

# Autumn Calving Index – £ACI

An economic breeding index for autumn block-calving systems



## What is the £ACI?

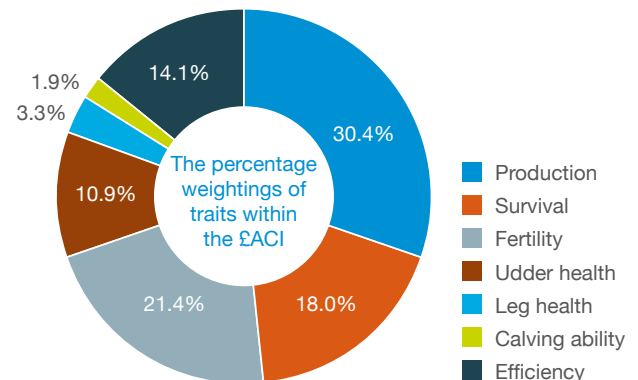
The Autumn Calving Index (£ACI) is an across-breed genetic ranking index developed in consultation with industry partners specifically for autumn block-calving herds and expressed as a financial value.

The £ACI:

- Promotes milk quality with more weight on volume than the £SCI
- Places strong emphasis on fertility
- Selects for reduced maintenance cost
- Improves udder and leg health
- Places strong emphasis on longevity
- Promotes easier calving
- Improves functional type – Feet & Legs and Udders

## £ACI explained

- The £ACI value represents the additional profit a high £ACI bull is expected to return from each of its milking daughters over her lifetime compared with an average bull of £0 ACI. These are specifically calculated for UK markets and farming conditions
- The £ACI will ensure important genetic areas are maintained or improved, eg fertility (calving interval and non-return rate), Somatic Cell Count (SCC) and milk solids
- Increased emphasis on the maintenance cost by reducing cow liveweight will give the daughters of high £ACI bulls improved efficiency suited to an autumn calving system



## When to use the £ACI?

- The £ACI has been created specifically for autumn block-calving systems, which have a higher requirement for winter feeding. For spring calving herds, we recommend using the Spring Calving Index (£SCI)
- The £ACI is an across-breed ranking. Bulls of all breeds will be shown on the same base so their £ACI values are directly comparable
- Use the £ACI to select the best bulls to breed profitable cows for an autumn block-calving system. £ACI should be used as the initial screening tool in bull selection; then look within this group for the traits that most need improving in your herd

## £ACI – Frequently asked questions

### 1. Why has AHDB Dairy launched the £ACI?

The £ACI has been introduced to make bull selection for farmers operating tight autumn block-calving systems easier and more profitable. It also complements the Optimal Dairy Systems strategy. Through this, we are asking farmers to hold up a mirror to themselves and decide whether the system they are currently operating is the best one for them. Genetics is one of the Key Performance Indicators and it was felt that the new £PLI no longer addressed the requirements of autumn block calving. The £ACI has been developed to breed a cow that produces lower volumes of milk than the £PLI but with a higher quality (similar to the £SCI) and places a particular emphasis on fertility and calving ease to achieve a tight calving block, similar to the £SCI. The index also favours bulls that will produce a smaller cow with lower maintenance requirements. As with the £PLI and £SCI, lower SCC and sound legs, feet and udders are all important.

### 2. Functional type is important in these systems. Why isn't there more emphasis on this in £ACI?

Functional type forms part of £ACI, just as it does with £PLI and £SCI. Mammary health and conformation, together with Feet and Legs, are included, but it is important to note that these traits are also strongly correlated with some of the other components of the index, including lifespan, so they are more important than would seem at first glance.

### 3. Why has £ACI been developed as an across-breed index?

£ACI is being presented by AHDB Dairy as an across-breed index because this is considered to be the most useful format for autumn block-calving herds. A number of these herds use more than one breed either as pure or cross-bred animals, so it's important for them to be able to compare the genetic potential of bulls from different breeds against one another.

### 4. Can the £PLI, £ACI and £SCI be compared?

No. The indexes have been designed for different farming situations so should not be compared.

### 5. Is the £ACI right for my herd?

The £ACI has been developed for herds targeting around 7,500 litres of milk, calving within a 12-week block and supplementing peak yield feed with concentrates. It is only suitable for use in these circumstances and not recommended for spring block-calving herds, which place a heavy reliance on summer grazing. Spring block-calving herds should use the £SCI for their breeding decisions.

UK genetic evaluations are undertaken and published by AHDB Dairy three times a year: April, August and December.

## Further information

For more information on AHDB Dairy breeding and genetics, visit [dairy.ahdb.org.uk/breeding](http://dairy.ahdb.org.uk/breeding) or email [breeding.evaluations@ahdb.org.uk](mailto:breeding.evaluations@ahdb.org.uk)

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