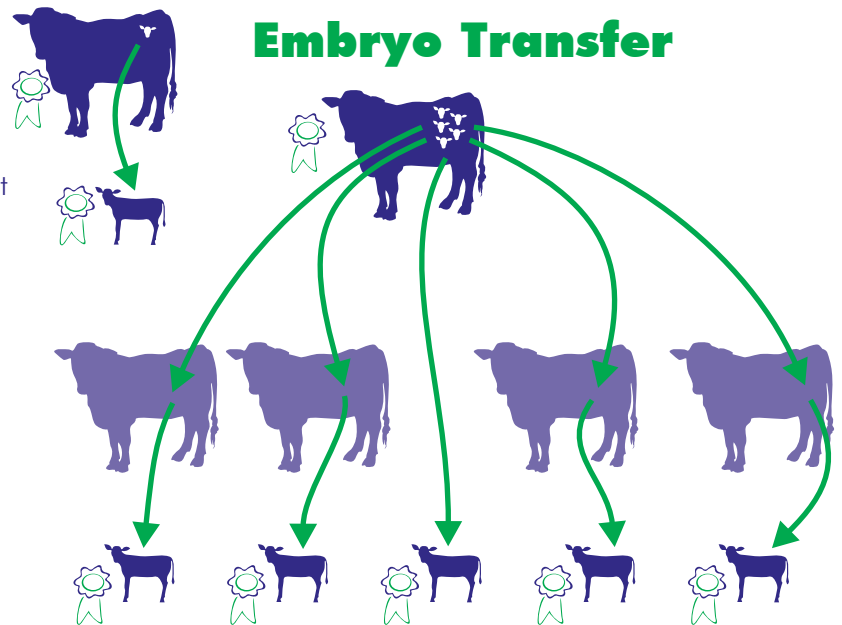


Animal Technology

Better Livestock

Farmers want livestock to be stronger and healthier so they produce more meat, eggs and milk for people. They also make more money if their animals are strong and healthy. They select the best female animals to have babies because the baby animals will grow up to look and produce like their mothers and fathers. One way to obtain more baby animals from the best females is to use embryo transfer technology.

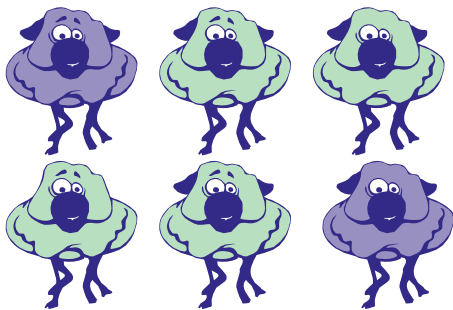
Scientists remove extra embryos from the best mothers and put each embryo into another cow, which will give birth to a calf.



Cloning is another new technology that can improve livestock. It means making an exact copy by reproducing an animal from one of its own cells.



Circle the clone of this sheep.



More Milk

If a cow produces 100 1-cup glasses of milk a day and giving her a hormone will increase her production 10%, how many glasses of milk will she produce? _____

A cow can produce milk for about 300 of the 365 days in a year, so how many cups of milk will she produce in one year? _____

How many gallons of milk is that in one year? _____

If a prize-winning cow produces one calf per year, how many calves will she have in 5 years? _____

If 10 embryos from the prize-winning cow are transferred to 10 other cows, how many calves from the prize-winning cow will there be in 5 years? _____

Technology for Food Safety

Irradiated Meat

Irradiation is similar to microwaving, but it doesn't raise the food's temperature and cook it. Irradiation reduces the number of harmful pathogens such as viruses, bacteria and other microorganisms that can cause foodborne illness. Irradiated meat still needs to be handled properly and cooked thoroughly to eliminate contamination and destroy all the pathogens.

Freshness Indicators

Food packages may soon come with freshness indicators that change color as the food gets older and not safe to eat.

Electronic Noses

North Dakota State University faculty are researching machines that can smell food. Odor is a main indicator of food spoilage, and these electronic sniffers will be able to determine whether or not food is safe to eat more accurately than a human nose.