

2 IPW FARM GUIDELINES, CHAPTER 2: CONSERVATION AND IMPROVEMENT OF THE FARM AND VINEYARD ENVIRONMENT (referred to as the “BIODIVERSITY GUIDELINES”)

One of the most important principles of IPW is that production should proceed in harmony with nature. This section’s guidelines were produced by the Biodiversity & Wine Initiative and revised in 2006. The complete set of IPW guidelines can be obtained from the IPW website – www.ipw.co.za.

The **Biodiversity & Wine Initiative (BWI)** is a partnership between the conservation sector and the wine industry to minimise the loss of threatened natural habitat and contribute to sustainable wine production. Producers can become recognised as **members** (entry level) or **champions** (exemplary level) of the initiative by setting aside an area of natural habitat for conservation and fulfilling other criteria as detailed on the BWI website [www.bwi.co.za]. For more information, contact Joan Isham or Sue Winter on 021-886 8428.

2A. Conservation and management of natural areas

Threatened ecosystems, especially lowland vegetation types, rivers & wetlands, are protected by law and may not be disturbed, degraded or developed without special permission from the relevant authorities.

Threatened ecosystems

- New vineyards should ideally be developed on old agricultural lands and not on virgin soil with pristine natural vegetation. A ploughing permit must first be obtained from the National Department of Agriculture in order to develop virgin soil. Any land that has not been worked for more than 10 years is regarded as virgin ground.
- As of 2006, the removal of any natural vegetation comprising an area of 3 ha or more requires authorisation from the Provincial Department of Environmental Affairs.
- It is strongly recommended that producers who still have areas of natural vegetation, especially lowland vegetation types, enlist the help of the BWI extension officers or CapeNature (or your regional equivalent) to determine the conservation value of these areas. Not all natural areas have the same conservation priority. Land owners with pristine habitats, especially critically endangered and endangered vegetation types on their farms should consider setting these areas aside for conservation. In the Western Cape, the Stewardship Programme of CapeNature may be applicable to high priority habitats to give these areas secure conservation status, and truly ensure these areas remain conserved for future generations.
- Consider drawing up a simple conservation management plan for a farm with natural areas, including time-bound management action schedules.
- Introduction of game into natural vegetation should be carried out on advice from the relevant conservation agencies and adhere to relevant policies and permit procedures. Too many game animals or animal species unsuitable for the area can damage remaining natural vegetation.

Rivers & wetlands

- In view of the national water shortage, all water abstraction from a river or underground source must be registered with the Dept. of Water Affairs & Forestry. All water catchments, including wetlands, are protected and may not be disturbed or polluted in any way that will impede their natural function. It is illegal to interfere with the flow regime of a river or wetland by canalizing waterflow, digging drainage ditches or infilling by dumping soil and rubble, without written permission from the relevant authority.
- Buffer areas of undeveloped land that are free of alien plants should be retained around wetlands and along water courses. The buffer width around wetlands depends on the characteristics of the wetland, but 25 - 75m is recommended. Buffer zones along rivers and water courses (riparian zones) should ideally be 30 – 40m wide. The well-being of river ecosystems is largely dependent on the health of the adjacent natural vegetation (or “riparian habitat”). Riparian vegetation stabilises the riverbank, filters pollutants, helps maintain a natural water temperature, contributes organic matter in support of aquatic life and acts as a buffer to adjacent land uses.
- Farm dams with a capacity >10 000m³ must be registered and dams with a capacity >50 000m³ must be licensed with Department of Water Affairs & Forestry.
- Properly designed and managed farm dams can attract a variety of birds, insects and animals to the area and so contribute to conservation of biodiversity. Avoid stocking dams with alien fish such as small mouthed bass and trout which decimate indigenous fish populations. Farm dams stocked with indigenous fish species can make a significant contribution to conservation.

2B. Invading alien species

- Invasive alien plants have a significant negative impact on the environment by causing direct habitat destruction, increasing the risk and intensity of wildfires, and reducing surface and sub surface water. Landowners are under legal obligation to control alien plants occurring on their properties.
- Alien control programs are long-term management projects and a clearing plan, which includes follow up actions for rehabilitation of the cleared area, is essential. This will save time, money and significant effort.
- Collective management and planning with neighbours allows for more cost effective clearing and maintenance considering aliens seeds as easily dispersed across boundaries by wind or water courses.
- For a list of declared weeds and invader plants according to the Conservation of Agricultural Resources Act, refer to the downloads page on the BWI website.
- All clearing actions should be monitored and documented to keep track of which areas are due for follow-up clearing.
- A general rule of thumb is to first target lightly infested areas before tackling densely invaded areas, and prioritize sensitive areas such as river banks and wetlands. For detail on the recommended clearing methods for each common alien species, consult the CapeNature “Landowner Alien Clearing Manual”, which is available on the BWI website (downloads page).
- Alien grasses are among the worst invaders in lowland ecosystems adjacent to farms, but are often the most difficult to detect and control.
- To avoid alien grass invasion a buffer of at least 30m should be left along the edges between pristine natural areas and vineyards, other agricultural lands & compost or manure piles. This can prevent disturbance, edge effects and nutrient run-off into the veld, which promotes alien grass invasion.
- Information on removal and management of /regulations regarding other alien invaders, such as fish (e.g. smallmouth bass, trout, carp), mallard ducks or feral pigs are available in the IPW Manual.

2C. Fire Management

As a landowner, you are responsible for the prevention and management of all fires that occur on your land, in terms of the National Veld and Forest Act of 1998. You will be assisted in complying with these regulations if you and your neighbours form a Fire Protection Association (FPA).

- Every property must have a system of fire breaks in place. The breaks must be on the boundary of the property unless there is an exemption granted by the Minister or an agreement with the adjoining landowner that the firebreak be located somewhere else within an FPA.
- Firebreaks must be wide enough to provide access for the control of wildfires and must not be burnt during times when there is a high fire risk. A sensible firebreak width is usually not wider than 10m for most fynbos and renosterveld vegetation, as soil erosion problems are created when firebreaks are too wide.
- Owners should ensure that firebreaks are positioned and prepared in such a way as to cause the least disturbance to soil and biodiversity. Firebreaks should be free from combustible material, e.g. prunings.
- Ensure fire fighting equipment is maintained and in good working order before the start of each fire season.
- Generally a late summer or early autumn burn is best for fynbos species, but due to the risk of runaway fires at that time, burning is usually only feasible in March and April.

2D. General land and vineyard management

- When large, continuous areas of habitat are broken up into disconnected fragments, many ecological processes that keep these systems functioning are disrupted and many species disappear. Corridors of natural habitats are needed to link fragments to allow species movement, pollination and nesting to continue.
- During the design phase of new vineyard blocks layout, consider leaving corridors between blocks or establishing new corridors. Consult an indigenous landscaper for advice on species suitable for planting in your area. Corridors can also include river and stream bank vegetation and wide road-side verges. Where no natural land remains on a property, portions of old fields that are left to naturally rehabilitate can also act as animal movement corridors and provide shelter.
- Any rehabilitation or restoration efforts are valuable in re-creating habitats that have previously been disturbed. However, rehabilitation by means of re-planting can do more harm than good, if incorrect species choices are made. For example, a number of protea species (especially white proteas) are known to easily hybridise and alter the genetic integrity of indigenous species. Specialist advice is recommended

as restoration can be a costly exercise. Rehabilitate using locally collected seed or species that historically occurred in the area.

- Wild animals (e.g. baboon & buck) have become a problem in many farming regions because we have made them a problem by introducing cultivated habitats and readily available food into their natural habitat. It is always advised to contact CapeNature regarding the most environmentally friendly and effective method of control for problem animals. Extermination by poisoning should be avoided at all costs! In some instances CapeNature will offer assistance with trapping large animals (e.g. leopard) and relocating them to a suitable location.
- Farm roads, particularly gravel roads, should avoid sensitive ecological areas such as wetlands or rare plant populations and must be designed and laid out so as not to cause or aid erosion. For example, contour drains, as well as drainage ditches and sumps filled with stones to decrease the flow rate of storm water can be used to prevent soil erosion in roads and vineyards. Regular maintenance is necessary to curb erosion and excessive dust.
- To prevent undue soil erosion, slopes with a gradient steeper than 20 percent (18°) should not be ploughed (as detailed in the Conservation of Agricultural Resources Act, 1983).
- Minimize fertilizer run-off onto adjacent natural areas, and especially wetlands and rivers. This runoff favours the spread of alien plants, and actively poisons many indigenous plant species and aquatic animals.
- Minimize pesticide drift from vineyards onto natural areas. Where possible use IPM methods and try to avoid drift altogether.
- Good waste management practices can make a profound contribution towards retaining biodiversity. Refuse/waste management must comply with legal prescriptions and may not pollute the environment (particularly wetlands and water sources) or create a health hazard. This applies to the disposal of both liquid & solid waste, such as that from a winery, as well as to household waste. Refuse disposal sites for household refuse on farms must be fenced. Refer to the following sections for more detail on waste management:

Guidelines for farms:

- Section 14 - Handling of Chemicals

Guidelines for cellars:

- Section 9.1-9.4 - Wastewater management (including monitoring, the amount and quality of cellar waste water; storing and disposal of wastewater)
- Section 11.1 - Disposal of solid waste
- Section 11.2 - Cleaning of water dams, pipes and other equipment

NOTE: More detailed information and practical guidelines for biodiversity management are available in the IPW Manual.

Relevant legislation:

Constitution of the Republic of South Africa, Act 108 of 1996

Biodiversity Act, No. 10 of 2004

Conservation of Agricultural Resources Act, No. 43 of 1983

Environmental Conservation Act, No. 73 of 1998

National Veld and Forest Fire Act, No 101 of 1998

National Water Act, No. 36 of 1998

National Environmental Management Act, No. 107 of 1998

Protected Areas Act, No. 57 of 2003

Subdivision of Agricultural Land Act, No. 70 of 1970

Western Cape Nature Conservation Laws Amendment Act No. 3 of 2000