

PCB RESIDUES THREATEN DAIRY OPERATIONS

In recent months a number of dairy herds in Ohio and the neighboring states of Pennsylvania, Michigan and Indiana have been excluded from marketing milk due to the presence of polychlorinated biphenyls (PCB's) in concentrations greater than the "temporary tolerance" of 2.5 parts per million in the milk fat. PCB's are industrial compounds that have been used widely since the 1930's. Between 1941 and 1970 many silos in Ohio and neighboring states were treated with a coating material that contained PCB's as one of its components. This coating was called Cumar and was used and marketed by the Michigan Silo Company. This coating was applied to many silos constructed by the Michigan Silo Company with plants located at Bloomfield, Indiana; Charlotte, Michigan; Monteagle, Tennessee and Massillon, Ohio.

Any dairyman that has a Michigan Silo or has had the Cumar coating applied to his silo should have his silage or scrapings from the silo checked for the presence of PCB residues. Even though no traces of the Cumar coating may be present on the silo, the residue may still be present in the silo blocks. When the silo is filled the organic acids produced during the ensiling process dissolve the PCB residues and they migrate into the silage. When the silage is fed to cattle the PCB residue accumulates in the body fat of the animals and is subsequently excreted in the milk. Once the animals are contaminated the elimination of the residue is very slow. A single PCB contaminated silo can be responsible for PCB residues in animals and milk that are many times greater than the "temporary tolerance" and the milk from these cows would be unmarketable for periods of from several months to greater than one year.

Now that many silos are empty or near empty is an ideal time to have the silo checked for the presence of PCB residues. If residues are detected most silos can be decontaminated by proper cleaning and application of an effective barrier coating.

Farmers wanting to obtain an analysis of silage or silo wall scrapings may send their samples to private laboratories or to the following laboratory:

Pesticide Analytical Laboratory, Entomology Department,
The Ohio State University, Room S132, B & Z Building,
1735 Neil Avenue, Columbus, OH 43210

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PCB-ARCH0745316

The cost per sample is \$40. Please make the check payable to the Cooperative Extension Service.

Careful attention must be given to the sample collection procedures to insure a representative sample is obtained.

SILAGE:

1. Samples should be collected and sealed in polyethylene bags for shipment to the laboratory for analysis.
2. Each sample should be a composite of silage collected ADJACENT TO THE SILO WALL (no further than 2 inches from the wall) and from four locations; the North, South, East and West sides. About $\frac{1}{2}$ pint of material should be collected at each location.
3. The bag should be tied tightly or sealed with tape.
4. The bag should be securely labeled with:
FARM - identity and address
DATE
SIZE, Age and Brand of Silo
DEPTH of silage when sample was taken.

SCRAPINGS:

1. Samples should be collected and sealed in polyethylene bags for shipment to the laboratory for analysis.
2. Each sample should contain scrapings of the concrete from the North, South, East and West sides of the silo. Include scrapings from the joint mortar. Approximately a tablespoon of material is necessary from each location.
3. The bag should be tied tightly or sealed.
4. The bags should be securely labeled with:
FARM - identity and address
DATE
SIZE, Age and Brand of Silo
HEIGHT at which scrapings were taken.

Dr. Acie Waldron (614) 422-7541 may be contacted if you have additional questions concerning the sampling procedures.

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