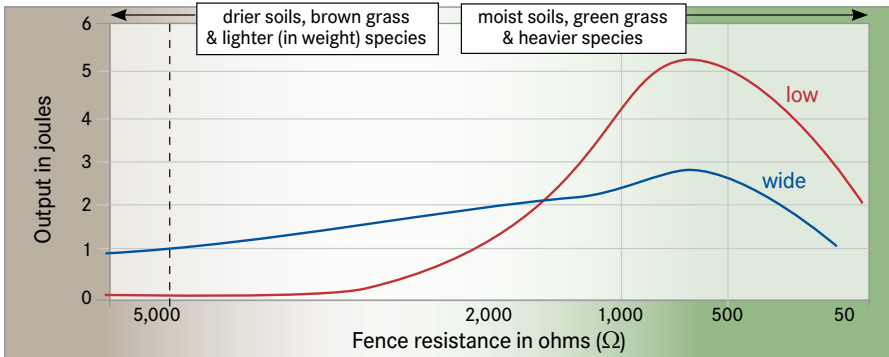


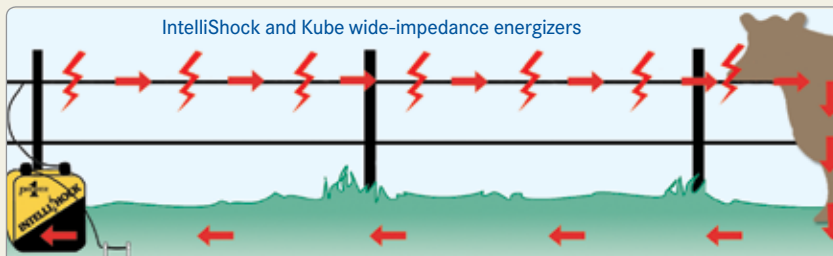
Energizer Impedance—wide vs low?



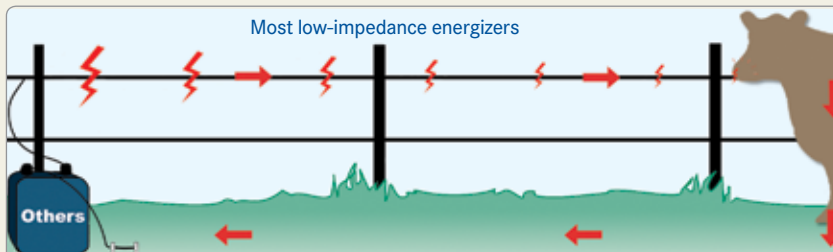
Wide vs low impedance output curves (chart above)

- 1. An energizer's output is not a constant!** The stated number on the outside of the box is a **optimum peak**. It's never more than stated—and almost always much less.
- 2. The curve shape is important.** The chart above shows 2 energizer output curves in joules. One is a wide-impedance unit with 2.7 joule peak output. The other is a low-impedance unit with 5.2 joules peak output.
- 3. Low-impedance units excel when the soil is moist**, the grass is green, the animal is a good conductor and there are plenty of ground rods.
- 4. Wide-impedance units excel when the total resistance is higher**—due to brown grass, dry soil, the animal is not a good conductor or the total ground rod is less.
- 5. The higher an energizer's peak joule output is at 500Ω**, the more likely it will be effective when there is high green-weed contact on the wires close to the ground.
- 6. The higher an energizer's output in joules at 5000Ω**, the more likely it is to be effective when the soil becomes dry.

Why animals respect wide-impedance energizers!



Wide-impedance energizers are able to deliver high-pulse energy levels and high voltages through a wider range of fence situations—including those with high total fence circuit resistance due to inferior polywire/netting; dry, sandy, rocky soils; dry, brown grass; and fewer ground rods. Animals have greater respect for and fear of such fences when energized by wide-impedance units.



Low-impedance energizers deliver high pain potentials when the resistance is low (hence their well-deserved reputation for working well when the soil is moist and the grass is green), but much less as the combined resistance of the soil, animal and wire rises. Illustrates how the joules of pulse energy at the end of the fence (and thus the potential pain available to animals) drop as the total resistance of the fence circuit increases—due to wet soils becoming dry, reliance upon stainless steel polywire and tape fences, or fencing across sandy/rocky soils.

High vs Low vs Wide impedance energizers

Impedance is similar to resistance. For energizers it means the level of ohms (resistance) that matches an energizer's peak output. If low ohms then it's a low-impedance energizer, etc.

The first fence chargers (50 years ago) were high-impedance units.

Their maximum output (never very much) occurred when the fence was weed-free. They could cope with drier soils but their effectiveness disappeared when a few green weeds touched the fence.

Most were too small in energy output/pulse to be effective against difficult-to-contain animals (sheep, goats, chickens).

The next generation was low-impedance energizers.

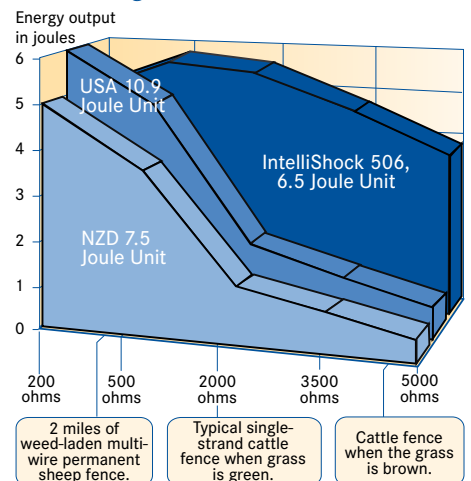
They coped well with high weed contact but not with dry soils or poor conductors.

They are very effective against low-resistance animals (cattle, horses, pigs) standing on moist soils.

Wide-impedance is Premier's term for energizers that perform well in both dry and wet situations.

In dry soils or with animals of high resistance (goats, wildlife and poultry), wide-impedance units outperform low-impedance units of similar output.

Graph comparing 2 low-impedance units with a wide-impedance energizer—IntelliShock 506



- Note when each excelled.
- Note also that the larger low-impedance unit did better than its low-impedance little brother in all conditions.