

NCIS LOSS ASSESSMENT PROCEDURES

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The affects of hail on the growing cotton crop will be well known to virtually all growers, as will the method of assessment which is used in conjunction with the Australian Cotton Industry's Hail Insurance Scheme.

As the independent chartered loss adjusters appointed to deal with the claims function of the industry scheme, we have a responsibility to both insurers and growers alike, to ensure that the undertakings contained in the policy of insurance are faithfully and fully discharged.

An important part of that responsibility relates to the manner in which losses are assessed, and that brings us directly to the NCIS procedures.

The National Crop Insurance Association, or NCIA, was established in the USA in the late 1950's by American insurers who were involved in agri-insurance, in order to pool their resources and expertise for the benefit of all members. A high priority was given to the development of objective in-field assessment techniques for a variety of crops, one of these being cotton. A number of university research stations at that time received funding from the NCIA to undertake research into the cotton crops response to hail damage, particularly the crops extraordinary regrowth capability. The research was carried out at three geographically strategic locations, over a period of three years, with the result that a table of loss factors was created in respect of each different growth stage.

From those very early days, the loss factors have been the subject of continuing research as new cotton varieties were introduced and farming practices altered.

The Association was renamed National Crop Insurance Services, or NCIS, in 1989 and is continuing its funding of research into more accurate and objective assessment techniques.

The NCIS procedures for cotton are currently used throughout the World, and despite the different varieties grown, the assessment results are still proving to be quite relative. As a result of our enquiries, the NCIS procedures are still the only in-field assessment techniques available for cotton and therefore, we are still reliant on their use in terms of the present insurance scheme.

The Australian experience in terms of the NCIS procedures has been as varied as the seasons, and it is precisely that problem which has given rise to the concerns over the relativity of assessment results in some years. To a large extent, these seasonal variations in relativity will always occur, in view of the fact that no account can be taken of circumstances which may arise between the time at which a loss occurs, and the time at which harvest is completed.

To understand this more clearly it is important to note that the policy is only intended, and indeed designed, at this stage, to compensate for the physical damage caused by hail alone, at any given period of time, and cannot therefore be expected to include losses as a result of subsequent cool weather, prolonged rain, or disease.

Just as it is readily appreciated that these factors can seriously impair the crops ability to fully recover from hail, it must also be recognised that good weather conditions following hail and for the duration of the season will, in some instances, totally negate the effect of the damage.

That is not to say that the grower has not suffered a loss even if a normal yield is achieved, because it is recognised that additional costs have been incurred in relation to the damaged crop in the form of extra sprays and perhaps an extra irrigation, quite apart from the costs associated with the delay in the completion of harvest.

Having commented briefly on the fact that we are only concerned with measuring the damage caused to the crop as a direct result of hail at the time an assessment is conducted, I will now expose the myths and explain the mysteries of the NCIS technique.

Rather than recite the procedures in detail, which are covered in the 30 page assessment manual, I think it would be more appropriate to provide answers to two of the most common questions asked of us, which, in order of frequency are:-

1. Reasons for a 14 day deferment between the time of loss and the time of assessment.
2. What factors are taken into account at the time the assessment is carried out.

With the exception of a total loss, it is impossible to objectively measure a loss until at least 10 days after the hail, with the NCIS procedures suggesting a 14 day deferment. There are a number of sound reasons for this in view of the fact that immediately following hail damage the crop will appear to lose all condition and remain in a state of suspended animation for a few days. At this stage, the damage will always seem worse than it really is.

In cases where near total defoliation has occurred, along with a severe cut back of the plant stem, the crop will appear almost dead immediately following the storm although by day 10, unless the crop is either dead or weather conditions are not favourable, the leaf canopy will be well on the way to being replaced and some indication of where the plants will regrow from will also be evident. It is only at this time that an assessment can be contemplated.

Another reason for delaying the assessment is that the damage to the plant as a direct result of the hail may not always stop immediately following the storm. I mentioned earlier that the stresses associated with damage will cause a plant to lose condition for a few days, and in younger plants where the storm is followed by cool weather, plant deaths can occur.

In terms of more mature crops, and here I specifically refer to late reproductive crops, it is impossible to accurately assess damage to bolls any earlier than 14 days minimum, and personally I do not think a delay of up to 21 days in some cases would be inappropriate. In most cases however, the decision to defer an assessment beyond established periods will be decided upon at the time an assessment is conducted.

Therefore, in answer to the question concerning the need for a deferment period, it would be true to say that, within reason, the longer the delay the more accurate the assessment result.

The second most commonly asked question concerning what precisely is taken into account when an assessment is carried out, is not easily answered as it depends on not simply the growth stage of the crop at the time of the storm, but also the type of damage occasioned.

When we examine a crop for the purpose of undertaking an assessment, the first task is to determine the stage of growth at the time of the damage. This is determined by checking a number of undamaged plants within the field and counting the number of nodes produced above the cotyledonary node. By averaging these counts we arrive at the applicable growth stage for the crop at the time of the damage. Alternatively, if no undamaged plants exist, we would estimate the growth stage by reference to the planting date and the crop generally. Having determined the growth stage, this then establishes the growth which would have existed but for the damage.

When individual plants in the randomly selected test site are then examined, we are not so much interested in how many nodes remain, but rather the node from which the regrowth is occurring. In some cases, this can be up to three nodes below the level of the cut off. If a plant stem is not actually cut off, and has simply been scarred, depending on the position and severity of the scars it might be decided to assume a cut off at a certain node on the basis that regrowth may be impaired.

In relation to mid and late stage reproductive losses, in addition to counting cut off or regrowth positions, we will also need to consider the loss or damage caused to fruiting limbs and bolls.

This is achieved by randomly selecting 10 plants within each test site, and carefully examining each plant for both limb and boll damage. Limb damage can include limbs missing or severely scarred to the point where it is felt that regrowth will be limited. In terms of boll damage, the outer carpel will usually be cut away in order to determine the depth of the injury if there is any doubt as to the severity of the damage. The most obvious advantage of the NCIS assessment technique is that it relies on physical factors to produce the percentage rather than someone's perception of the loss suffered. In view of this, every grower's loss is considered on the basis of exactly the same criteria, with all assessments supported by factual counts, and quite a number of them, which are able to be re-worked by our computer system to re-check our in-field mathematics.

Rather than exercise blind faith in the basic values upon which the NCIS system currently relies, you will all be aware that a significant research programme will commence in the 1990/91 season, for a three season period, involving the simulation of hail damage on commercially grown crops. These trials will be conducted on the main cotton varieties being grown so that any difference in the various varieties response to hail, from the existing NCIS model, can be accurately determined and proper changes made to the factors to suit Australian conditions.

The task however of reviewing and improving the cotton assessment technique will be an ongoing responsibility to ensure that as much as possible, we are able to keep pace with the dynamic nature of this industry.

