Renowned sheep geneticist Dr. Dave Notter once said the backbone of America’s future commercial flock will be a ewe with parasite resistance, low maintenance costs, high fertility/prolificacy and good mothering ability. The National Sheep Improvement Program makes it possible to identify those animals.

“The data identifies the superior animals,” says Lynn Fahrmeier, of Wellington, Missouri. “It keeps us from being victims of our own arrogance, thinking we can visually assess the best sheep.” Fahrmeier knows the benefits first hand. He grew up on an average Midwest farm raising corn, soybeans, hogs and cattle, where he learned about breeding and genetics and EPDs (expected progeny differences). He added to that knowledge with advanced genetic theory courses at the University of Missouri.

Then, 17 years ago, he discovered sheep. Fahrmeier and his wife, Donna, took interest in the Katahdin breed, known as “hair” sheep for the absence of shearable wool. They started with 12 ewe lambs. Their herd now numbers 200 ewes and customers stretch from Kansas to Virginia. Years in the swine business naturally led him to NSIP’s Estimated Breeding Values (EBVs). “That’s the only way the seedstock producer truly knows he’s using the best genetics.”

NSIP data helps measure maternal traits, and ensures the growth Fahrmeier sees in his sheep is muscle, not fat. It also helps him tailor his product to meet his customers’ needs.

“I have commercial producers whose customers want a 120 pound lamb for the suburban housewife, or a specific loin eye size desirable for sale at farmers markets,” says Fahrmeier. “NSIP helps me breed animals to those specifications.”

Emily Diamond of Diamond Farm near LaGrange, Kentucky, is one of those customers. She uses Fahrmeier’s Katahdin rams to produce grass fed lamb for a niche market. “They’re exactly what I need,” says Diamond who pours over EBVs to choose animals right for her operation. “I’m looking specifically at weaning weight, 120 day weight, and loin eye size, as well as parasite egg counts.” She expects her sheep to be “out the door” in six months, and that means rapid growth and meat, not bone mass or fat, is essential. “With the EBVs, I know exactly what I’m getting and what to expect.”

Lee Wright, Superintendent/Senior Research Associate at Virginia Tech Southwest Agricultural Research and Extension Center, says the use of data that is attractive to both the purebred breeder and the commercial producer. At a recent Virginia Performance Tested Ram Lamb Sale in Glade Spring, Virginia, more than half of the rams sold had EBVs. The top dollar ram went for $2,850. Overall, animals on the block averaged $1,048 per head, with the NSIP rams bringing around $200 more per head than those without the performance/genetic data.

**Breeding for a New Age**

Katahdin sheep are a natural fit for warm climate pastures with their decreased susceptibility to gastrointestinal parasites like the barber pole worm. NSIP offers an Estimated Breeding Value for parasite resistance.

Photo courtesy of James Morgan, Katahdin Hair Sheep International.
Using a process similar to that used by nearly all other livestock species to aid in genetic selection, NSIP develops Estimated Breeding Values (EBVs) which sheep producers can use to select animals for important traits, including productivity, quality and flock health.

National Sheep Improvement Program

www.nsip.org

“Just knowing 50-plus buyers came primarily because the sheep sold with EBV data was exciting,” says Wright, who adds he has had several inquiries since from producers wanting to adopt NSIP. “They were looking for good rams, with good numbers – especially parasite resistance data.”

That is a particular issue for the Katahdin breed, which possesses a heritable resistance to the barber pole worm, a trait that is measurable with NSIP. The system offers an EBV for fecal egg count, tracking genetic progress in passing on the parasite resistance. “There are two main threats to sheep – predators and parasites,” says Wright. “Good fencing and guard dogs can help with predators, but parasites don’t respond to guard dogs. There’s only so much you can do.”

The barber pole worm is difficult to diagnosis and control, and a particular pest in warm, damp climates. Almost invisible, it causes anemia, weakening the animal and even resulting in death. Diagnosis is generally performed through a FAMACHA test, comparing the underside of the eyelid to a color card. Treatment can involve deworming as often as every three weeks, but even that has limited effectiveness, as the pest boasts resistance to most current pharmaceuticals.

“It’s an issue that requires a great deal of time and money,” says Fahrmeier. In addition, once a pasture has is contaminated by larvae, it must be left idle, or grazed by another species such as cattle, for at least four weeks.

The data works for Diamond, who doesn’t like to waste time and effort on bringing her herd in for regular deworming. “It’s a big deal to me. Kentucky is hot and humid, and my sheep live on fescue pasture. I can select breeding stock with a low fecal egg count EBV and keep problems to a minimum.”

“Just knowing 50-plus buyers came primarily because the sheep sold with EBV data was exciting,” says Wright, who adds he has had several inquiries since from producers wanting to adopt NSIP. “They were looking for good rams, with good numbers – especially parasite resistance data.”

“Just knowing 50-plus buyers came primarily because the sheep sold with EBV data was exciting,” says Wright, who adds he has had several inquiries since from producers wanting to adopt NSIP. “They were looking for good rams, with good numbers – especially parasite resistance data.”

That is a particular issue for the Katahdin breed, which possesses a heritable resistance to the barber pole worm, a trait that is measurable with NSIP. The system offers an EBV for fecal egg count, tracking genetic progress in passing on the parasite resistance. “There are two main threats to sheep – predators and parasites,” says Wright. “Good fencing and guard dogs can help with predators, but parasites don’t respond to guard dogs. There’s only so much you can do.”

The barber pole worm is difficult to diagnosis and control, and a particular pest in warm, damp climates. Almost invisible, it causes anemia, weakening the animal and even resulting in death. Diagnosis is generally performed though a FAMACHA test, comparing the underside of the eyelid to a color card. Treatment can involve deworming as often as every three weeks, but even that has limited effectiveness, as the pest boasts resistance to most current pharmaceuticals.

“It’s an issue that requires a great deal of time and money,” says Fahrmeier. In addition, once a pasture has is contaminated by larvae, it must be left idle, or grazed by another species such as cattle, for at least four weeks.

The data works for Diamond, who doesn’t like to waste time and effort on bringing her herd in for regular deworming. “It’s a big deal to me. Kentucky is hot and humid, and my sheep live on fescue pasture. I can select breeding stock with a low fecal egg count EBV and keep problems to a minimum.”

“Just knowing 50-plus buyers came primarily because the sheep sold with EBV data was exciting,” says Wright, who adds he has had several inquiries since from producers wanting to adopt NSIP. “They were looking for good rams, with good numbers – especially parasite resistance data.”

That is a particular issue for the Katahdin breed, which possesses a heritable resistance to the barber pole worm, a trait that is measurable with NSIP. The system offers an EBV for fecal egg count, tracking genetic progress in passing on the parasite resistance. “There are two main threats to sheep – predators and parasites,” says Wright. “Good fencing and guard dogs can help with predators, but parasites don’t respond to guard dogs. There’s only so much you can do.”

The barber pole worm is difficult to diagnosis and control, and a particular pest in warm, damp climates. Almost invisible, it causes anemia, weakening the animal and even resulting in death. Diagnosis is generally performed though a FAMACHA test, comparing the underside of the eyelid to a color card. Treatment can involve deworming as often as every three weeks, but even that has limited effectiveness, as the pest boasts resistance to most current pharmaceuticals.

“It’s an issue that requires a great deal of time and money,” says Fahrmeier. In addition, once a pasture has is contaminated by larvae, it must be left idle, or grazed by another species such as cattle, for at least four weeks.

The data works for Diamond, who doesn’t like to waste time and effort on bringing her herd in for regular deworming. “It’s a big deal to me. Kentucky is hot and humid, and my sheep live on fescue pasture. I can select breeding stock with a low fecal egg count EBV and keep problems to a minimum.”

“Just knowing 50-plus buyers came primarily because the sheep sold with EBV data was exciting,” says Wright, who adds he has had several inquiries since from producers wanting to adopt NSIP. “They were looking for good rams, with good numbers – especially parasite resistance data.”

That is a particular issue for the Katahdin breed, which possesses a heritable resistance to the barber pole worm, a trait that is measurable with NSIP. The system offers an EBV for fecal egg count, tracking genetic progress in passing on the parasite resistance. “There are two main threats to sheep – predators and parasites,” says Wright. “Good fencing and guard dogs can help with predators, but parasites don’t respond to guard dogs. There’s only so much you can do.”

The barber pole worm is difficult to diagnosis and control, and a particular pest in warm, damp climates. Almost invisible, it causes anemia, weakening the animal and even resulting in death. Diagnosis is generally performed though a FAMACHA test, comparing the underside of the eyelid to a color card. Treatment can involve deworming as often as every three weeks, but even that has limited effectiveness, as the pest boasts resistance to most current pharmaceuticals.

“It’s an issue that requires a great deal of time and money,” says Fahrmeier. In addition, once a pasture has is contaminated by larvae, it must be left idle, or grazed by another species such as cattle, for at least four weeks.

The data works for Diamond, who doesn’t like to waste time and effort on bringing her herd in for regular deworming. “It’s a big deal to me. Kentucky is hot and humid, and my sheep live on fescue pasture. I can select breeding stock with a low fecal egg count EBV and keep problems to a minimum.”

“Just knowing 50-plus buyers came primarily because the sheep sold with EBV data was exciting,” says Wright, who adds he has had several inquiries since from producers wanting to adopt NSIP. “They were looking for good rams, with good numbers – especially parasite resistance data.”

That is a particular issue for the Katahdin breed, which possesses a heritable resistance to the barber pole worm, a trait that is measurable with NSIP. The system offers an EBV for fecal egg count, tracking genetic progress in passing on the parasite resistance. “There are two main threats to sheep – predators and parasites,” says Wright. “Good fencing and guard dogs can help with predators, but parasites don’t respond to guard dogs. There’s only so much you can do.”

The barber pole worm is difficult to diagnosis and control, and a particular pest in warm, damp climates. Almost invisible, it causes anemia, weakening the animal and even resulting in death. Diagnosis is generally performed though a FAMACHA test, comparing the underside of the eyelid to a color card. Treatment can involve deworming as often as every three weeks, but even that has limited effectiveness, as the pest boasts resistance to most current pharmaceuticals.

“It’s an issue that requires a great deal of time and money,” says Fahrmeier. In addition, once a pasture has is contaminated by larvae, it must be left idle, or grazed by another species such as cattle, for at least four weeks.

The data works for Diamond, who doesn’t like to waste time and effort on bringing her herd in for regular deworming. “It’s a big deal to me. Kentucky is hot and humid, and my sheep live on fescue pasture. I can select breeding stock with a low fecal egg count EBV and keep problems to a minimum.”