



Property planning

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Module 1 – Property planning

What to do?

As you work through this section, tick off each action as it is completed. Only when you have successfully ticked off every box should you consider taking on a goat enterprise.

When considering a goat enterprise, you need to consider the following:

- Your business and personal goals – consider your lifestyle preferences, financial needs and skills. Be realistic with your expectations.
- Assess your enterprise choices – consider the advantages and disadvantages of different enterprises.
- Think about your customers/processors:
 - Do you have a buyer? Availability of a suitable outlet for your product.
 - Proximity to the processor/customer – there are implications for cost of transport, welfare of animals and quality of end-product.
- Assess the suitability of the land for a goat enterprise:
 - Shelter, soil type, climate, feed availability, access to water, topography, threat from predators, established infrastructure such as fences.
- Consider the scale of your operation:
 - Size required to be economically viable.
 - Associated labour requirements.
 - Infrastructure requirements.
 - Resource availability (quality and quantity of feed and water).
 - Is there room for expansion?
- Consider the financial implications – gross margins, return on investment and cashflow.
- Consider how the new enterprise fits with existing enterprises.
- Planning considerations:
 - Consideration for neighbours.
 - Consideration of land capability – be aware of fragile areas.
 - Potential impact on catchment.
 - Permit requirements.

How to do it?

Planning a new enterprise is not something that should be done lightly. You need to thoroughly research the industry and the operational factors associated with the enterprise. The information provided below is designed to assist you with your research.

Information should be gathered from a broad range of sources: managers of similar enterprises, other local farmers, publications, the internet, departments of agriculture and primary industries, industry experts, interest groups, financial advisers and consultants.

1. Goal setting

Before undertaking any enterprise change you need to have a clear understanding of your personal and business goals.

- What do you and your family want from life?
- What do you want from the business?

Consider the following factors:

- Lifestyle preferences:
 - Where do you want to live?
 - How hard do you want to work?
 - Is it a full-time or part-time commitment?
 - When and how often do you want holidays?
- Income requirements:
 - During the establishment phase.
 - When the enterprise is fully operational.

- Skills:
 - What skills do you have?
 - Are you willing to undertake further education and training?
 - Have you worked with animals?
 - Have you worked with goats?
- Interests – what do you enjoy doing?
- Willingness to employ staff and/or use contract labour.

All members of your family and business partners need to be involved in this process.

Once you have a clear understanding of what you want from your life and your business, you then need to ask yourself: *Will a goat enterprise allow me to achieve these goals?*



2. Enterprise choices

Goatmeat production can be the sole enterprise, part of a mixed business or a by-product of another enterprise, such as fibre or dairy. The table below outlines some of the advantages and disadvantages of different goat enterprise mixes.

Enterprise	Pros	Cons
Meat only	<ul style="list-style-type: none"> • Single program for health and husbandry. • Infrastructure specific to the enterprise. • Single focus on meat marketing. • Contractors can be used as a labour source. 	<ul style="list-style-type: none"> • No diversification of income. • Income may be seasonal, not evenly distributed throughout the year. • Labour is required at peak handling times, not consistently employed.
Meat and fibre	<ul style="list-style-type: none"> • Income from two sources: meat and fibre. • Cull animals from the fibre enterprise can be joined to produce offspring for the meat market. • Labour may be fully utilised throughout the year. 	<ul style="list-style-type: none"> • Greater infrastructure requirement – shearing facilities. • More skills and knowledge required for marketing the products. • Increased labour requirement.
Meat and sale of breeding stock (this could also be incorporated with a fibre enterprise)	<ul style="list-style-type: none"> • Diversity of income. • Genetic stock can be a high-value marketing opportunity. 	<ul style="list-style-type: none"> • More skills and knowledge required, particularly with reference to marketing. • Genetically improved livestock is usually more expensive to purchase, thus increasing the capital required to establish the business. • Breeding programs involving artificial insemination and/or embryo transfer require significant planning. These programs can be expensive if there is not a high success

Enterprise	Pros	Cons
Meat and sale of breeding stock (this could also be incorporated with a fibre enterprise) <i>continued</i>		<p>rate and a clearly identified market supporting the breeding plan.</p> <ul style="list-style-type: none"> • Increased husbandry and maintenance requirements and costs.
Dairy with sale of male kids for meat	<ul style="list-style-type: none"> • Sale of milk provides a regular income stream. • Opportunity for value adding to milk by processing to cheese and yoghurt. • Raising male kids for meat adds value to a production resource. Milk is a valuable resource; cows' milk or milk replacer should be used to feed meat kids. • Diversification of income. 	<ul style="list-style-type: none"> • High cost of infrastructure for the dairy enterprise. • Location of property dictated by access to milk-processing facility. • Raising kids is time-consuming. • High labour requirement. • Requires a broad skills and knowledge base, with particular emphasis on nutrition and health. • Various state regulations may impact the siting of a dairy parlour and the sale of milk product to the public. Check thoroughly before commencing construction.

An analysis of a potential enterprise's strengths and weaknesses may also assist you in making business decisions. Commonly referred to as a SWOT analysis – strengths, weaknesses, opportunities, threats.

Strengths: (for example)
 What are the advantages offered by the enterprise?
 What positive attributes will you as a manager bring to the enterprise?
 What will make your business different from the competition?

Weaknesses:
 What are the potential weaknesses of the enterprise?
 What should be avoided?
 What could cause problems?

Opportunities:
 What are the industry trends that could benefit your enterprise?

Threats:
 What obstacles do you face?
 Are there any factors that could threaten the enterprise?

Aim to work with the strengths and pursue opportunities. You need to be aware of potential threats and put risk management strategies in place to minimise negative impacts. Work to correct any weaknesses.

If the threats and weaknesses out-weigh the strengths and opportunities, then the enterprise in question may not be the most appropriate use of your time and money.

You might also like to use this analysis technique (SWOT) to assess:

- Your people – family and staff.
- Your natural resources – land, water, pastures and vegetation.
- Your whole business – profitability and productivity.
- Your marketing – product specifications and supply.

3. Customers and processors

With any enterprise access to markets is critical. You need to be assured that there is a ready market for your product. *Module 8 – Marketing* provides information that can assist you in developing a marketing strategy for your enterprise. You need to consider the availability of buyers and/or processors in the area where you are planning to establish your goat enterprise. This aspect of your business needs to be thoroughly researched during the planning phase.

If your customer base is a distantly located there are distinct disadvantages:

- Availability of transport – transport needs to be reliable and timely. Are there suitable transport contractors in your area? If not, do you have the capacity to provide transport yourself?
- Cost of transport – the greater the distance that you have to move stock, the greater the associated transport costs. These costs need to be factored into your budget calculations.

- Length of transport journey – there are animal welfare issues associated with transporting stock. Lengthy journeys can be very stressful for goats. If using contractor transportation, make sure that the contractor complies with the Code of Practice for Transportation of Livestock (refer to *Module 3 – Industry obligations*), which dictates appropriate times that stock can spend in transport and frequency and length of breaks.
- Impact of transport stress – during transportation, goats will lose weight and their food intake will be depressed for up to five days after transportation. Stress can also impact on meat quality. Meat from animals that have been stressed prior to slaughter can be tough, dark-coloured and more prone to salmonella infection.¹

If rangeland goats are transported over long distances, stress can cause a condition called ‘capture myopathy’. This is a muscular degeneration. It is not immediately fatal, but can cause death by kidney malfunction later in life. For more information on symptoms and management of common health problems refer to *Module 6 – Husbandry Toolkit 6 page 3*.

4. Suitability of land for goats



The best resource when researching a district or a specific property is other local farmers, as they will have an intimate knowledge of the area.

A farm map or aerial photograph may also assist you in your assessment of land, and can be used to plan improvements.

¹ Meat Standards Australia (2006) website: www.msagrading.com



- **Shelter** – goats are very susceptible to heat and cold stress. Does the property have sufficient shelter from wind and cold, and shade from the sun? If not, how practical and costly will it be to establish shelter and shade? Shelter is also important during kidding and provides protection from predators.
- **Soil type** – soils vary in their texture, water-holding capacity, natural fertility, salt levels, drainage, acidity/alkalinity and stability. These factors influence the type of plants that will grow, quality and quantity of plant growth and how the soil will stand up to animal traffic, ie potential for erosion, compaction and pugging.

Corrective actions can be taken to overcome some soil problems. Such actions may include capital fertiliser inputs, application of soil ameliorants (eg lime and gypsum), improvements to drainage and treatment of erosion and salinity problems. However, the costs of these activities need to be carefully considered.

To find out more about the soils of a particular property, you may consider:

- o Taking soil tests – these will tell you about nutrient levels, texture, salt levels, acidity/alkalinity.
- o Seeking advice from a soils specialist – most departments of agriculture and primary industries will be able to provide you with some information about local soil types and their production capabilities. There are also many private advisers who will be able to provide similar services.
- o Talking to local farmers.
- **Climate** – rainfall, temperature, humidity, weather patterns and incidence of extremes.

Rainfall and soil temperature are the critical factors influencing plant growth. These two factors will influence the types of plants that grow in an area, the length of growing season and the quantity of growth.

Weather patterns and incidence of extremes will directly impact on animal performance. These two factors will also influence the timing of farm management activities. For example, access to and from remote properties can be severely restricted for long periods during wet weather. This has implications for the timing of stock sales.

Coastal areas also present a number of challenges. Due to the wet climate, there tends to be a greater incidence of parasites, thus requiring increased animal husbandry. There is also an increased possibility of trace element deficiencies in these areas.

- **Feed availability** – quality and quantity of available feed and knowledge of the timing and size of feed deficits and surpluses. Feeds suitable for goats include grasses, herbs and shrubs.

A good understanding of feed availability is important in terms of making a decision about the type of enterprise a property will support and the stocking rates that can be achieved.

As explained above, plant growth (feed availability) is strongly linked to soil type, rainfall and temperature. Local knowledge is critical. Often information about growth rate will be available from the local department of agriculture or primary industries. You can also learn to estimate feed availability using visual assessment techniques.

Feed budgeting is a tool that can assist you in making decisions about stock numbers and classes that can be run on a property. It can also help you to identify and quantify surpluses and deficits. The basis for feed budgeting is a monthly analysis of how much feed is grown, compared with the quantity required by stock. More information on this topic is presented in *Module 7 – Nutrition*.

- **Access to water** – quality and quantity of water. Water is essential for any goat enterprise. When assessing the suitability of a property, you need to know the quantity, quality, location and reliability of the water sources.

The quality, quantity and reliability of water sources will determine the

number and class of goat that can be run on a property. *Module 7 – Nutrition* includes a table which outlines the water requirements of goats.

The location of the water source will influence stock management. Goats must have ready access to water, so there needs to be water available in each paddock or grazing area. It should be noted that the greater the distance that goats have to travel to water, the more energy is required for activity. Also goats will tend to graze within comfortable walking range of water. This has implications for grazing coverage of the property. For example, goats grazing in rangeland areas will stay within about 5km of a water point.

- **Topography** – landscape features (streams, hills, forest, lakes). Understanding the lie of the land on a property will assist in planning farm layout. Topographic maps, contour and hydrology (the nature, distribution and circulation of water above and below the surface) overlays and aerial photographs will help you to visualise landscape features.

Different components of the landscape require individual management. ‘Landclass’ fencing can be beneficial. Landclass fencing refers to separation of areas requiring different management, this involves consideration of both landscape features and soil type.

For example: stock will graze flats and slopes differently, so to encourage even grazing pressure it may be useful to separate these areas with fencing. Plants will also grow differently on flats and slopes, so fencing will allow grazing management to incorporate appropriate rest periods for the pasture.

Another example: streams can be vulnerable to stock damage – eg bank erosion, contamination from dung and urine, damage to riparian vegetation. Fencing to control stock access can benefit waterway health. Also, river flat environments may be too cold and wet for grazing over winter, so goats should be excluded from these areas during that time.

- **Threat from predators** – a realistic understanding of the potential threat posed by predatory animals is important when considering the location of a goat enterprise. With this knowledge in mind, consider cost and practicality of reducing the risk of predation. Strategies may include predator-proof fencing, pest control programs and/or guard animals. Refer to *Module 6 – Husbandry* for more information on predator control. If the threat level is very high in a particular area, the costs of controlling predators may render a goat enterprise uneconomic.
- **Established infrastructure** – fencing, yards and handling facilities are essential for effective management of goats. Goats require different infrastructure to cattle and sheep, although existing infrastructure can be modified to support a goat enterprise. This is one of the first things that you will need to address when you set up a new enterprise. Such infrastructure is expensive to establish. Construction and/or modification options need to be carefully researched and these expenses factored into the enterprise set-up costs. *Module 4 – Infrastructure* provides more information on this topic.



5. Scale of operation

Having identified the desired income and investment level during your initial goal-setting exercise, you then need to assess whether the enterprise under consideration will be able to provide the necessary income stream. The main factor that will influence this is the number of stock being turned off each year. As discussed earlier, stocking rate is strongly influenced by the suitability of land for goats.

You need to find out about the potential stocking rate that can be achieved in a particular area. There is a range of decision support tools that can assist you in determining the appropriate stocking rate for an area, eg the GrassGro™ software program. However, local knowledge is always the best indicator. With this knowledge you can then calculate how many hectares will be required to turn off the amount of product required to generate the desired income. Overstocking is generally unsustainable and should be avoided.

The size of the property and the intensity of the operation will dictate the labour and infrastructure required to manage the property (fencing, handling facilities, yards, water supply). Refer to *Module 4 – Infrastructure* for more information. Labour and infrastructure development can add significantly to your costs, and need to be factored into the financial analysis of the operation. If extra labour is required, you also need to consider your skills in terms of managing staff, and the degree to which the property is compliant with Occupational Health and Safety standards.

Take a long-term view of your business. If you can foresee future expansion, you should consider whether the property in question will allow you to grow the business. Think about the costs and practicality of moving the enterprise, compared with further developing it on the current site, in years to come.

6. Financial implications

Financial analysis should address the following:

- Annual profits – income less costs.
- Cash flow patterns.
- Gross margins for comparison of different enterprises – income minus variable costs and animal replacement costs, expressed on a per hectare, per head, or per \$100 of capital investment basis.
- Return on investment – the annual rate of return earned for the amount of money that you have invested in setting up the enterprise. This should be compared with the interest that could be earned from alternative investment options.

Module 2 – Financial analysis deals with this topic in some depth.

7. Fitting in with existing enterprises

Many farm businesses involve several interrelated enterprises, eg sheep, beef, cropping, fodder conservation. These enterprises will compete for resources such as land (pasture), labour and capital, but may also complement each other in the way they are structured.

If you are considering incorporating a goat enterprise into an existing farming business, the following table provides some insights into how some of the more common enterprise mixes work in a practical sense.

Enterprise mix	Complementary aspects	Potential disadvantages
<p>Goats and sheep</p>	<ul style="list-style-type: none"> • Sheep focus more on clover than goats. The presence of goats can reduce pressure on clover, thus improving overall clover content of pastures. • Goats can help control weeds, including woody species. • Goats grazing temperate pastures eat more of the dry tops of grasses over summer than sheep, thus helping to clean up pastures in preparation for the autumn break. • Goats are more flexible and opportunistic in their grazing habits than sheep. • In rangeland areas, goats will walk further and graze wider than sheep, thus expanding the grazing coverage. • Shearing infrastructure may be shared, but careful management is required to minimise the risk of fibre contamination. • Labour may be used more efficiently, especially if meat goats are chosen (no mulesing, crutching or shearing). • When feed is abundant, goats will not graze grasses and herbs as low as sheep. 	<ul style="list-style-type: none"> • Sheep and goats will compete for feed. • Sheep and goats carry similar diseases and parasites. See <i>Module 6 – Husbandry</i> for more details. • Goats can be run on wool-producing properties provided care is taken to minimise the risk of fibre contamination. For more information refer to the Australian Wool Exchange’s code of practice for the preparation of wool clips, reference details provided in <i>Module 1 - Property planning Toolkit 1 page 2</i>. • Sheep-proof fencing will not necessarily hold goats. • Sheepyards will require significant adaptation to handle goats. The main issue is that panels need to be higher for goats than sheep. • Turn-off times for meat animals may conflict with peak times in other enterprises. Careful planning is required to ensure that the workload can be adequately managed. • Sheep and goats should not be run together in a mob because the total grazing pressure applied by the two species tends to degrade the country, unless very carefully managed. <p>Sheep tend to graze lower, thus potentially increasing the exposure of goats to parasites.</p>

Enterprise mix	Complementary aspects	Potential disadvantages
<p>Goats and cattle</p>	<ul style="list-style-type: none"> • Goats and cattle have different grazing habits and therefore competition for feed and pressure on plants is reduced if running a mixed enterprise. • Fewer common internal parasites than with goats and sheep. Running a mixed enterprise can assist with internal parasite control strategies. • Goats can help control weeds, including woody species. • Diversification of income. • May utilise labour more efficiently. • Depending on the marketing, the mix may assist cashflow patterns. 	<ul style="list-style-type: none"> • Cattleyards will require alteration to be able to handle goats. Races will need to be narrowed and spaces between rails reduced. • Cattle-proof fencing will not necessarily hold goats. • If running fibre goats, shearing infrastructure will be required. • More planning and organisation will be required for health and husbandry. • More skills and knowledge required.
<p>Goats and cropping</p>	<ul style="list-style-type: none"> • Goats can be grazed on crop stubbles to reduce trash burdens. • Goats can be grazed on break crops in a cropping rotation. • Goats can help control weeds. • Diversification of income. • Goats are a relatively cheap livestock enterprise to get into, with respect to the cost of animals. • May utilise labour more efficiently. 	<ul style="list-style-type: none"> • Substantial alteration to fencing may be required if goats are introduced to a cropping enterprise. • If running fibre goats, shearing infrastructure will be required. • More planning and organisation will be required to effectively manage goats. • During the crop-growing season, the area available for goat grazing will be significantly reduced. • More skills and knowledge required.

Planning considerations

When establishing a goat enterprise you need to consider the social and environmental impacts of the business.

Have consideration for your neighbours. This means managing your animals in a responsible manner. Ensure that boundary fencing is secure – goat-proof. Animals that stray on to other people’s properties, roads or public land can cause community conflict. There are issues in terms of potential spread of disease, unwanted matings, damage to vegetation, public nuisance, threat of contributing to the unmanaged population and, on roads, the risk of traffic accidents.

Be aware of the potential impacts that your enterprise may have on the environment. Some areas of land are fragile and are not suitable for a grazing enterprise, or require very careful management to prevent further damage. The sorts of things that you need to consider are erosion risks, salinity problems and threatened native vegetation. Well managed goats are kind to the land. However, managed irresponsibly, goats have the potential to degrade land quicker than sheep or cattle.



Managed correctly, goats can be a cost-effective tool in managing regrowth. The regrowth to the left of the fence in this photo was controlled using goats, whereas the area to the right of the fence has been left unmanaged.

Every property is part of a water catchment, and, as such, your management has impacts beyond your property boundary. You need to be aware of the potential impact that your enterprise has on the water quality of streams and wetlands, habitat and food supply for wildlife, disease transfer, weed populations and soil health. The enterprise should be managed in such a way that it is in harmony with the environment, minimising the risk of environmental degradation.

When establishing a new enterprise, you need to comply with any planning requirements that may exist in the area. Seek advice from relevant local authorities, such as local government and the department of agriculture or primary industries. You should also refer to *Module 3 – Industry obligations* for specific state-based information.

Remember that you are part of a broader industry and your actions reflect on the image of the goat industry as a whole.



Under some circumstances goats have the potential to ringbark trees. Corrective action should be taken such as fencing off at-risk trees as soon as such activity is observed.



Toolkit 1 – Property planning

Tool 1.1 Finding further information (page 2)

Tool 1.2 Dry sheep equivalents (page 4)

Tool 1.3 How to conduct an effective web search QUICKLY (page 5)

Case studies

Goat farming for profit and pleasure – an intensive dairy enterprise
Harold Hopper (page 10)

Developing a run-down property
Heather Osborn (page 11)

Tool 1.1

Finding further information

Useful contacts

CSIRO

The CSIRO project, GRAZPLAN, has developed a suite of computer models that can help with farm management decisions. GrassGro™ (pasture quality, quantity and stocking rate information), GrazFeed™ (feed requirements and production calculations) and MetAccess™ (weather predictions).

For more information contact :

CSIRO

Tel: 1300 363 400,

www.pi.csiro.au,

or

Horizon Agriculture

Tel: 02 9440 8088,

www.hzn.com.au

AgForce Queensland

Tel: 07 3236 3100

<http://www.agforceqld.org.au>

Australian Rangeland Society

Tel: 08 8357 3378

www.austrangesoc.com.au

Grassland Society of Southern Australia

Tel: 03 5622 0805

www.grasslands.org.au

Breed associations:

Australian Cashmere Growers Association Ltd (ACGA)

President: Andrew James

Executive Officer: Carolyn Gould

Tel/Fax: 02 9629 2390

Email: cashmere@acga.asn.au

Boer Goat Breeders' Association of Australia Ltd

c/- ABRI

University of New England

ARMIDALE NSW 2351

Tel: 02 6773 5177

www.boergoat.une.edu.au/

Dairy Goat Society of Australia Ltd

PO Box 9048

TRARALGON VIC 3844

Tel: 03 5176 0388

Email: dgsasec@bigpond.com.au

Mohair Australia Ltd

147 East Street,

PO Box 22

NARRANDERA NSW 2700

Tel: 02 6959 2069

www.mohair.org.au

Cashmere Connections Pty Ltd.

Avtar Singh

4 Station Street,

BACCHUS MARSH VICTORIA 3340

Tel: 03 5367 4222

Email: avtar_singh@optusnet.com.au

References

Code of Practice for AWEX Quality System – Preparation of Australian Wool Clips. 2004. Australian Wool Exchange Limited (AWEX).

Accessible as a download from the AWEX website:

www.awex.com.au/Corporate/Industry_Services/File/Code_of_Practice_2004.pdf

Courses and workshops

Whole Farm Planning is offered as part of the National Agricultural Training Package. See your local regional training organisation for details about Whole Farm Planning courses, eg TAFE colleges and vocational training courses.

Websites

Refer to *Module 1 – Property planning Toolkit 1 page 5* for instructions on how to conduct an effective web search.

NSW Department of Primary Industry
www.dpi.nsw.gov.au

Department of Primary Industries, Victoria
www.dpi.vic.gov.au

South Australia Research & Development Institute
www.sardi.sa.gov.au

Primary Industries and Resources South Australia
www.pir.sa.gov.au

Department of Primary Industries, Water & Environment, Tasmania
www.dpiwe.tas.gov.au

Department of Agriculture Western Australia
www.agric.wa.gov.au

Queensland Department of Primary Industry and Fisheries
www.dpi.qld.gov.au

Northern Territory Department of Business Industry and Resource Development
www.dpi.nt.gov.au

Google Earth (maps and satellite images)
www.googleearth.com

CSIRO Centre for Arid Zone Research
www.cazr.csiro.au

New tools – things to look out for

Enterprise Comparison Calculator – a spreadsheet for comparing the economic and financial returns of goat, Damara, Merino and cattle enterprises on pastoral stations in Western Australia. This program has been designed to assist producers who are considering changing enterprises on their properties. To access this spreadsheet contact the Department of Agriculture Western Australia, Rangelands Program.

Tool 1.2

Dry sheep equivalents

Dry sheep equivalents (dse) is a term commonly used in livestock enterprises when discussing stocking rates and carrying capacity. It allows comparison of different types and classes of animals, using a common reference point. That reference point is the Merino wether, 45kg, in good store condition. The energy required to maintain this animal is 7.6 megajoules of metabolisable energy per day.³

Dry sheep equivalents (dse) for classes of goats:⁴

Class	Dry sheep equivalent	Weight range
1 dry doe	0.75	30-40kg
1 breeding doe	1.50 (doe in a herd producing 150% kids)	40-60kg
1 weaner	0.70 (from weaning to one year old)	20-40kg
1 buck	1.50	60-80kg

³ McLaren, C. (1997). Dry Sheep Equivalents for comparing different classes of livestock. AG0590. Department of Primary Industries Victoria.

⁴ Blood, D. and Williams R. (2005). The Grazing of Goats in the Pastoral Areas of Western Australian. Best Management Practice – July 2005. Department of Planning and Infrastructure Western Australian Government; Pastoral Lands Board.

Tool 1.3

How to conduct an effective web search QUICKLY

Using a web search tool is a fast and effective way to find what you want on the Internet. There is a vast amount of quality information on the Internet relating to goats if you know how to search for it effectively. A web search allows users to cut through the clutter and find what they really want.

There are ways to ensure a quick and effective search. This section details the 'ins' and 'outs' of effective web searching. Google is used as an example search as it is the number-one search engine and many other search mechanisms feed from Google.

What is a search engine?

Internet search engines help users find web pages on a particular topic of interest. Search engines maintain databases of web sites and use programs to collect information from the Internet. This information is then organised by the search engine in its database.

Another form of search is a directory search. Directories, such as Yahoo! maintain ordered lists of websites.

The basics of search

The most common form of searching on the Internet is through a keyword search in which you enter a keyword or series of keywords into a search engine.

You typically enter keywords in the search bar on your selected search engine web page as shown in figure 1.

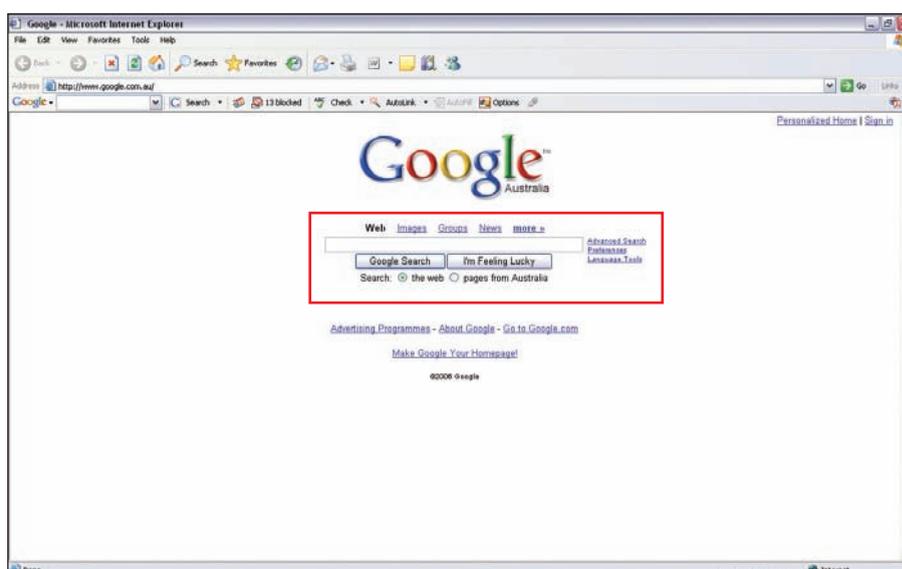


Figure 1.

Keywords are usually separated by spaces and can be upper or lower case as typically search engines are not case sensitive.

Searching the entire web or searching just a geographical area (ie: Australia) increases or decreases search results.

While you can search on a single keyword, the more keywords you use, the more defined your search. When using multiple keywords, most search engines only return results with all of the specified keywords, so there is no need to use 'and' in the search term.

For example, searching Google Australia for the term 'goats' yields 343,000 results while the term 'fencing' yields 1.9 million results. Both of these results are daunting to scroll through.

Combining the two words into a search phrase such as 'goat fencing in Australia' provides 13,700 – a much more manageable search result. Even just the term 'goat fencing' on Google Australia provides 17,000 results. By being more and more specific you can further refine what you are looking for.

Searching common words

Many search engines ignore common words such as 'is', 'at', 'how', 'when' 'with' and so on. This speeds up the search and ensures a more focused result. For example in figure 2, the term 'mustering goats with dogs' yields 762 local results that exclude the term 'with'.



Figure 2.

In some instances however, common words may be important to your search. In this case, you can ensure they are included in the search by putting a '+' sign in front of the common word. For example searching on 'mustering goats +with dogs' provides 973 local results. These results include any page with all of the keywords in any order, as shown in figure 3.



Figure 3.

Searching for a phrase

An alternative to a keyword search is to search for a specific phrase, which means the search engine will only return results that have specific keywords in the exact order. This is useful when you know the exact phrase you are looking for. However, given that it is so specific, this method can often return no result. To search on an exact phrase, place " " symbols around the phrase in the search bar.

In the example shown in figure 4 the difference between searching for the keywords 'mustering of feral goats' on Google Australia is compared with searching for the exact phrase "mustering of feral goats". As you will see the exact phrase search yields a smaller number of results.



Figure 4.



Figure 5.

You should also note that although the industry is now referring to ‘feral’ goats as ‘rangeland’ goats, it is a good idea to consider any term or key word which may assist your search.

Including or excluding words

There may be instances where you want to include or exclude particular words. Examples of this are where a word has multiple meanings or a search needs to be refined.

Using the positive ‘+’ and negative ‘-’ symbols before keywords, can include or exclude terms.

- **Positive searches**

For example, searching on the word ‘yards’ provides 702,000 results with information on ‘car wrecking yards’, ‘cattleyards’, ‘backyards’ etc.

However searching for ‘yards +goats’ will only return results where both the word ‘yards’ and ‘goats’ appear on the page – some 34,000 results. By including and excluding other words you can further refine this search as you will see below.

- **Negative searches**

On the flip side of this, using the ‘-’ sign will avoid particular words when searching. In the example above where we have searched for ‘yards’, this can be further refined by searching for yards but excluding the word ‘car’. This brings the total results from 702,000 to 429,000 – still a daunting number!

You can build on the positive and negative searches and search for an entire string, for example: searching for ‘yards -car -horse -sheep +goats’ provides 804 results, with no mention of car, horse or sheep, only yards and goats as outlined in figure 6.



Figure 6.

Advanced search

Most search engines include an “Advanced Search” option, which not only helps you search as outlined above without having to remember whether to include all of those “ ” and +/- symbols, but also offers many more options such as language preferences, date ranges, file formats etc.

In addition to this, many search engines include ‘How To’ sections that offer search tutorials and answers to frequently asked questions.

Understanding search results

Searching is typically the easy part, understanding the actual results can be more difficult, especially with the increase in paid or sponsored search listings. Working out what is a legitimate search result and what is a paid search result is not always easy.

Often you will see a search result that looks similar to the picture in figure 7. There are four components to this search page:

- 1) the search bar;
- 2) paid search results (or sponsored links);
- 3) search results; and
- 4) search navigation.

The screenshot shows a Google search results page for the query 'goats'. The page is annotated with four numbered boxes:

- 1**: Points to the search bar at the top left, which contains the text 'goats' and a search button. A callout box next to it says: "The Search bar is used to refine the search and shows the total number of results".
- 2**: Points to the 'Sponsored Links' section on the right side of the page. A callout box next to it says: "Paid search links are essentially a form of advertising – they typically appear at the top of the page in blue tint and at the righthand side of the page. The more specific your search, the fewer number of paid search links show."
- 3**: Points to the organic search results on the left side of the page. A callout box next to it says: "These are the acutal indexed seach results. The blue underlined text is the name of the page and is a link to the actual page. The text provides an excerpt from the result page with your search terms in bold."
- 4**: Points to the search navigation bar at the bottom of the page, which includes the Google logo and a 'Next' button. A callout box next to it says: "The navigation allows you to review as many pages of results as required."

Figure 7.

Tips on searching:

- Use more than one keyword – the more words, the more specific the search.
- Use Australian-specific searches for fewer, localised results.
- Make use of advanced features such as exact phrase searching (“ ”) or negative/positive searches (+include, -exclude).

Top five search sites:⁵

Google	www.google.com.au (Australian-specific)
Yahoo!	www.yahoo.com
MSN	www.search.msn.com
AOL	www.search.aol.com
Ask Jeeves	www.ask.com

⁵ Nielsen/NetRatings 2004

Case study

GOAT FARMING FOR PROFIT AND PLEASURE – AN INTENSIVE DAIRY ENTERPRISE

NAME:	Harold Hopper
PROPERTY NAME:	Ellendean
PROPERTY LOCATION:	Maleny, Queensland
PROPERTY SIZE:	60ha – dairy, 600ha – cropping
NUMBER OF GOATS:	160
MAIN GOAT ENTERPRISE:	Dairy – pasteurised milk, yoghurt, cheese and soap
TARGET MARKET:	Domestic retail trade. Pasteurising milk and yoghurt-making is done on farm. Some milk is also sent to a processor for cheese and soap production
SECOND GOAT ENTERPRISE:	Meat and Livestock sales
TARGET MARKET:	Culls and surplus stock are sold for meat. Each year a number of young does are sold as breeding stock to export buyers
OTHER FARM ENTERPRISES:	Dairy cattle. Grain growing

Harold retired from dairying (cattle), but that didn't last. "I couldn't hack retirement," says Harold. So he started milking again, but this time it was goats.

What has become a very profitable enterprise began with a small number of dairy goats, producing milk to supply consumers who could not tolerate cows' milk. Over time, demand for the product has grown, and so has Harold's herd.

When asked about the attributes of goats that make them a pleasant and rewarding animal to farm, Harold listed temperament, productivity and grazing behaviour.

Harold explains that goats have a very pleasing temperament. He likens them to dogs, "Give them some attention and you've got a friend for life. They are always pleased to see me and come for a pat."

In terms of production, dairy goats are prolific milkers. They enter the milking herd at 12-15 months old and a single lactation can extend beyond twelve months. A doe can produce the equivalent of her own body weight in milk every 10 days.

He has also observed a positive impact on his paddocks, with improved pasture growth in areas grazed by goats. Well-managed goats will graze a variety of species, without overgrazing individual plants. He points out that they can be used to good effect in weed-control programs, reducing weed bulk and returning nutrients to the soil in the form of manure.



Case study

DEVELOPING A RUN-DOWN PROPERTY

NAME:	Heather Osborn
TRADING NAME:	Winfield Angoras and Boers
PROPERTY NAME:	Merriman's Creek Farm
PROPERTY LOCATION:	Giffard, Victoria
PROPERTY SIZE:	210ha
NUMBER OF GOATS:	1,100 – 1,200
MAIN GOAT ENTERPRISE:	Angoras: Fibre, livestock sales and meat
TARGET MARKET:	Fibre – Mohair sold via the Australian Mohair Marketing Organisation for export Livestock sales – Breeding stock are sold to other breeders; wethers to graziers/mohair growers Meat – Cast for age goats are sold to abattoirs for the export carcase trade. Prime-condition wethers (up to two-tooth) are sold for the domestic meat trade
SECOND GOAT ENTERPRISE:	Boers: Livestock sales and meat
TARGET MARKET:	Livestock sales – Stud breeding animals are sold in both domestic and export markets; commercial breeding stock are sold to domestic goatmeat enterprises; wethers are often sold for use in weed-control strategies Meat – Prime kid meat trade
OTHER FARM ENTERPRISES:	Opportunistic agistment of horses and/or cattle

Heather purchased her current property in 2001. Previously it had been used for ostrich farming, but was in a very run-down state with poor infrastructure, vermin and overgrazed pastures. “Weeds were rampant. The creek was inaccessible in many places due to impenetrable blackberries. The flats were heavily infested with thistles, tussocks and numerous other weeds, and bracken dominated the top country.”

Prior to purchasing the land at Giffard, Heather had been running goats on smaller properties, and was looking for an opportunity to consolidate her enterprises on a larger property.

The key features that attracted her to the property were a balance of slopes and flats, productive soils, excellent natural shelter and shade and good water. As Heather says, these are “all things that you just can't build! The rest could be fixed.”

In terms of developing the property the highest priority was fencing. The existing fences were run-down and definitely not goat-proof, but the materials were salvageable. The greatest barrier to improving the fencing was the lack of available labour.

During this phase, Heather agisted cattle to generate income. “Goats were progressively moved on to the property as paddocks were made secure.”

The next priority was to improve stock access and water supply. This involved repairs to dams, troughs and laneways. To enable safe and efficient handling of stock, a new set of stockyards was a must. New shedding and other sundries followed.

One of the critical tasks was to tackle the vermin problem. This issue was addressed, but Heather stresses that it is an important part of on-going property management.

The goats took care of the blackberry problem, and the bracken was treated with herbicide. Having addressed these issues, pasture improvement becomes the focus, with some areas of the property requiring work to improve pasture growth and species content.

Of her progress to date, Heather says: “There’s still a lot more to do but I’m starting to feel the benefits. Its not just financial, but more of overcoming the obstacles; a sense of feeling that you’re doing something worthwhile for the land and the goats (and hopefully the industry) and there’s nothing like a new drop of Boer kids darting about in the bush, or a mob of silky fleeced Angoras flowing over the brow of a hill, to keep you going.”

