CHECKLIST

EVALUATING HEAT STRESS IN YOUR BARN AND HERD

Wind speed

- [ ] Wind speed is a minimum of 2m/s (4.5mph) in each stall and at eat headlock
- [ ] Area with higher animal stocking density (i.e. holding areas) should be even higher - approx. 4m/s (9mph)

Calculate THI

- [ ] Use an anemometer to capture the temperature and humdity of various areas and use a Temperature Humidity Index (THI) to determine the severity of heat stress
- [ ] Breaths per minute as an indication of internal temperature (Brouck et al., 2002)
    - BPM 60 -> threshold for lactating cow heat stress (typically 68 THI)
    - BPM 75 -> mid to moderate heat stress typically 72 THI)
    - BPM 85 -> moderate to severe heat stress (typically 80 THI)
    - BPM 120 - 140 -> life threatening (typically >90 THI)

Fan placements and speeds

- [ ] Ensure wind speed is about 2m/s (or 400ft/min) in all areas of the barn
- [ ] Fans are cleaned and maintained
- [ ] Fans are all facing in one direction to increase efficiency
- [ ] Fans are not working against the wind coming into the barn
- [ ] Fans are spaced at 24 to 30 feet intervals (University of Wisconsin)

Shade

- [ ] Are the cows hiding from the sun?
- [ ] Is there sufficient shaded area?
- [ ] Are the cows bunched under fans?
- [ ] Are a lot of cows standing in stalls?

Water

- [ ] Water bowls are CLEAN
- [ ] There is approx. 4”of water bowl spacing per cow
- [ ] At least two water bowls per group; there is increased competition for water during heat stress (McDonald et al., 2020)
- [ ] Water consumption can increase by as much as 100L/cow/day during heat stress
- [ ] Provide at least one watering device for every 15 to 20 cows or a minimum of 2 feet of tank space per 20 cows

Sprinklers

- [ ] Soak the cow and allow the cooling water to evaporate
- [ ] If soaking cows in holding area, it is important to soak again in return alleys
- [ ] Large water drops so it does not increase humidity
- [ ] Sprinklers do not spray the bedding
- [ ] Spacing sprinklers at headlocks for efficiency and maximum coverage

For more information contact your Dairy Nutrition Advisor or local Shur-Gain® dealer.