





Choosing the best genes

Get the power to make positive changes this bull buying season with tools such as BULLCHECK and **Estimated Breeding Values**

BY TIM EMERY, DEPARTMENT **OF AGRICULTURE AND FISHERIES BEEF EXTENSION OFFICER**

F YOU are responsible for buying bulls for a business, your selections will have an influence on the genetic direction and profitability of the herd in question for more than a decade.

Relying on visual appeal can be an expensive gamble.

Luckily, there are a host of tools that can help you make more informed, objective decisions.

Bull checks

When purchasing a bull, you are ultimately buying a package of genes.

In order to pass on these genetics, the bull must first and foremost be fertile.

A veterinary bull breeding soundness evaluation (VBB-SE) or BULLCHECK uses a set of standards developed by the Australian Cattle Veterinarians to identify risk factors for a bull's future fertility.

Before purchasing a bull, you should ask the seedstock producer for a BULLCHECK report, including a morphology assessment, so you have a clear understanding of the level of risk associated with using the bull for a particular purpose.

It's also a good idea to ask seedstock producers about the selection pressure they apply to their herd, if bulls

are PI (persistenly infected)-tested free and their routine vaccination and biosecurity programs.

Breeding objectives

Clear, written breeding objectives will help you focus on where you want your business to head and what traits you need to consider and place emphasis on.

Determining the breeding objectives of prospective seedstock suppliers is also recommended.

Estimated breeding values

Estimated breeding values (EBVs), which provide an estimate of an animal's genetic merit for a particular trait, have been available for more than 30 years to help drive genetic improvement.

Research projects and demonstration sites conducted across various years, locations and breeds have clearly shown EBVs provide an accurate prediction of genetic merit, with the expected difference in the progeny and the actual difference closely aligning for various traits.

Calculating EBVs

Included in the calculation of EBVs are the animal's own performance, the performance of known relatives, the heritability of each trait, the relationship between the different traits and - in some breeds (five at present) - genomic (DNA) information.

EBVs can be expressed



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Department of Agriculture and Fisheries beef extension officer Tim Emery

as a positive, negative or zero value. It is important to remember a negative value doesn't always denote being undesirable.

This is certainly the case

for the fertility trait "days to calving", where a more negative figure is favourable.

You cannot currently compare EBVs across breeds (such as Santa Gertrudis

versus Droughtmaster).

But research projects are being undertaken to drive development of multi-breed EBVs (such as Repronomics, Southern Multibreed and the Northern BIN Steer Projects).

Using EBVs

Determine the most appropriate selection index for your breeding objectives and production system - giving consideration to individual EBVs where relevant - and use this to establish a shortlist of genetically desirable animals.

EBVs can be found on the BREEDPLAN or relevant breed society websites.

Here you can find comprehensive information about how the bull you are looking to buy stacks up across the varying traits, dam history and any genetic conditions of concern.

When using online sale catalogues, you can enter minimum and maximum EBVs to quickly identify animals that are genetically suited to your requirements.

Spend ample time appraising each shortlisted animal for temperament and structural soundness, excluding those that are unsuitable for your longterm breeding program.

When purchasing, implement measures to minimise risk to your new sire(s) and the overall business.

Be prepared

Tools such as BULL-CHECK and EBVs significantly minimise the guesswork and, in turn, the risk to your business.

They give you the power to make positive changes this coming bull buying season.

You can start preparing now by:

■ reviewing and revising your breeding objectives ■ doing your homework ■ identifying seedstock producers going the extra distance to provide objective information evaluating your current

and potential sires.

For assistance, contact Department of Agriculture and Fisheries beef extension officer Tim Emery on 0408 707 155.

You can also learn more by visiting futurebeef.com. au, genetics.mla.com.au or breedplan.une.edu.au or attend MLA's Breeding-EDGE workshop.

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Prepare for wet season

REPARING northern pastures and cattle for the wet season is a key tactic to boost productivity in beef busi-

As the end of the dry season approaches, northern beef producers will be trying to maintain as much ground cover as possible going into the 2022/2023 wet season.

As plants can only use water when it becomes available as soil moisture, maximising rainfall infiltration through ground cover is

Producers are advised to maintain ground cover of more than 50 per cent in the lead-up to the wet season.

Department of Primary Industries and Regional Development (DPIRD) Western Australia development officer Matthew Fletcher said now was an extremely good time to start planning for the upcoming wet season.

"At the start of the wet season, grasses produce green leaf from energy stored in roots," he said.

"If new shoots are continuously grazed and plants don't have an opportunity to replenish energy reserves, the reserves will run out and grasses die.

"This is an example of how desirable perennial grasses such as Mitchell grass (Astrebla species), ribbon grass (Chrysopogon fallax) and curly blue/bundle-bundle grass (Dichanthium fecundum) can be removed from a grazing system.

"Experience suggests once these plants are removed it is very difficult to get them back.

There are several things producers can do to get the best out of the wet season

opportunity.

"Aligning stock numbers with available feed is the number one thing to do," Mr Fletcher said.

"There is little benefit emptying paddock A into paddock B to achieve a wet season spell when paddock B is already stocked to capacity.

"The benefit gained from spelling one paddock comes at the expense of overgrazing the other.

"This leads to bare ground, erosion, reduced infiltration and reduced desirable grasses in the overgrazed paddock.'

Managing stock and having control over grazing is also essential in the lead up to the wet season, according to Mr Fletcher.

"Cattle preferentially graze the more productive, palatable pastures and if the opportunity presents, they will find their way back to these areas every time," he

"Keeping cattle out of preferentially-grazed areas over the wet season will enable palatable grasses to grow biomass (ground cover), set seed and replenish root reserves ready for grazing the next dry season.

"Fire is also a useful tool for encouraging stock onto underutilised areas."

Dr Kevin Bell is the technical innovations manager at Pardoo station in WA's Pilbara region.

He said there were several key management decisions Pardoo makes to prepare the cattle and land for the wet season, including spelling pastures and undertaking a controlled burning regime.

"Our usual program would aim to spell approx-



DPIRD WA development officer Matthew Fletcher, centre, says rotationally spelling pastures during the wet season is key to achieving good pasture growth.



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DPIRD development officer Matthew Fletcher

imately 30 per cent of our country in the wet season,"

"But this is dependent on the type of wet season we have. "We incorporate spelling

pastures with a controlled cool burn on an as-needed basis.

"Much of Pardoo is spinifex pasture, and so usually every four to five years we would anticipate burning designated areas.

"As spinifex pasture becomes of low value and difficult - or impossible - to graze the older it is, a cool burn removes accumulated dead and "stemmy" plant

material and restores fresh high-quality leaf.

'It also provides an opportunity for new plants to germinate."

Dr Bell said burning was achieved close to the wet season when humid conditions commenced and when weather conditions were favourable.

There are other useful things a cool fire can achieve on the northern rangelands.

"Burning also helps to remove some of the unwanted plants such as wattle and poverty bush," Dr Bell said.

"Burning this helps to open up more ground for spinifex pastures."

At Pardoo station, heifers are prioritised in management decisions and paddocks are stocked at an appropriate rate matched to feed availability.

"We try and place heifers into the paddocks spelled over the previous wet season," Dr Bell said.

"The fresh plant growth is of good quality and, if cattle numbers are conservative, the spinifex provides excellent nutrition.

"An appropriate stocking rate is required to meet a happy medium."

To enable spelling, cattle have to graze somewhere over the wet season in the northern rangelands.

So, producers should look for a paddock in good to fair condition (A-B condition).

Mr Fletcher said these paddocks would have the resilience to maintain ground cover with grasses able to tolerate grazing by the cattle.

"Once the wet season starts, cattle will generally spread out and minimise overgrazing," he said.

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Know your toxic Pimelea species

Get on top of problem plant

PRODUCERS should keep an eye out for Pimelea following cooler temperatures and winter rain across south and south-west Queensland.

There are three commonly found toxic Pimelea species that can cause significant economic losses to production if not managed effec-

These are Pimelea elongata, Pimelea simplex and Pimelea trichostachya.

Impacts on production start to occur when pastures are not readily available, or when Pimelea grows within pastures.

It is important to be on the front foot with management. Understanding the species on your property is a useful first step.

Cattle do not generally consume Pimelea when it is green, as the plant releases a strong odour.

When the plant dries off, this odour disappears.

Then flowers and seed heads, which contain large levels of the toxin, can easily be mistakenly consumed in fragments. pastures.

Pimelea can also be con-



There are three commonly found toxic Pimelea species that can cause significant economic losses to cattle production if not managed effectively.

containing fragments or susceptible. Identification Veterinary Medicines Au-

Be on the front foot by understanding your pastures sumed by cattle through and cattle. Introduced aniingestion of soil or water mals are found to be more Australian Pesticides and ing and removal of animals

seeds and inhalation of dried of Pimelea species and its impacts to cattle can allow for effective management options.

thority (APVMA) Minor use risk of significant consumppermit (#13549) for spraying small areas of Pimelea.

Other management op-There is currently an tions include strategic graz-

tion of Pimelea plants.

Pimelea poisoning, otherwise known as St George or Maree disease, can occur with excessive consumption.

It can happen at all stages of cattle growth.

Typical signs of poisoning in cattle are:

■ diarrhoea

- reduced appetite and depression
- rough coat/condition oedema (due to build-up of
- fluid) of the head, brisket and abdomen
- increased respiration rate and heart rate
- reluctance to move (during exertion sudden death can

All classes of animals can suffer, and it is more likely to occur in cattle that are new to the area - probably because they have no built-up rumen microflora to assist in detoxifying the poison in the plants and are uneducated about its toxicity.

When visual signs of Pimelea poisoning are observed, remove stock and get them onto quality, non-Pimelea infested pastures.

This can assist in recovery from paddocks when there is if impacts have not gone too far. Do not push affected animals, but try to move them slowly.

> More information about Pimelea can be found at www.futurebeef.com.au.

Helping build resilience for beef producers

WHETHER you are managing drought or have just come out of drought conditions, planning and adapting to climate risks are a vital part of business planning.

The Farm Business Resil- CANEGROWERS. ience Program (FBRP) supidentifying goals, business and climate risks and strate-

gies to manage these risks.

The FBRP is delivered through the Department of Agriculture and Fisheries (DAF), Queensland Farmers' Federation, Growcom and

Within DAF, the Grazingports business planning by Futures Livestock Business Resilience Project has partnered with rural financial

counselling services and natural resource management groups to provide a comprehensive whole-of-business extension program which is flexible to producers' individual needs.

Along with workshops and other training opportunities, one-on-one assistance is on offer to help primary

producers complete a Farm Business Resilience Checklist and develop a Farm Business Resilience Plan.

DAF senior principal beef extension officer Joe Rolfe said more than 950 producers had received one-on-one support from the Grazing-Futures Livestock Business Resilience Project this year.

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Country Life

"Along with one-on-one assistance, we're running workshops and other training opportunities to help Business Resilience Plan," he

"There may be actions and strategies identified in your business plan that could improve your business

operation, such as building new water infrastructure and fodder storages.

"While not all actions producers develop a Farm identified may require a direct financial commitment, some of these actions may be considered for funding."

> For more information visit daf.qld.gov.au/drought phone 13 25 23.

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A boost to prevention and preparedness

Industry unites on diseases

THE Queensland Government's recent announcement of \$22 million over five years, followed by an ongoing annual investment of \$2.4 million, will boost prevention and preparedness for biosecurity emergencies to ensure the protection of Queensland livestock and supply chain industries.

Activities will further strengthen prevention and preparedness efforts in response to the threat of emergency animal diseases including Lumpy Skin Disease (LSD), Foot and Mouth Disease (FMD) and African Swine Fever (ASF).

Queensland and Australia remain free from Foot and Mouth Disease, Lumpy Skin Disease and African Swine Fever.

An incursion would have the potential to cause significant and far-reaching impacts to Australia's livestock industries, including considerable economic losses and restrictions.

Queensland's Chief Vet-Crook said the Department of Agriculture and Fisheries was working with other gov-



Lumpy Skin Disease causes swelling of lymph nodes across the animal's body. Picture by AW Coetzer, E Tupparainen, S Babiuk and DB Wallace.

key livestock industry and lance, early reporting and industry networks and are ■LOOK - for and know the erinary Officer Dr Allison to ensure emergency animal disease preparations were timely, informed and united.

"We know the key to ernment departments and Australia's defence is vigi-

supply chain stakeholders ensuring every livestock supply chain enterprise has adequate biosecurity measures in place," Dr Crook said.

> "We continue to collaborate with our livestock

encouraging everyone along the supply chain to look, report and protect."

Livestock owners know their animals best. Key actions you can take now are:

signs of emergency animal disease such as Foot and Mouth Disease, Lumpy Skin Disease or African Swine Fever ■ REPORT - suspect cases of

Lumpy Skin Disease or African Swine Fever to your veterinarian and the **Emergency Animal Disease** Watch Hotline on 1800 675 888 immediately

Foot and Mouth Disease,

- PROTECT your livestock and livelihood
- Have a biosecurity management plan that it is being followed by everyone who visits your property. To create a farm biosecurity management plan or for more information visit farmbiosecurity.com.au
- Ensure your Biosecurity Entity registration is up to date. Registration helps to quickly locate animals and contact livestock owners in the event of an animal disease emergency in Queensland. Visit qld.gov. au/BiosecurityRegistration

Keep up to date with the latest developments about emergency animal diseases at daf.qld.gov.au.

You can also check out our emergency animal disease preparedness eHub.

This brings together resources at daf.engagementhub.com.au/animal-disease-preparedness.

Advantages of segregating the breeder herd

into calving groups based on predicted calving dates can be a valuable management tool for beef enterprises.

foetal aging at weaning enables the drafting of breeders into early, mid and late calving groups - with the number and size of calving groups

SEGREGATING breeders based on the pregnancy status of the cows, paddocks available and seasonal conditions.

Breeder segregation is For control-mated herds, particularly valuable in yearround mated herds.

> It enables cows calving out of season to be better managed, reduces mustering costs and lowers supplemen

tation costs. This practice enables more targeted management of breeders.

■ Breeder groups can be paddocked to better match feed quality to nutritional requirements. Earlier calving cows are likely to have a longer period as wet cows on lower quality dry season pastures so can

be given paddocks with the best pasture.

■ If animals are paddocked on the basis of calving period and consequently nutritional requirements, supplementation can be better targeted. Cows that will not calve until the end of the dry season may not require any dry season

supplementation, whereas those calving early are likely to require dry season supplementation.

- Calving females can be monitored more efficiently for calving difficulties and health issues.
- Branding and weaning practices can be timed to avoid having to brand big

calves and younger calves being stressed during mustering and handling.

For more information visit futurebeef.com.au and search for 'breeders'.

Or you can contact Jo Campbell, Department of Agriculture and Fisheries technical officer, 0459 895 881.

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Spring rains boost worm risk

QUEENSLAND sheep and wool producers are being warned to prepare for increased worm burdens this summer.

The current Bureau of Meteorology (BOM) outlook is forecasting above-median rainfall for most of Australia between August and October, with minimum temperatures likely to be above median.

Department of Agriculture and Fisheries extension officer Jed Sommerfield said forecast rainfall in spring meant producers must be vigilant with monitoring and increase the frequency of worm checks in their flock.

"Prolonged favourable conditions will create an opportune environment for increased survival and multiplication of worms in sheep, with high moisture levels in the soil and substantial vegetation cover on paddocks limiting the chance of these parasites being exposed summer," he said.

"There are several things producers should keep a summer period."



It is vital for producers to understand the impact of worms on their flock's productivity and ensure they have a worm management plan.

Common visual indicators to the usually lethal sun in include: scours and subsequent weight loss; swelling under the jaw - which is commonly referred to as "bottle look out for this spring and jaw"; general lethargy; or - in more severe cases - collapse this would give you a clear

when being mustered and

But the most accurate indicator are the results from a faecal worm egg count.

Mr Sommerfield said

indication of the number of worm eggs and the worm burden in your sheep.

"A worm egg count (WEC) test will alert producers to the scale of worm burden and give them the information recent conversation with a ported by AgForce.

they need to make informed management decisions, particularly around drenching," he said.

Mr Sommerfield said this was highlighted during a Wool Innovation and is sup-

Queensland sheep producer, who said: "I was desperate. After finding a weaner with symptoms of worms, my first reaction was to drench. I did a worm egg count, which indicated a low worm burden, and I saved myself the cost and effort of mustering and drenching."

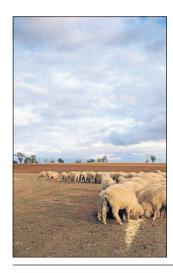
Mr Sommerfield said that while drenching was the most commonly used management practice for sheep with high WEC, it was important producers continually evaluated its effectiveness and checked for drench resistance in their flock.

"WormBoss has a quick and easy test to help check for drench resistance DrenchCheck - where, following results of an initial WEC, producers drench their mob and send in another WEC sample for testing 14 days later," he said.

'The results will compare the effects of drenching on the worm egg count."

Leading Sheep is a partnership between Queensland's Department of Agriculture and Fisheries and Australian

TOP FLOCK TIPS TO GET THROUGH THIS WORM SEASON WITH FEW DISRUPTIONS



THE sheep and wool industry incurs significant productivity losses from worms each year, but there are several tests and simple management methods producers can put in their toolbox to help mitigate the risk of an infestation.

Department of Agriculture and Fisheries extension officer Jed Sommerfield said if you're neglecting regular worm egg count (WEC) tests, it's easy to miss the signs of

infestation until your sheep become ill.

"So, be sure to test regularly and always be on the lookout for visual signs of infection in your flock," he said.

"If it's a method in your management plan, it's important to be vigilant in ensuring the correct drench dosage is administered to your sheep.

"This is an easy mistake to make. So, ensure you use a correctly-calibrated

gun, alternate the type of drench you use and assess for drench resistance to ensure effectiveness."

Mr Sommerfield said it was key to keep any new sheep brought onto your property away from your existing flock and give them a 'quarantine drench', keeping them off your pastures for six to eight hours.

"The most high-risk time for worm contamination in sheep is in late winter and late summer, so be watch-

ful. If your pasture becomes contaminated, rotate your sheep into a new paddock after drenching or the cycle of infection will continue," he said.

The WormBoss website - at www.paraboss.com. au/wormboss - has a range of resources, including how to collect and send WEC samples and a list of WEC providers. There is an online booklet outlining regionally-specific worm control programs.

SIGNS OF WORMS

What to look out for

- Bottle jaw
- Accumulation of fluid in the abdomen
- Humped back from abdominal pain
- Coughing and
- pneumonia
- Anaemia
- Lethargy and collapse
- Weight loss from decreased appetite
- Scouring
- Nodular lesions

