

equilume circadian lighting

# SHINE A LIGHT
## ON A HEALTHY START

Supporting the **pregnant mare** and **developing foal** with research-backed blue light therapy

Applying the Equilume® Light Mask to pregnant mares **90 days prior** to foaling due date benefits gestation, fertility and foal development.

SUPPORTING MARE AND FOAL
## physiology through late gestation

The horse's reproductive physiology is naturally aligned with the long days of spring and summer. When mares are bred to foal early in the year, the final trimester of pregnancy occurs during the short days of winter, which can contribute to prolonged gestation, reduced foal maturity and delayed post-foaling reproductive activity.

Equilume® Light Masks deliver targeted blue light to extend perceived daylength during the final 90–100 days of pregnancy. This suppresses melatonin and provides a long-day endocrine signal, influencing reproductive function and the GH/IGF-1 axis involved in fetal growth and maturation.

WHAT THE
## research supports:

**Optimized Gestation***
- Approximately 14 days shorter on average

**Improved Foal Maturity***
- Healthier at birth
- Faster to stand
- More mature neonatal immune profile

**Improved Post-Foaling Fertility***
- Earlier ovulation
- Greater dominant follicle development
- Helps prevent lactational anestrus

**Reported Lactational Benefits†**
- Improved colostrum quality
- Stronger early milk production

** Supported by published research studies*
*† Based on field reports from veterinarians and breeding managers*

HOW TO USE THE
## Equilume® Light Mask

- Mask is activated once at 4pm; worn 24/7
- Extends daylength by providing blue light for 7 hours (4pm–11pm) daily
- Comfortable, adjustable and suitable for routine use

WHEN TO USE FOR THE
## Pregnant Mare

For best results, apply mask **90 days** prior to foaling due date, but no earlier than November 15th.

LEARN MORE



### Belfield Light Mask
- Single Season use
- 5-month lifespan

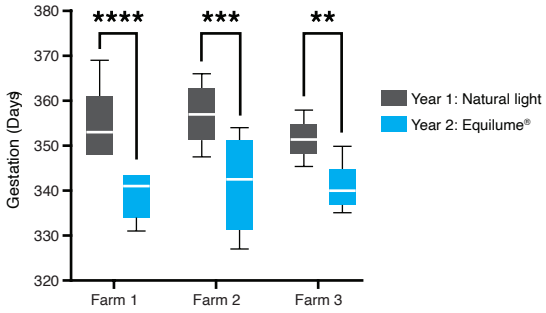
### Curragh Light Mask
- Multi Season use with replaceable light cup
- 5-month lifespan
- Headpiece can be reused for another season with new light cup

RESEARCH
# Results

## Optimized gestation

Across three commercial Thoroughbred breeding farms (n=22 mares), Equilume® Light Mask use during the final trimester **reduced mean gestation length by 13.5 days** compared with the previous year under natural photoperiod.

### Gestation length (days)

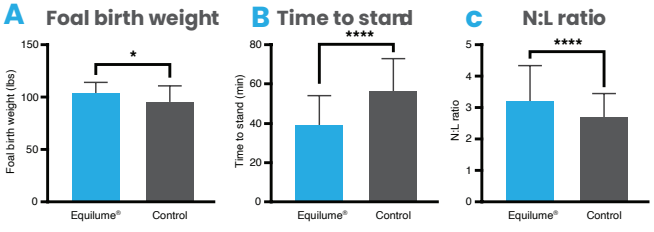



*Source: Sternberg Allen et al., 2020*

| Farm | Natural light | Equilume¨Æ | days |
|---|---|---|---|
| Farm 1 (n=9) | 354.8 ± 7.6 | 339.4 ± 5.1 | -15.3 |
| Farm 2 (n=5) | 357.0 ± 7.3 | 342.2 ± 10.7 | -14.8 |
| Farm 3 (n=8) | 351.5 ± 4.0 | 341.0 ± 5.0 | -10.5 |
| **Overall (n=22)** | **354.4 ± 1.6** | **340.9 ± 0.8** | **-13.5** |

*Mean ± SEM*

## Improved foal maturity




**A:** Equilume® Foals were 8.0 lb heavier at birth on average ($P < 0.05$). *Source: Kürti et al., 2021.*

**B:** Foals from mares wearing Equilume® Light Masks stood approximately 16 minutes sooner on average ($P < 0.05$). *Source: Kürti et al., 2022.*

**C:** Foals from mares wearing Equilume® Light Masks had a higher neonatal neutrophil/lymphocyte ratio (3.2 vs 2.7; $P < 0.05$), consistent with greater fetal maturity. *Source: Kürti et al., 2021.*

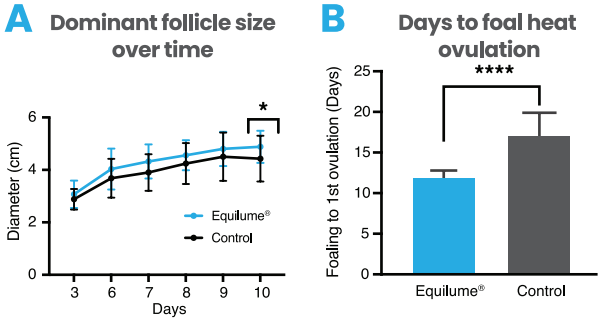
We have been using the Equilume® light Masks for the past 10 years with great success. Our pregnant mares that wear the masks foal on time with excellent post-foaling fertility, especially mares that had previously struggled to cycle with foal at foot. We highly recommend Equilume to farms that want to reduce costs and improve breeding efficiency.



**MIKE FLEMING** | DHIMA THOROUGHBREDS, AUS

## Improved post-foaling fertility

Mares wearing Equilume® Light Masks **ovulated 5.2 days sooner after foaling** and had a significantly larger dominant follicle on day 10 postpartum.




**A:** Equilume®-treated mares reached first postpartum ovulation 5.2 days sooner on average ($P < 0.01$). *Source: Kürti et al., 2022; Hägg et al., 2021.*

**B:** Mares wearing Equilume® Light Masks had a significantly larger dominant follicle on day 10 postpartum ($P < 0.05$).
*Source: Kürti et al., 2022; Hägg et al., 2021.*

Equilume® Light Masks have been a valuable tool in our pregnant mare program, helping encourage early-foaling mares to resume cyclicity post-foaling.



**RAFAEL MARTINEZ** | PHD, TARLETON STATE UNIVERSITY