

The wheels are turning

Teams weigh strategies, get technical when it comes to professional stage races

By Todd Mordhorst Journal Sports Editor



Todd Mordhorst/Auburn Journal
Auburn's Julie Young was one of the top cyclists in the world in the mid-1990s when she won the prestigious Tour de L'Aude in France.

If you know how to find the slipstream, you have a stellar VO2 max and can increase your cadence to keep up with the peloton, you just might be capable of riding in the Amgen Tour of California.

But odds are, you'll have to settle for studying up on cycling lingo and watching the race like millions of others across the state this week.

Julie Young knows the ins and outs of team stage racing. The Auburn resident was one of the top riders in the world at the peak of her career in the 1990s. She raced for the U.S. National team, Team Kahlua, the Saturn Cycling Team and the Timex Cycling Team in her 12-year career.

Young won the Tour de L'Aude – the women's version of the Tour de France – among many other titles in her impressive career. She said there have been some minor changes in the sport since she retired in 2002, but the basic approach to a stage race hasn't changed for decades.

"The top teams come in with a protected rider and the other riders will work for him so that he can have decisive stages," Young said. "There are a lot of factors that go into selecting the protected rider, but it's so professional and controlled at that level of racing that everyone knows their role on the team."

The name of the game in cycling is conserving energy. Teams do this by drafting, chasing down breakaway riders and avoiding dangerous situations.



"I think one of the biggest things is, you always want to be at the front of the pack," Young said. "That's one thing Lance (Armstrong) has been so good at throughout his career. If you're in the back, crashes happen and you can't always tell what's happening in the front. It's so important to stay attentive and stay out of trouble."

Depending on the wind's strength and direction, a rider that is drafting behind another can save around 20 percent of his energy. It's a huge factor over a 104-mile stage and a weeklong route that covers over 800 miles in all.

The bicycles featured today are nearly all made of carbon, weighing in at between 14 and 16 pounds. A perfect bike fit allows the riders to keep a little flexion in their knees while getting the most out of each pedal stroke. Their shoes clip onto their pedals, allowing them to produce greater power with each revolution.

Positioning on the bike is key to maximize efficiency. Young said the riders' knees should be over the spindle on the bike.

"Stage racers want to utilize their gluts and their hamstrings," Young said.

The hands are positioned on top of the handlebars with access to the brakes except for on the descents, when the riders will use the lower bars for better control and a better aerodynamic position.

What separates the world-class cyclists in the Tour of California from thousands of skilled amateur riders all over the world? Most of the top pros are simply gifted with bodies that are made for cycling long distances in a short amount of time.

"The main thing that separates the pros from the amateurs is just the physiological side," said Luke Ramseth, an accomplished amateur rider from Colfax High who recently finished up his cycling season at Humboldt State. "If you don't have the VO2 max you can't keep up. You've got to have a certain set of gifts.

"There's a noticeable efficiency when you see them ride. There's no energy wasted. They're very smooth on the bike."

The VO2 max refers to the highest rate of oxygen consumption attainable during exhaustive exercise. In layman's terms, those with a high VO2 max and provide more oxygen for their lungs and, in turn, their muscles than the average person. Top-level cyclists generally produce VO2 max calculations on par with just about any other athletes in the world and almost twice the number of the average person.

Fans today will also notice the peloton is not filled with muscle-bound hulks. Power to weight ratio is a key factor in cycling success. Many of the riders are 150 pounds or less. Three-time defending champion Levi Leipheimer is 5-7, 140 pounds. Auburn's Chris Jones has an ideal build of 5-9, 145 pounds.

"It's definitely genetics," said Dan Tebbs, an accomplished category 4 cyclist and the owner of Victory Velo in Auburn. "The physique, the build, the power to weight ratio is a big part of it. Chris is lightweight and he has a good amount of effort. He can ride for a long time."

Fans in Auburn won't have long to view the riders today. They'll be buzzing by at around 30 mph on the flat sections and could reach speeds of more than 50 mph on descents like the one before the Foresthill Bridge.