



Turf Production Handbook

Version 11, 2021

The Australian Turf Accreditation Program

Turf Certification Standards

The AusGAP turf certification program has been created for the country's leading turfgrass producers to provide consumers with assurance that their turf adheres to a stringent set of quality standards.

The AusGAP turf certification system not only ensures the genetic purity* of a turf variety where appropriate but provides assurance the entire production and harvesting process is undertaken to the highest industry standards.

AusGAP incorporates the International Turfgrass Genetic Assurance Program (ITGAP) with the AusGAP business certification standards to offer consumers turf products and services that are unmatched in Australia.

ITGAP is the world leading turf quality assurance program used throughout the USA and other parts of the world that sets the bar for international turf certification standards.

Under the AusGAP program, the turfgrass producer (grower) is responsible for the genetic purity* of the certified grasses sold in a wholesale, commercial or retail capacity. The grower must meet minimum standards, as directed by AusGAP, covering the entire planting, production and harvest process.

AusGAP stipulates that to achieve approved standards, all stock must pass a pre-harvest test: be visually free of disease, weeds and pest damage, true-to-turf-type and free of any other foreign varieties at the time of harvest.

All new, on-farm turf crop planting stock must be preapproved by AusGAP to ensure satisfactory varietal identity and purity which is to be maintained throughout the production process.

*Genetic purity is defined as: The plant population conforms to the phenotypic characteristics as described in the breeder's description.

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1. Eligible Businesses

For a business to propagate and supply AusGAP certified turf grass, it must be in the process of becoming AusGAP certified or already have the AusGAP business certification. (See AusGAP Business Certification Handbook).

2. AusGAP Field Classification

Under the AusGAP turf certification program there are three paddock classifications – Foundation, Registered and Certified. All certified plantings must remain within three generations of the original breeder material to ensure genetic purity.

Nurseries designated for expansion purposes will be planted on land that has been treated in accordance with AusGAP pre-planting standards. Treatment methods, fallow times and chemical applications must be approved by an authorised AusGAP administrator.

- 2.1.1 Foundation Paddocks – Foundation paddocks are planted from the original breeder material and must be maintained to the highest level to ensure all propagation material that is sourced for expansion is 100% free of off-type grasses and other contaminants. Foundation fields must be approved by an authorised AusGAP inspector.
- 2.1.2 Registered Paddocks – A registered paddock is one that has been planted from foundation material, generally the first paddock of that variety planted on each farm. Registered paddocks can be used for expansion of the crop on one's own farm if approved by AusGAP and must be closely monitored to retain genetic purity. Stock from a registered paddock can be used to expand a crop twice. A third and fourth expansion may be permissible, subject to an AusGAP inspection.
- 2.1.3 Certified Paddocks – Any expansion from a registered field is considered a certified crop. Certified crops must be maintained closely to ensure purity. They are for commercial sale only and are not to be used for propagation material unless authorised by AusGAP.

3. Eligible Grasses

For a turf variety to be eligible to enter the AusGAP certification program, the following requirements must be met.

- 3.1.1 The origins of the turf cultivar must be proven by the breeder or owner of the variety.
- 3.1.2 A genetic resource of the original material must be kept by the breeder or agent of the breeder for the purpose of testing or re-establishment should the commercial cultivar become impure due to inclusions, cross-pollination or mutation.
- 3.1.3 The breeder must have a clear description of the characteristics of that cultivar.
- 3.1.4 The supplier of the approved foundation planting stock must provide a document showing the name of the producer, date of harvest, variety of grass harvested, quantity shipped, field number/identification and certificate from AusGAP declaring the source as eligible.
- 3.1.5 All planting stock must be sourced from either a certified foundation farm or the grower's own registered stock following approval from AusGAP.

4. Field Inspections

- 4.1.1 Fields must be managed in a manner that will facilitate the inspection process – i.e. Weeds are controlled so the certified grass is visible to the inspector.
- 4.1.2 To maintain full certification, a paddock must be inspected annually. (This may involve DNA and/or grow-out testing.) If re-certification is not granted, an order to destroy and/or replant will be issued to the grower.
- 4.1.3 The producer will provide documentation of quarterly self-assessment as required under the International Turfgrass Genetic Assurance Program (ITGAP).

4.2 Quarterly Self-Assessment

Quarterly assessments of AusGAP certified paddocks are designed to supplement the independent annual AusGAP inspection. The objective of the assessment program is to familiarise the producer with inspection procedures and to identify and correct any contamination problems before they become serious and lead to a rejection at the time of the annual inspection.

Every AusGAP member must complete quarterly assessments of all turfgrass production fields in the AusGAP program. The dates covered under each quarter and due dates for inspection reports are as follows:

QUARTERLY INSPECTION CYCLES	
Jan 1 st - Mar 31 st	Due April 15 th
Apr 1 st - June 30 th	Due July 15 th
Jul 1 st - Sept 30 th	Due Oct 15 th
Oct 1 st - Dec 31 st	Due Jan 15 th

AusGAP will provide the self-inspection forms through the AusGAP website.

AusGAP Production Protocols:

All production processes and turf produced under the AusGAP turf certification program must meet approved standards in the following areas.

5. Land Requirements

Land used for turf production must meet the following minimum standards:

- 5.1.1 Land use must comply with any applicable local or state government approval requirements.
- 5.1.2 All land where turf is to be produced must not be zoned as more frequent than a one in ten-year flood zone.
- 5.1.3 The total growing area must be clearly identified on an aerial map, and each individual paddock identified by name, area and GPS logs.
- 5.1.4 Each paddock must be clearly separated from paddocks growing other varieties by a controlled buffer zone, or another measure can be demonstrated to prevent cross-contamination.
- 5.1.5 Any uncontrolled perennial grass areas or pastures must be separated from each individual turf crop growing area by a controlled buffer zone or another measure to prevent cross-contamination.
- 5.1.6 Buffer zones must be in place to protect all defined water courses and must comply with applicable local and/or state government approval requirements.
- 5.1.7 Every AusGAP certified crop (not individual paddock), must undergo an annual soil analysis, with a copy of the results supplied to AusGAP on request at the end of each financial year along with an amended fertiliser program based on those results.

6. Pre-Planting Documentation

For all new crop plantings, the grower must record and provide an assessment declaration to AusGAP certifying the following:

- 6.1.1 When the existing crop and/or vegetation was first eradicated, and the method of eradication (i.e. product and rate per hectare).
- 6.1.2 The dates and rates of follow-up eradication treatments.
- 6.1.3 What cultivation methods were used, and dates.
- 6.1.4 Any supportive evidence that all existing vegetation has been successfully eradicated. For example, sufficient seasonal time has been allowed for existing weed seed and/or pre-existing turf types to germinate between eradication treatments.
- 6.1.5 No living plants of any type are to exist prior to planting. In addition, the grower must provide a sequence of five photos (from close-up to full field) showing the area to be 100 per cent free of any live vegetative material prior to planting.
- 6.1.6 Planting rates and methods must be recorded.
- 6.1.7 All newly planted areas must be treated with a pre-emergent program that can be submitted to AusGAP for approval.
- 6.1.8 Extra protocols and inspections introduced by AusGAP for new turf varieties must be adhered to and made known to all staff.



7. Pre-Planting Inspections

Once the pre-planting documentation has been submitted, AusGAP will instruct the grower to schedule either a pre-plant inspection with AusGAP or provide a declaration that all requirements have been met. Planting cannot commence until the pre-planting inspection/documentation has been satisfactorily completed.

Turf Quality:

8. Grow-in Phase of Production

The grow-in phase of production will be monitored by AusGAP inspectors and the following requirements must be met:

- 8.1.1 Every effort must be made to keep weeds, disease and insects to a minimum during production.
- 8.1.2 Foreign grass contamination of any type must be actively controlled during the grow-in phase. AusGAP will carry out random inspections; if contaminants are not being actively controlled, the crop may be placed in quarantine and a re-inspection (at cost) may be required.
- 8.1.3 Appropriate measures must be taken when equipment and machinery (e.g. mowing, irrigation equipment) crosses between different varieties in order to ensure contamination doesn't occur.

9. Existing Turf Crops

- 9.1.1 Turf crops that are in production prior to AusGAP certification may need samples submitted for grow-out testing and possibly future DNA testing if deemed necessary.
- 9.1.2 Upon AusGAP inspection, any existing crop that does not meet quality requirements cannot be associated with AusGAP at the time of sale.

10. Harvesting

To ensure the highest harvesting standards, the following minimum AusGAP requirements must be met:

- 10.1.1 Appropriate measures are in place when harvesting machinery moves between varieties to ensure cross-contamination does not occur.
- 10.1.2 Turf must be harvested 'green as possible' all year round. In cooler climates, every effort must be made to maintain an acceptable harvest colour. The use of frost blankets or application of an organic grass colourant or similar method can be adopted to achieve the best seasonal colour.
- 10.1.3 As far as practicable, fertiliser application must be controlled to reduce the incidence of pallet core heat up in harvested turf.
- 10.1.4 Turf is to be harvested within a reasonable time frame for the local climate to ensure it will not overheat during delivery. When harvested and palletised, the turf must meet the following standards:
- 10.1.5 Turf is to be visually free of other turf varieties, weeds, disease and pest damage.
- 10.1.6 Turf tensile strength must meet minimum AusGAP standards: turf rolls and slabs can be picked up with two hands without separation and remain in one piece when installed.
- 10.1.7 Turf must be cut to consistent length and methods must be in place to avoid product mix-ups on sale or delivery.
- 10.1.8 The center of turf pallets must not exceed 47.5°C at the time of delivery. If the core temperature is at risk of exceeding this, a method of cooling such as icing should be applied at the time of harvest.

11. Product Warranty

To be AusGAP compliant, growers must adhere to the following requirements relating to product warranties:

- 11.1.1 All turf sold will meet the guidelines as detailed in the relevant product warranty that is issued.
- 11.1.2 A relevant product warranty must be made available to the customer with every turf delivery.
- 11.1.3 Each AusGAP certified variety must be accompanied by an AusGAP authenticity certificate.
- 11.1.4 Authenticity certificates can only be issued by growers of AusGAP certified turf or, if otherwise authorised by AusGAP.



12. Definitions:

Authenticity certificate	A guarantee provided with the sale of each certified turf product proclaiming the turf is true to type.
Authorised AusGAP inspector	A trained and competent person employed by AusGAP to audit the systems and procedures outlined in the AusGAP certification guidelines.
Breeder material	The original strain of a cultivar produced by selective breeding.
Buffer zone	A controlled area intended to prevent contamination or pollution.
Certified paddock	Paddocks planted with material from a registered field. Third generation.
Contaminant	Any grass found in a paddock of certified turf that is of a different species or variety to that of the registered variety under production.
Cultivar	A plant variety that has been produced in cultivation by selective breeding.
Disease damage	Physical and visible damage to turf caused by a pathogen.
Foreign turf varieties	See Contaminant.
Foundation paddock	Paddocks planted from the original breeder material and used to source planting material for further expansion of a cultivar. First generation.
Genetic purity	The plant population conforms to the phenotypic characteristics as described in the breeder's description.
Genetic resource	Breeder material of a selected cultivar kept in pure form in a designated location.
Grow-in-phase	The time in turf production between the planting of a paddock and harvest, or between harvests when the turf is actively covering a paddock.
ITGAP	International Turf Grass Genetic Assurance Program.
Off-Type	Contaminant grasses of the same species as the intended variety under production that should not be present. Off-types will have differing growth habits and/or morphological appearance to the certified crop in production.
Pest damage	Physical and visible damage to turf caused by an insect, grub or other living being.
Pre-emergent herbicide	A chemical applied to prevent the germination of seeds by inhibiting a key enzyme.
Registered paddock	Paddocks planted from foundation material, generally the first paddock of that variety planted on each farm. Second generation.
True-to-type	Pure turf grass showing the expected traits and morphological features of the intended variety under production. Being or behaving as expected.
Turf Generation	Each expansion of a turf cultivar from one classification of paddock to another is considered a generation, ie. foundation to registered, registered to certified.
Turf tensile strength	The resistance of a turf roll or slab to breaking under tension.
Visually free	No visible signs or distress or damage in the harvested turf product.



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