crop's tax book value is generally taxable. The loss of the crop triggers the 'crystallisation' of tax payable on the sale of a crop and removes the owner's opportunity to defer taxation by retaining a crop until harvest.

Therefore, to place the owner in the same post-tax position as they would be prior to the loss, the value of compensation should include the difference in the value of the tax liability faced by the owner.

Approach

The target is the level of compensation that would give the owner the ability to purchase at market price a forest equivalent to that lost taking into account the tax situation the owner would face.

There are two tax considerations:

1) the tax that is payable on compensation;
2) the value of the cost of (standing) timber tax shield created if the owner purchases a replacement crop.

The value of compensation can be calculated by:

- estimating the market value of the crop, immediately prior to loss, as described in Chapter B12;
- subtracting from this market value the present value of the future tax deductions associated with the cost of (standing) timber if the crop were purchased at this market value;
- scaling up this net value to allow for the tax that is payable on the compensation and ensure that the owner is put in the equivalent post-tax position as they were prior to the loss. If the crop has a nil tax book value, scaling up would be by dividing by the factor (1-tax rate).

In reality the amount of scaling required will depend on the tax position of the crop owner. For example, the owner of a destroyed forest can write off the crop's tax book value (e.g. the cost of timber and unused tax deductions at the date of loss).

Calculation of value of cost of timber tax deduction

The present value of the tax deduction associated with the purchase price can be calculated as:

$PV(\text{cost of timber tax deduction}) = T*V/((1.0 + p/100) \times (1.0 + i/100))^{(u-n)}$

where

T = tax rate

V = purchase price of crop

p = real discount rate

i = inflation rate

u = rotation age

n = current stand age

Example

Market value of crop = $16,000

PV(cost of timber tax deduction)= $1,600

Crop tax book value = $0

Illustrative tax rate= 0.28

Compensation value = (16,000 - 1,600)/(1-0.28)

= $20,000

Insurance cover

For the purposes of valuation for insurance cover, the owner may have, subject to the provisions of available policies, the option of seeking no cover right through to the option of obtaining cover to put them back in the same financial position. Events that can be covered for insurance include fire, wind, hail and volcanic eruption. Forest valuers should use the approach described in this Standard to ensure that the crop owner is informed of the value of the insurance cover required to put the owner in an equivalent post-tax financial position.

Compulsory Sale and Compensation

Insurance losses are generally tightly prescribed by the specific policy and the type of loss that can be insured for.

However, for compulsory sale and compensation purposes there may be the opportunity to claim for a wider range of losses. For example, it may be possible to claim for loss to the wider forest estate or for the delay to re-establishment and the start of the next rotation.

Estate-based valuation

For a forest of any scale, loss is likely to occur across a number of stands. The impact may also extend to other stands through the harvesting pattern subsequently changing. An approach here is to calculate the loss as the difference in value of the estate prior to loss and the value of the estate after loss.

Delay of next rotation

After a major catastrophic loss, logistical constraints may prevent all area being re-established immediately. Instead, it may be several years before some area is re-established. This imposes an opportunity cost.

Examples

Fire

In a recent example there was damage caused by fire to two adjacent 1 ha stands with an insured value of $30,000 each. The salvage value of stand 1 was $20,000 and insurance paid out $10,000. The salvage value of stand 2 was $35,000 and exceeded the insured value. Consequently, there was no pay-out. The pay-out of each stand was treated in isolation ($10k) rather than as an estate ($5k).

Opportunity Cost Associated with Fire

Opportunity costs are incurred [by the grower] during the period when dead but salvageable trees remain on the stump until harvested. Once salvage harvested, further opportunity costs are incurred as land areas remain unproductive until fully replanted. Replanting may take several years, particularly after large-scale losses, and be limited by seedling availability and other capacity constraints. Any non-salvageable material may contribute to increased land clearing costs as part of replanting.

Calculation of compensation for Public Works Act acquisition

If there is an adverse effect on the land you retain you may be entitled to additional compensation. The compensation for depreciation in value of the retained land is called "injurious affection".

Compensation for injurious affection is provided by section 64 of the Public Works Act in **New Zealand** whereas in **Australia** the calculation of additional compensation such as injurious affection operates under state laws. Where only part of your land is taken or acquired the compensation is assessed by adopting a "before and after" approach.

This means agreeing to the value of the whole property disregarding any proposed work prior to acquisition, and comparing this with the value of the land you are left with after the taking or acquisition.

Revision History

Original Standard	Released in May 1999
Revision in August 2023	Main changes are: • Addition of section on scope. • Removing section in approach using expectation value approach. • Adding sections to Guidance Notes on compulsory sale and compensation, estate-based valuation and delay of next rotation. • Adding examples to Guidance Notes.