



OPINION

Phenomenal Knowledge

W. Richard Dukelow, director of the Michigan State University Endocrine Research Center, enjoys public speaking, particularly on the subject of the brave new world of biotechnology in animal reproduction. Among his repertoire of anecdotes is one about the English scientist who split an eight-celled sheep embryo into four two-celled embryos. The scientist froze two of the embryos and transferred the other two into donor mothers. Theoretically, they could wait for the resulting twin lambs to mature then use them as donor mothers for the frozen embryos. Thus, the identical twins would give birth to their own twin sisters. While this story sounds like a classic brain teaser, it is based on existing biotechnology.

Those of us in agriculture who follow new scientific developments are already acquainted with and maybe even comfortable with the whole idea of embryo transfers, especially in dairy cattle. Freezing embryos is a nice way of moving genetics to different geographic locations. A lot of overseas countries are interested in receiving the inheritance of some of the best dairy cows in the United States.

This week it was announced that a new government policy will permit scientists to patent genetically engineered animals. The new policy outlined by Commissioner of Patents and Trademarks, Donald J. Quigg, finds "non-naturally occurring non-human multicellular living organisms, including animals, to be patentable subject matter. Quigg has 15 multicell patent applications and expects more as a result in the change in policy.

Not everyone agrees with the policy of patenting the manipulation of genetic inheritance. To some the specter of a brave new world of biotechnology descends into a brave new world of unforeseen horrors. They see a world where living things are accorded all the status of a manufactured toaster; where animals are cruelly mutated in the name of science and where family farms fail because of megabusiness patents on breeds of superior animals.

Jeremy Rifkin, director of the foundation on economic trends,

says that with this process animals are reduced to the same manufacturing process as an automobile or a toaster oven. But agricultural researchers disagree. Breeding better animals with biotechnology is just a more efficient way to do what farmers have done for centuries by selecting their best stallions to breed with their best mares.

"This new technology is simply a way of accelerating and somewhat broadening domestication," said Bernard Davis, a professor at Harvard Medical School. But Rifkin says, "I think taking genes from one species and injecting them into the permanent genetic code of another violates the species identity."

Whether we are creating a world in our own image as well as playing God will continue to be debated. The ultimate fear is that this whole process will extend to the exploitation and patenting of humans. This could be a logical extension of a strictly utilitarian world view. Davis says genetic engineering involving humans would not follow and the patent office maintains that to patent new human traits would be prohibited by the U.S. Constitution.

But it's still within easy memory that Nazi Germany attempted to breed a superior human race. And if someone has the ability and wants to genetically alter human genes in the future, we suppose a way could be found to circumvent both the U.S. Constitution and the U.S. Patent Office.

The surrogate human mother is already nearly as common as the list of embryos that open almost every good quality registered holstein sale. Who is to say the manipulation of genes carried out on animals will not be used as the basic research to produce human babies with special genetic inheritance? The last book of the Bible reveals some characters that might be construed to be earth-created being with altered human characteristics.

Maybe we're closer to revelation time than we think. At least the moral issue should receive as much weight as the scientific view when deciding how to use the phenomenal knowledge given to mankind in the twentieth century.



NOW IS THE TIME

By Jay Irwin

Lancaster County Agriculture Agent

To Prepare For Corn Planting

It always seems like we are in the full swing of the spring rush by the end of April. Well, this year is no exception. We are fast approaching corn planting time and if your planter is not "ready to go" then put this high on your list for jobs that must be done. If you plan to change the row width, be sure to calibrate your planter to the plant population you desire. This should be done well ahead of time, so if you need new plates they can be picked up and installed. Also your pest control programs should be worked out.

If you are on a no-till program and have a cover crop of rye, wheat or barley, then it should be sprayed when the vegetation is 18 to 24 inches tall. Paraquat plus a surfactant does an excellent job.

As far as insect control goes, research data collected from numerous sites over the past

several years indicates that soil insecticide treatments for corn rootworm control have not significantly increased yields except in a small percentage of the fields. If rootworm was not a problem in the past treatment will not be necessary. If the field was in anything but corn last year, there would not be a rootworm problem because they only survive on corn roots.

To Develop Safe Habits

We are aware that farming is not the safest occupation. In fact, the average farm worker can expect that once every four years he'll be injured so severely that medical attention is needed. We also know that farming is even more dangerous than industrial work. Farmers have a work accident rate that's two and a half times greater than the average for all industries. The problem is, that unlike industry, farmers work with a minimal amount of supervision and they may not be properly trained for the job. We urge farmers, during this busy season, to take time to be safe.

For Spring Worming

Spring is the best time to start a year round program to control internal parasites in cattle. Worming will help calves achieve heavier weights and give better feed efficiency.

Since producers will probably be handling cattle before turning them out on summer pasture it's a good time to worm cattle to rid them of existing parasite burdens.

Internal parasites damage the stomach and intestines and compete with the animal for feed. A parasite infection increase the

nutrient requirement for good health maintenance in all cattle. In nursing mother cows, more feed is required to keep up milk production. Severe infections can also result in lowered resistance to secondary infections and anemia.

Along with repeat wormings, good pasture management can prevent massive parasite built-up. Leave pastures idle for several months if possible. This allows most of the infective larvae to die off without being replenished by eggs from infected hosts. If supplemental forage is supplied, feed troughs should be used to avoid the ingestion of infective parasites on the ground.

To Evaluate Sewage Sludge Before Using

Many farmers are being approached to have sewage sludge applied to their land. Several things must be evaluated before considering this step. First of all, many of our farms are presently producing more animal and poultry manure than they have land to apply it on, so we just don't have the acreage. You should also be aware of potential pitfalls in sewage sludge. Sludge is a by-product of wastewater treatment and can contain many different elements and compounds from municipal and industrial sources.

The wastewater goes through several stages of treatment, but the sludge that is removed from the effluent may contain heavy metals and trace elements such as copper, zinc, lead, nickel, chromium or cadmium. These elements can be toxic to plants at low levels and some represent a hazard to the food chain.

Pa. Flying Farmers monthly meeting at Bruce and Nancy Younker's, Bethel; for more information call 717-867-2384.

Pfizer Research Conference, Indianapolis Convention Center, 1:30 to 5 p.m.

PFA Women's Spring Conference, State College.

State Grange Banquet, Marriott, Harrisburg, 5 p.m.

Wednesday, April 29

Lancaster County FFA Ag Mechanics Contest, Solanco High School, 12:30 p.m.

Thursday, April 30

Adams County Homemaker's Day, Cashtown Firehall, 9:30 a.m. to 2:30 p.m.

York County Beekeepers Meeting, 7 p.m., Extension office meeting room.

Friday, May 1

Delaware Food Festival, Felton Firehall, 9:30 a.m. to 1:30 p.m. Call 1-800-282-8685 for information.

Saturday, May 2

Md. Sheep and Wool Festival, Howard County Fairgrounds, W. Friendship Maryland off I-70, 9 a.m. to 9 p.m. Continues tomorrow, 9 a.m. to 6 p.m. Sheep auction, May 3, 3 p.m.

Pa. Shorthorn Association Spring Sale, Mercer.

Monday, May 4

PennAg Pesticide Workshop, General Sutter Inn, Lititz, 8:30 a.m. to 4:30 p.m.

Wednesday, May 6

Lancaster County Conservation District Meeting, Farm and Home Center, 7:30 p.m.

N.J. Agricultural Society Annual Dinner.

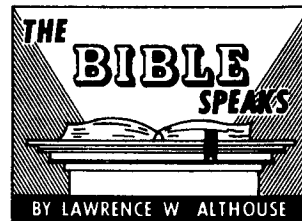
Friday, May 8

Spring Steam Up, Rough and Tumble Engineers History Association, Kinzers, 717-442-

4249; continues tomorrow.

Saturday, May 9

Western Pa. Sheep and Club Lamb Sale, Mercer County 4-H Park, 6 p.m.



HAVE YOU BEEN TO EMMAUS?

April 26, 1987

Background Scripture: Luke 24: 13-40.

Devotional Reading: Luke 24:36-42.

In many ways, the Emmaus Road experience of the two disciples has always been for me the most important of all the Easter texts. Somehow the story of the Emmaus Road brings the question of the resurrected Christ to a very personal level, so that the question is changed from "Did Christ rise from the dead?" to "Can I experience the Risen Christ?"

The two disciples on the Emmaus Road already knew the claim of the Galilean women that Christ was risen. As they walked and talked, they turned over and over again the question of whether such a thing wasn't just too good to be true. We can imagine the questions that must have gone through their minds: "Is it possible for someone to rise from the grave?" "Did our Master have

this power?" "After all he suffered on the cross, could he be alive?"

THE STRANGER

I am always intrigued by the fact that these two disciples did not recognize the risen Lord when he appeared to them on the Emmaus Road. Luke tells us simply that "their eyes were kept from recognizing him" (Luke 24:16). "Kept" by what or by whom? Did Jesus not want them to recognize him right away or was it some failure on their part that kept them from recognizing him? Does that mean that he may appear to us and that we do not recognize him either? I think so.

But, although they did not recognize the Master, they at least kept open the door through which that revelation was eventually to come. Instead of pushing these troubling questions from their minds, they continued to concentrate upon them and, when at last they reached Emmaus, they invited the stranger to stay with them. (They might have said to each other, "After all that's happened today, I can't psyche myself up to entertaining this stranger.")

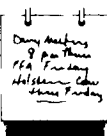
RECOGNIZED AT LAST!

It is also significant to me that it was not in their continuing theological discussion, not in their weighing of the rational pros and cons of the resurrection claims, that these men at last recognized the Master. It was in the common and simple act of breaking bread — the same kind of ordinary setting in which many of us are able to experience him when our eyes are open.

Immediately as they recognized him, the Risen Christ disappeared. Then it was that they thought back over their experience on the Emmaus Road and remembered what had eluded their conscious minds at the time.: "Did not our hearts burn within us while he talked to us on the road, while he opened to us the scriptures?" (24:23).

It is in the same sense that each of us can and needs to walk the Emmaus Road.

Farm Calendar



Saturday, April 25

Witmer Fire Co. Ox Roast, noon, Witmer.

NE Regional Seminar, "Women in a Changing World," Bloomsburg University, Bakeless Center, 9 a.m. to 4 p.m.

Penn State Dairy Expo, Ag Arena, 8:30 a.m.

Wayne County Holstein Club Sale, Wayne County Fairgrounds, Honesdale.

Cook College Ag Field Day, New Brunswick, all day.

Sunday, April 26

4-H Capital Days, Harrisburg; continues through April 28.

