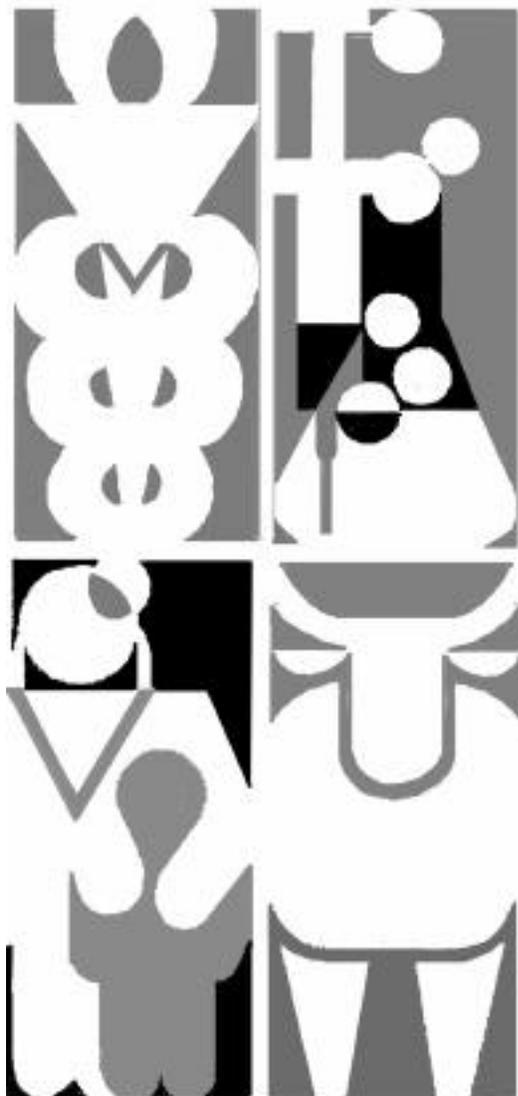


NEWSLETTER



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ATVPHPM is committed to developing and fostering the academic base for veterinary public health and preventive medicine

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Important: Please take a moment to look at your mailing label on the envelope. The number (e.g. 96) in the lower right corner of the mailing label is the last year for which a dues payment has been recorded. Membership dues remain \$15 US annually and are payable on January 1 of each year. If, for example, your dues payment year is indicated to be 96, then to become current you should remit two years dues or \$30.

James Thorne - ATVPHM Secretary/Treasurer

ASSOCIATION NEWS

President's Message

Dear colleagues:

The Executive Committee or your Association met recently via conference call and following is a summary of the items discussed. The results of the recent election were announced (see item elsewhere in this newsletter). Many thanks are extended to those who have served on the Executive Committee and who were willing to be candidates during this election. We continue to be fortunate to have members willing to offer additional service to the Association.

Our new web site, managed by Ron Smith (U. of IL) has received considerable attention. It was accessed 417 times during June. The newsletter and position announcements were the most popular sections.

Your Association will be sponsoring a half day seminar at the CRWAD on November 8, in Chicago. Hollis Erb and Jan Scarlett (Cornell) will be the presenters. Watch for additional information. The annual Association business meeting will also be held during the CRWAD meeting. It will be immediately following the morning session on November 9, in the room where the epidemiology section presentations are given. Non-members are welcome to attend.

Jim Thorne (U. of MO) is working with John Galland on the possibility of the American Society of Veterinary Epidemiology and Economics (ASVEE) being merged into our Association. We have much in common and the interests of professionals working in veterinary public health and preventive medicine might better be served through a combination of our groups. Membership in our Association is not limited to veterinarians.

Hollis Erb reported that plans for the 9th meeting of the International Society of Veterinary Epidemiology and Economics (ISVEE) are progressing. The meeting will be in Colorado in 2000 and our Association is the local sponsor. Mo Salman (Colorado State U.) is in charge of local arrangements and is developing an ISVEE web site. When established, it will be linked to our web site.

I look forward to seeing many of you at our annual business meeting in Chicago. Please feel free to contact me with your ideas of how to make our

Association better and stronger (full address was in the last newsletter and is on the web site).

John New (U. of TN)
President, 1997-99

From the Newsletter Editor

The last issue of the ATVPHPM Newsletter described an OIE publication entitled "Contamination of Animal Products: Prevention and Risks for Public Health Scientific and Technical Review, Vol. 16 (2), August 1997." I have since learned that the editors of that publication were Drs. Alwynelle (Nell) Ahl, a long time member of ATVPHPM, and Paul Suttmoller. Nell writes: "OIE never prints the names of the editors of their Scientific and Technical Review series in large type....but they do extract a huge chunk of time and effort from their editors...as well as the papers in the volume. Oh well, Paul and I had fun; it was instructive to manage the scientific development of the volume. In addition, if others find it useful all the better."

The Web address listed at the end of the review should be changed to

<http://www.oie.int/>

RD Smith, Editor

Results of Election

Congratulations to Jim Thorne (U. of MO) on his election as the Association's new Secretary- Treasurer and thanks to Chet Thomas (U. of WI) for serving in this office for the last 12 years. Jim became Secretary-Treasurer upon completion of the election. New membership applications should be sent to Jim (address elsewhere in this newsletter and on the web site).

Congratulations also to Paul Bartlett (Michigan State U.) on his election as a member-at-large to the Executive Committee and to Margaret Slater (Texas A & M U.) on her election to a second term as member-at-large. Paul and Margaret will take their offices at the completion of the annual business meeting this November. Many thanks to Daniel Scholl (Louisiana State U.) for his service as member-at-large.

CORRESPONDENCE

A Challenge

From: "KathaDS" <KathaDS@aol.com>

To Whom It May Concern:

I am offering a \$20,000 prize up front to whomever can supply me first with 20 lbs. of a self-dosing, contraceptive cat food suitable for feeding stray and feral cats. I will moreover guarantee that person one half of all profits, if they will supply the formula to an effective product and will agree to allow me to commercially market the product.

The product must be:

1. (Required) NOT any known carcinogen. Edible and palatable. (Contraceptive shots, pills or implants need not apply!)
2. (Required) Short-term or cumulative (so that the occasional escaped prize Himalayan isn't accidentally and irreversibly neutered by occasional feeding at a neighbor's home.)

3. (Preferably) targets hormone balance or prevents embryo implantation, rather than being a systemic toxin. Goal: to avoid gestation without permanently altering the animals' physiology.

4. (Preferably) having the same effect on dogs, so it can be used where there are wild dog populations too. Ditto raccoons.

5. (Preferably) a substance which is obtained over-the-counter so as to avoid lengthy expensive safety tests and licensing hurdles, and which can be sold off the shelf, not by prescription.

You do not need to have a professional certification or college degree to win this prize. But your cat food must prevent pregnancy! Together we can do a good business (and a business for good). The current level of euthanasia of stray animals is unacceptable and unnecessary. Please contact me at: <KathaDS@aol.com>

K.D. Sheehan, a private investor.

Food Safety and Cheese

Institute of Food Science and Technology

<<http://www.easynet.co.uk/ifst/>>

The Institute of Food Science & Technology, through its Public Affairs and Technical & Legislative Committees, has authorized the following Position Statement, dated 7th April 1998, prepared by its Professional Food Microbiology Group. This updates and supplements the previous version dated 19th December 1997.

SUMMARY

Attention is drawn to the hazards to human health due to the potential presence of pathogenic bacteria in cheeses made from unpasteurized milk, particularly cheeses of the soft and semi-soft type. Recommendations are given for safe production, which includes the use of pasteurized milk to minimize health risks from such cheeses. The IFST considers that it is impossible to ensure that raw milk is free from pathogenic micro-organisms, that subsequent hygiene measures will not remove pathogens already present and that the majority of cheese-borne outbreaks have been associated with raw milk cheeses. In order to ensure the production of safe cheese, the following measures are therefore important:

1. raw milk should be collected and maintained in good hygienic conditions,
2. if the raw milk is not to be used immediately, it should be refrigerated to minimize multiplication of bacteria,
3. for those products where a risk assessment indicates a hazard from pathogens in the raw milk, the raw milk should undergo a full pasteurization or equivalent process,
4. good conditions of hygiene should be maintained throughout cheese manufacture, ripening, distribution, sale and storage until consumption to prevent contamination.

The IFST has always accepted that the safety of cheese may be compromised by post-pasteurization contamination but considers that, except in the case of low-risk cheeses such as Parmesan, the total health risk to the consumer is less from cheese made from properly pasteurized milk than from cheese of similar composition made from unpasteurized milk.

BACKGROUND

Cheese was originally developed as a means of preserving raw milk in times of excess production and cheese is generally considered to be a relatively 'safe' food. However, the spread of some diseases by cheese has been demonstrated and, as a result, most cheese is now produced from milk that has been pasteurized. Pasteurization is one of the major critical control points in the cheesemaking process that prevents pathogenic micro-organisms in the raw milk from contaminating the finished product, which may otherwise contribute a hazard to human health. Nevertheless, the production of some cheeses still occurs from milk that has not received a 'full' pasteurization process. Cheese manufactured by 'traditional' processes may be made from raw milk (i.e. milk that has received no heat-treatment at all) whilst some larger-scale operations may use thermised milk (i.e. milk that has been subject to a heat-treatment that is less severe than the full pasteurization process of 71.7°C for 15 seconds or equivalent). Although thermisation destroys some species of micro-organisms, some pathogenic bacteria, such as *Listeria monocytogenes*, *Salmonella* and *E. coli* O157 may survive and thus contaminate the final product even though the milk has received a moderate heat process. All foods possess a finite risk of microbiological contamination, the level of which varies with the food. The highest risk factors include foods of animal origin and foods consumed without prior cooking (either by the manufacturer, the caterer or the consumer). Relatively few foods possess both of these risk factors although cheeses made from unpasteurized milk, fermented meats, smoked or pickled fish, sushi and some mayonnaise recipes may fall into this commodity category. Although the numbers of food poisoning outbreaks associated with these commodities is not high in comparison with, for example, the number of *Salmonella* infections due to poultry, because of the severity of some reported health hazards, the IFST considers it appropriate to issue a Position Statement on cheese, some varieties of which are examples of this type of commodity.

OUTBREAKS OF DISEASE ASSOCIATED WITH CHEESE

Some reported cheese-associated outbreaks of foodborne illness (affecting a few or many individuals) are summarized in Table 1 but these reports do not include sporadic, individual cases. Cheeses made with unpasteurized milk appear to have been involved in the majority of reported outbreaks. In the remaining reported outbreaks, it is believed that either milk pasteurization was not carried out properly (and the heat-treatment was therefore inadequate) or the cheese was made from correctly pasteurized milk subsequently contaminated with pathogenic micro-organisms. Indeed in the Mexican-style cheese outbreak, the cheese appears to have been made from correctly pasteurized milk to which raw milk had deliberately been added (Linnan, et al. 1988).

It is recognized that, in cheese manufacture, post-pasteurization contamination can occur whether or not the milk is pasteurized. Nevertheless, the outbreaks shown in Table 1 indicate that food-poisoning incidents are more likely to arise with cheese made from unpasteurized milk even if the starting material is of exceptionally high microbiological quality and the manufacturing conditions are the most hygienic possible. Although these outbreaks do not represent a large proportion of all outbreaks of foodborne illness, on some occasions the consequences for the victims have been particularly severe. Organisms such as *Listeria monocytogenes*, *Brucella melitensis* and *Escherichia coli* O157 have all been involved in cheese-associated outbreaks and have caused severe infections which, in a significant proportion of cases, have resulted in death or long term sequelae. *Listeria monocytogenes* can cause meningitis and septicemia with up to 30% mortality as well as abortion in pregnant women; some *Salmonella* spp. can cause septicemia and may result in long-term illness such as reactive arthritis; *Brucella melitensis* causes undulant fever, a severe condition that can be long-lasting and incapacitating; Verocytotoxin-producing strains of *Escherichia coli* (including *E. coli* O157) may cause hemorrhagic colitis, hemolytic uremic syndrome and renal failure which may result in death, particularly in young children.

MICROBIOLOGICAL SAFETY OF CHEESE

Traditionally, it has been assumed that pathogenic micro-organisms in raw milk die during cheese manufacture due to the production of high acidity (low pH value) and competition from the 'starter cultures' deliberately added to produce a characteristic flavor and texture. However, it is not possible to generalize about either the composition of cheese or the behavior of contaminating pathogens. The compositional characteristics of the soft, mold ripened cheeses (e.g. Brie) are very different from those of the very hard, acid types (e.g. Parmesan). Not only do the pH values of these two products differ widely but also the water activities differ; ripened Brie has a neutral pH and high water activity that permits the growth of many pathogens whilst Parmesan is more acidic with a much lower water activity that inhibits microbial growth. Parameters such as these are paramount in controlling the growth, survival or death of pathogenic micro-organisms, especially if a low storage temperature is not maintained continuously; it therefore cannot be assumed that all pathogenic micro-organisms will die out in all types of cheese. However, even the harsh conditions found in the hard, acid cheeses do not guarantee that all pathogenic bacteria will be completely destroyed

and the recent outbreaks of food-poisoning due to Salmonella and E. coli O157 in semi-hard cheeses bear testimony to this fact. Pathogenic bacteria vary just as widely as the cheeses they contaminate and their survival characteristics are equally varied. For example, Brie stored under refrigeration will support the growth of *Listeria monocytogenes* whilst Parmesan stored at near-ambient temperature will not; similarly, Salmonella may die slowly in Cheddar cheese, but *Staphylococcus aureus* may remain viable throughout the shelf life.

The manufacture of cheese is a complex process and the assurance of consumer safety is equally complex. The diverse varieties of cheese are made by a wide range of techniques. Each requires specific procedures that must be (and are) applied for safeguarding the consumer. The manufacture of safe cheese demands the application of systems based on the Hazard Analysis Critical Control Point principles. Such systems must be applied at all points in the process from the rearing of milk-producing animals to cheese consumption by the consumer and indeed, a survey of cheeses sold in the UK has demonstrated a significant improvement in their microbiological quality in recent years (Nichols, et al., 1996). Hazard Analysis Critical Control Point (HACCP)-based systems and risk assessment are strongly advocated by food safety authorities such as CODEX, World Health Organization, UK Department of Health, UK Ministry of Agriculture Fisheries and Food, US Department of Agriculture and US Food and Drug Administration since these systems are designed to identify microbiological hazards to the consumer that final product testing would fail to detect and to identify points at which control or preventive measures should be applied. Indeed, HACCP principles have been written into the requirements of the UK Food Safety (General Food Hygiene) Regulations 1995 and the Dairy Products (Hygiene) Regulations 1995. The IFST strongly supports the application of HACCP-based systems for cheese manufacture at all stages 'from farm to fork'.

CONTROL MEASURES

It is indisputable that some outbreaks of food-borne illness have been clearly linked with the consumption of cheese, the majority of those reported being associated with cheese made from unpasteurized or improperly-pasteurized milk. Whilst pathogens can and do gain access to cheese after curd formation, it is clear that many food-borne pathogens are fecal in origin (Rampling, 1996), it not being possible to milk cows aseptically. Fecal contamination of raw milk, no matter how slight or infrequent, is therefore inevitable and most of the types of bacteria shown in Table 1 have been found in some samples of raw milk. In addition to potential fecal contamination, pathogens may also be excreted into the milk directly from the udder.

Correctly-controlled milk pasteurization kills such bacteria. Pasteurization was designed to destroy the vegetative pathogens that may be found in raw milk the part that pasteurization of milk played in dramatically reducing the 19th century diseases such as milk-borne tuberculosis, brucellosis and typhoid fever is widely recognized. Pasteurization is a critical control point that still provides the simplest means of ensuring the elimination of vegetative pathogens from raw milk. This can clearly be seen from the number of food poisoning outbreaks that have resulted from pasteurization failure or its deliberate misuse. Thus, if milk has not been fully and correctly pasteurized, the death of all vegetative pathogens originating from raw milk cannot be guaranteed in all types of cheese on all occasions, no matter how good the control of hygiene during milking and cheese production. Following the major outbreaks of listeriosis due to contaminated cheese (Linnan, et al., 1988; Bille, 1990) many producers of cheese have changed from the use of unpasteurized to pasteurized milk while great improvements have been made in the conditions of hygiene in major cheese factories (Lund, 1990).

Susceptibility to foodborne pathogens varies greatly from person to person. Young children, the elderly and the immunocompromised are most at risk whilst pregnant women are particularly susceptible to listeriosis: together these groups form at least 20% of the population. However, it is clear in some of the outbreaks reported that foodborne pathogens can also cause disease in healthy adults. Because of these and other variables, such as the level of contamination in the cheese and the quantity of cheese consumed by different individuals, it is important to miss no opportunity to add another protective control measure to the microbiological safety barrier that the responsible manufacturer will want to build to protect his/her customers and the business.

Pasteurization provides an effective control measure although innovative technologies are being developed that may provide alternatives to heat-treatment for the reduction of pathogens in raw milk. A 'farm to fork' approach employing HACCP-based systems is widely advocated to control pathogens in food production. The IFST strongly supports this approach and considers that Good Manufacturing Practice should be employed at all stages of production and handling, from production of the raw milk at the farm to purchase of the cheese by the consumer. These principles demand that the safety conferred by pasteurization must be assessed in relation to the quality of the raw milk and the type of cheese being manufactured. The "Code of Best Practice" recently published by the Specialist Cheesemakers' Association is a valuable guide which details numerous good hygienic practices for the

production of artisan cheeses though the IFST considers it is misguided in encouraging of the use of unpasteurized milk. It should not be assumed that all countries have the same level of raw milk hygiene. Many farmers in the UK are to be congratulated on the microbiological quality of their milk and it is well-recognized that, together with Denmark, UK raw milk has by far the highest microbiological quality in the world. Yet even so, the presence of pathogens in raw milk was demonstrated in a survey of 1673 samples of raw milk from farm bulk tanks in England and Wales in 1992-3 in which 0.36% contained *Salmonella* spp. and 5.08% contained *Listeria monocytogenes* (O'Donnell, 1995). In addition, the UK Advisory Committee on the Microbiological Safety of Food (18th September 1997) has expressed concern at the presence of pathogens in raw milk for direct consumption in England & Wales, as revealed by surveys carried out by ADAS and the Public Health Laboratory Service (PHLS). In the ADAS survey, *E. coli* (some strains of which are pathogenic and whose presence in foods is considered indicative of fecal contamination) was isolated from 62% of samples, 0.4% having levels of 1000 organisms/ml or more (Anon., 1997a). Moreover, the presence of pathogens may be even more likely in raw milk produced in countries with less strict control of farm hygiene. Since raw milk is now marketed internationally, it is possible for cheese to be manufactured in the UK from milk, the microbiological quality of which is less well controlled than that of raw milk produced within the UK. Because the pasteurization of milk forms an important critical control point in the manufacture of safe cheese, the IFST considers that pathogens in raw milk for cheese manufacture are most effectively eliminated by a full pasteurization process, unless a cheesemaker can demonstrate that his/her process and product composition together can provide a safe product when manufactured from pathogen-contaminated milk. This approach supports the decision taken at the recent meeting of the Codex Committee on Food Hygiene (October 1997).

CONSUMER AWARENESS

It can be argued that the consumer has the right to choose whether to eat cheese made from raw milk or from pasteurized milk. IFST considers that:

- * All cheeses made from unpasteurized milk should be clearly and adequately labeled as such at the point of sale to the consumer, including delicatessen counters restaurants and other catering establishments. In the UK, such labeling is clearly not mandatory at present but is undertaken by some retailers on a purely voluntary basis.

- * For those products where a risk assessment indicates a hazard from pathogens in the raw milk, the 'small print' wording, "made from unpasteurized milk" is inadequate. A warning such as that required by law for raw, drinking milk sold in England & Wales should be used, e.g., "this cheese is made from milk that has not been pasteurized and may contain organisms harmful to health".

- * The public should be educated as to the potential risks involved, so that the consumer can make an informed choice.

- * Particularly vulnerable people (young children, the elderly, pregnant women and immunocompromised people) should avoid consuming soft cheeses made with unpasteurized milk.

CONCLUSION

The IFST considers that it is impossible to ensure that raw milk is free from pathogenic micro-organisms, that subsequent hygiene measures will not remove pathogens already present and that the majority of cheese-borne outbreaks have been associated with unpasteurized milk cheeses. In order to ensure the production of safe cheese, the following measures are therefore important: (1) the raw milk should be collected and maintained in good hygienic conditions, (2) if the raw milk is not to be used immediately, it should be refrigerated to minimize multiplication of bacteria, (3) for those products where a risk assessment indicates a hazard from pathogens in the raw milk, the raw milk should undergo a full pasteurization or equivalent process, (4) good conditions of hygiene should be maintained throughout cheese manufacture, ripening, distribution, sale and storage until consumption to prevent contamination. Microbiological tests on finished cheeses are useful for monitoring the successful application of controls but these tests cannot ensure the microbiological safety of the cheese (Desenclos, et al., 1996; Rampling, 1996).

In view of all these considerations the Institute of Food Science & Technology considers it important to draw attention to the real hazards to human health that may arise due to potential contamination of raw milk cheeses with pathogenic bacteria, especially cheeses of the soft and semi-soft types, and to discourage the manufacture of cheeses, especially high-risk products, using milk that has not been treated to eliminate vegetative pathogens. For the consistently reliable production of microbiologically safe cheese the following measures are considered important:

- * A HACCP-based risk assessment and Good Manufacturing Practice should be employed for all stages of production and handling, from the farm to the consumer.

- * For those products where a risk assessment indicates a hazard from pathogens in the raw milk, the milk should undergo full pasteurization or a process of equivalent effect.

The IFST further recommends that raw milk cheeses should be clearly and adequately labeled.

Table 1. Reported outbreaks of foodborne disease due to cheeses since 1983.

Outbreak	Pathogen	No. of cases	No. of deaths	Food	Comments	Reference
1983, Netherlands Denmark, Sweden USA	enterotoxigenic <i>Escherichia coli</i>	>3000	NR	Brie cheese	No correlation could be made between high levels of Enterobacteriaceae/E.coli and high phosphatase activity (indicating the use of raw milk)	MacDonald et al, 1985; Nooitgedagt and Hartog, 1988.
1983-7, Switzerland	<i>L.monocytogenes</i>	>122	34	Vacherin Mont d'Or cheese**	Made from thermised milk since 1984	Bille, 1990
1984, Canada	<i>Salmonella typhimurium</i>	2700	1	Cheddar cheese**	<i>Salmonella</i> survived for up to 8 months in refrigerated storage	D'Aoust et al, 1985; D'Aoust, 1994
1984-5, Scotland,	<i>Staphylococcus aureus</i> enterotoxin	>13	0	Sheep milk cheese**	Contamination was associated with clinical mastitis and post-infection carriage by ewes	Bone et al, 1989
1985, Switzerland	<i>Salmonella typhimurium</i>	>40	0	Vacherin Mont d'Or cheese**	Hand-borne cross-contamination from a pigsty	Sadik et al, 1986
1985, USA	<i>L.monocytogenes</i>	>142	48	Mexican style cheese*	Contamination probably occurred from the addition of raw milk	Linnan et al, 1988
1988-89, England	Unknown cause	155	0	Stilton cheese**	Subsequent decision to pasteurise milk for Stilton manufacture	Maguire et al, 1991
1989, England	<i>Salmonella dublin</i>	42	0	Irish soft cheese**	Four cows were asymptomatic excretors. <i>Salmonella</i> was detected in the cheese curd but not in the raw milk nor in the factory environment	Maguire et al, 1992
1989, USA	<i>Salmonella javiana and S.oranienberg</i>	164	0	Mozzarella	The contamination level was in the range 0.36 cells/100 g to 4,3 cells/100 g	Hedberg et al, 1992
1992, England	<i>Salmonella livingstone</i>	10	NR	Cheese	-	Djuretic et al, 1997
1992-3, France	Verocytotoxin-forming <i>E.coli</i>	NR*	1	Fromage frais**	-	Anon 1994a
1993, France	<i>Salmonella paratyphi B</i>	273	1	Goats' milk cheese**	Internal microbiological monitoring failed to detect the contamination for 2 months	Desenclos et al, 1996
1994, Scotland	verocytotoxin-forming <i>E.coli</i> O157	>20**	0	Local, farm-produced cheese**	-	Anon 1994b
1995, France	<i>L.monocytogenes</i>	20	4	Brie de Meaux cheese**	Disinfection and control measures were reinforced at the plant	Goulet et al, 1995
1995, Malta	<i>Brucella melitensis</i>	135	1	Soft cheese**	-	Anon, 1995.

1995, Switzerland and France	<i>Salmonella dublin</i>	NR Switz. 25 in France	NR Switz. 5 in France	Cheese from Doubs region of France**	The outbreak was resolved after production control measures (but not pasteurisation) were introduced	Vaillant et al, 1996
1996, England and Scotland	<i>Salmonella gold-coast</i>	>84	0	Cheddar cheese+	-	Anon, 1997
1996, Italy	<i>Clostridium botulinum</i>	8	1	Mascarpone cheese	"This outbreak of botulism the necessity to apply HACCP principles"	Aureli et al, 1996
1997, England	<i>E.coli O157</i>	2	0	Lancashire- type cheese**	-	Anon, 1997c

* This cheese was made from pasteurised milk to which raw milk had deliberately been added

** These products are known to have been produced using unpasteurised milk

*** Both pasteurised-milk cheese and thermised-milk cheese were contaminated

+ Associated with failure of the pasteurisation process

NR = Not reported

* All cases of haemolytic uraemic syndrome

** One case of haemolytic uraemic syndrome

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INTERNET RESOURCES

HACCP Software Website

The Food Safety Institute has developed a Web site that demonstrates the new FIST-HACCP Software Program. It can be seen at:

<http://www.fist-haccp.com>.

FIST-HACCP was developed by TNO Food Nutrition and Research Institute of The Netherlands. TNO employs over 6,000 scientists involved in research relative to food and food safety with 500 dedicated to software development. Earlier this year TNO awarded the exclusive rights for the US and Canada for the software to The Food Safety Institute. FSI's Web site is at:

<http://www.premier.net/~fsi>.

Food Safety Net (FSnet) Now on World Wide Web

Many of you have asked about availability on the web. Dr. Ozadali volunteered and I say, why not. The page is still under construction. Also, our own homepage is under construction as I write, and should be up sometime in Sept. -- dp)

A letter from Ferhan Ozadali, Ph.D. from Ohio State University:

Dr. Powell:

As you suggested, I tried to combine all of your August messages under one page, please visit this page and let me know if I can improve the page's appearance. You are more than welcome to use and reference this page in your communications.

<http://www.fst.ohio-state.edu/people/ozadali/fsnet.htm>

This page is linked under The Turkish Institute of Food Technologists and Engineers (TIFTE) homepage

<http://www.fst.ohio-state.edu/people/ozadali/tifte.htm>

Best Regards,
Ferhan Ozadali, Ph.D.
The Ohio State University
<ozadali.1@osu.edu>

Evidence-Based Medicine Web Site

From: "John Gay" <jmgay@vetmed.wsu.edu>

I've created a website of epidemiology and other materials for veterinary students and ag animal practitioners. It contains both original materials as well as links to other sites. If I've missed linking something or you find something original is in serious error, please let me know. Like most sites, I modify and add things to it on an irregular but constant basis and contents are in various stages starting with rough draft. If you have similar items to link to, please let me know.

Some pieces relevant to this list are:

- Clinical Epidemiology & Evidence-Based Medicine Glossary

<http://www.vetmed.wsu.edu/courses-jmgay/GlossClinEpiEBM.htm>

- Guidelines for Assessing Professional Information
<http://www.vetmed.wsu.edu/courses-jmgay/EvalGuide.htm>

- WWWeb Epidemiology & Evidence-based Medicine Sources for Veterinarians
<http://www.vetmed.wsu.edu/courses-jmgay/EpiLinks.htm>

NEWS & COMMENTARY

EPA: How Safe is the Water at Your Beach?

From: "Food Safety Network"
<FSNET-L@LISTSERV.UOGUELPH.CA>

<http://www.exnet.iastate.edu/Pages/families/fs/homepage.html>

July 1/98 (from a press release)

CHICAGO -- At least a million people will visit one of the 581 beaches around the Great Lakes this holiday weekend. Most water is safe for swimming, but beach pollution is still a problem, with thousands of beaches being closed nationwide each year. Before going to the beach this summer, visit U.S. Environmental Protection Agency's (EPA's) new Website "Beach Watch" at

<http://www.epa.gov/ost/beaches>

for up-to-date information about water quality at more than 1,000 beaches.

By clicking on a U.S. map, you will find information about beaches in Chicago, Milwaukee, Southwest Michigan, Sandusky, OH, and many other places on the Great Lakes. Local health officials have provided information on whether and how often water is monitored, recent beach closings, potential pollution sources, and the number of people who use the beach during peak periods each season.

"Thanks to the Clean Water Act, the Great Lakes and other waters are much safer for swimming than they were 25 years ago," said Jo Lynn Traub, regional Water Division director. "Pollution controls and improvements in sewage treatment have resulted in cleaner water, but since many beaches are still threatened by contamination, the public should be vigilant."

Why are beaches closed? Most beaches in the United States are closed because of the presence of high levels of harmful microorganisms that come from sewage overflows and polluted storm-water runoff from cities and farms. In some areas, boating wastes and malfunctioning septic systems are local sources of pollution. Pollution in beach water is much higher during and immediately after heavy rains.

Illnesses caused by polluted water

Swimming in polluted water may expose swimmers to bacteria, viruses, and protozoans, resulting in minor illnesses such as diarrhea, sore throat, or skin and eye infections. Children, the elderly, and people with weakened immune systems are most likely to develop illnesses or infections after swimming in polluted water.

You are less likely to be exposed to polluted water at beaches that are monitored regularly and posted for closures or swimming advisories. Avoid swimming at beaches with visible discharge pipes or at urban beaches after a heavy rainfall. Most swimmers are exposed to waterborne diseases by swallowing the water, so keep your mouth shut! Wade, or swim without submerging your head.

Questions to ask about your beach

Contact local health departments for information on specific beaches. Some questions you might ask are:

- Which beaches are monitored and how often?
- What do you test for?
- Where can I see the results, and who can explain them to me?
- What are the main sources of pollution at this beach?

What can you do to reduce beach-water pollution? Pollution prevention, such as improving sewage treatment plants, is the most effective way to reduce beach-water pollution. But individuals can also help by conserving water, keeping septic systems properly maintained, disposing of boat sewage in onshore sanitary facilities, and properly disposing of animal wastes from pets.

For more information on beach-water pollution or the Great Lakes, call EPA at 800-621-9431.

Zoonotic Tuberculosis Project Funded

From: "Larry Glickman" <ltg@vet.purdue.edu>

We were just funded by the Rockefeller Foundation for a study on the epidemiology of zoonotic tuberculosis in Uganda, Africa. We have developed PCR methodology to distinguish human from bovine tuberculosis using clinical specimens from humans eg sputum, and will be using this to conduct a case control study of human tuberculosis. Our goals are

to determine the proportion of human tuberculosis that is of bovine origin, the role of AIDS in susceptibility, and to identify important host and environmental risk factors. The research will be conducted by one of our Ph.D. epidemiology students who is a veterinarian from Uganda with a microbiology degree from Cornell. he and I will leave for Uganda sometime in January 1999 and the field work should take about one year.

Also, we have contributed a lecture to the Supercourse in Epidemiology that is now on the Internet. It is titled Human-Animal Interactions Part I Zoonotic Diseases

<http://www.pitt.edu/~super1/lecture/lec0301/index.htm>

We have just submitted part II which is on Human Health Benefits of Human-Animal Interactions and are planning part III which will be on Animals as Sentinels of Environmental Hazards for Humans.

Editor's comment: If others would be kind enough to submit news of recently funded grants and a brief abstract describing the project, I would be glad to include items in a new section ("Funded Research") in future issues of the newsletter.

Clinton Wants National Health Database

From: "Edupage", 21 July 1998

The Clinton Administration has been developing a plan to assign every American a unique identification code that would be part of a national database that would track everyone's life-long medical history. Proponents of the plan (including insurance companies and public health researchers) say it would reduce bureaucratic inefficiencies, improve public health, and offer vast opportunities for scientific study. Arguing in favor of the plan, epidemiologist Dr. Christopher Chute of the Mayo Foundation says that the alternative to a national health database is "to rely on folklore and anecdote in health care." But critics of the plan fear it would result in a massive invasion of privacy. A.G. Breitenstein of the Health Law Institute in Boston says, "That information will be irrevocably integrated into a cradle-to-grave medical record to which insurers, employers, government and law enforcement will have access is, to me, exactly what privacy is not. People are not going to feel comfortable going to the doctor, because now you are going to have a permanent record that will follow you around for the rest of your life that says you had syphilis, or depression, or an abortion or whatever else." (New York Times 20 Jul 98)

FSIS Offers Free Newsletter

The USDA Food Safety and Inspection Service (FSIS) publishes a quarterly newsletter on food safety chock-full of good information on various food safety issues. Best news...it's free! You can subscribe by faxing your name and address to: 202-720-9063. Articles in recent editions informed readers of a new CD-ROM for kids from the University of Florida, "Let's Have a Killer Cookout...NOT!" Designed for children in grades 4 through 12, the highly interactive lessons games and quizzes on the CD can be used in a computer lab, library, or students' homes. Other issues contain items about food safety for seniors, safety tips, USDA's Meat and Poultry Hotline, health web sites, and the FSIS "Fight BAC!" campaign.

Vice President Launches Computer Network to Fight Food Borne Illness

From: "The White House" <Publications-Admin@pub.whitehouse.gov>

Washington, D.C. -- Addressing a problem that affects 33 million Americans each year, Vice President Gore announced today a new national computer network that will be five times faster at identifying and combating food-borne illness. PulseNet -- a national computer network that identifies outbreaks of food-borne illness -- will enable public health laboratories across the country to use the Internet to provide alerts when outbreaks of food-borne disease occur.

President Clinton and I are committed to finding ways to ensure that the food Americans put on their tables is safe, said the Vice President, who was joined at a White House ceremony by Health and Human Services Secretary Donna Shalala and Agriculture Secretary Dan Glickman. With this efficient new computer network, we can more effectively trace widespread foodborne disease outbreaks and warn millions of Americans to stay away from contaminated food products.

In as little as 48 hours, PulseNet can identify rogue E.coli strains in foods by identifying the distinctive DNA fingerprints of pathogens found in both food sources and the patients suffering from gastric illness. In 1993, it took three weeks to track an rogue E.coli contamination in hamburger meat produced by single source.

PulseNet will link food safety investigators at the Centers for Disease Control, the Food and Drug Administration, the Agriculture Department, four key area laboratories and state health departments to link directly with the PulseNet database. As of today, epidemiologists in the following states will be on

PulseNet -- Massachusetts, Minnesota, Texas, Washington, California, Colorado, Florida, Georgia, Iowa, New Hampshire, New York, Ohio, Oregon, Utah, Virginia and Wisconsin. The CDC plans to have all states on the network by 1999.

This important Administration initiative will reduce the number of Americans who suffer from episodes of food-borne illness and prevent over 9,000 deaths a year. This initiative is part of the Vice President's effort to reinvent government through partnerships at state and federal agencies and make smart use of the latest technology. The Vice President also announced the formation of FORCG (pronounced Force G), a partnership of federal and state agencies to better respond to food-borne illness outbreaks.

USDA Moves to Dismiss Inspector's Union Lawsuit From: "Food Safety Network" <FSNET-L@LISTSERV.UOGUELPH.CA>

June 22/98
National Meat Association, Jeremy Russell

USDA filed a Motion to Dismiss the American Federation of Government Employees (AFGE) lawsuit challenging HACCP inspection. The Motion argues that the lawsuit is preemptive as FSIS has not even begun testing new procedures for post-mortem inspection, let alone adopting any of them, and so they are not ripe for judicial resolution. The Motion also challenges the union's claim to the standing of "consumers," and therefore their right to file this lawsuit. AFGE will have 30 days to respond. USDA has released two documents in conjunction with this Motion, the first is the motion itself and the second is a declaration by FSIS Deputy Administrator Dr. Mark Mina.

In his declaration Mina describes HACCP as a "new inspection model that will permit [FSIS] to deploy its inspection resources more effectively and will delineate clearly the respective responsibilities of FSIS and the industry. Redeployment resources would be allocated to new in-plant inspection functions associated with oversight, evaluation, and verification of industry implementation of HACCP, and would provide better oversight of controls on meat and poultry after they leave establishments. Under the anticipated approach, FSIS would rely less on after-the-fact detection of product defects and more on verifying the effectiveness of HACCP process controls designed to ensure food safety."

For a copy of both documents send a self-addressed/stamped (\$1.24) large envelope to Ira Perez at NMA-West.

PulseNet (CDC Fact Sheet) - The National Molecular Subtyping Network for Foodborne Disease Surveillance
From: "National Food Safety Educator's Network" <EdNet-L@foodsafety.gov>

PulseNet is a national network of public health laboratories that performs DNA "fingerprinting" on bacteria that may be foodborne. The networks permit rapid comparison of these "fingerprint" patterns through an electronic database at the Centers for Disease Control and Prevention (CDC). The DNA "fingerprinting" method is called pulse-field gel electrophoresis (PFGE). The URL is:

<http://www.cdc.gov/ncidod/dbmd/pulsenet/pulsenet.htm>

HACCP Implementation Update
From: "National Food Safety Educator's Network" <EdNet-L@foodsafety.gov>

Since January 26, 1998, the Food Safety and Inspection Service (FSIS) is requiring that the nation's largest meat and poultry plants implement new science-based Pathogen Reduction and Hazard Analysis and Critical Control Point (HACCP) Systems. The approximately 312 plants now under HACCP regulations represent 75 percent of slaughter production and 45 percent of processed meat and poultry products such as frozen dinners, wieners, or hams. Another 3000 small plants will come under HACCP regulations in January 1999, and the remaining approximately 3000 very small plants will implement HACCP in January 2000. This Update addresses FSIS efforts to refine its HACCP implementation strategy to assist plants coming online or currently operating under HACCP regulations. The URL is:

<http://www.usda.gov/fsis/haccpup2.htm>

National Food Safety Initiative
From: National Food Safety Educator's Network <EdNet-L@foodsafety.gov>

1999 Federal Budget: This web page contains the February 1998 USDA Background titled "1999 National Food Safety Initiative" and the executive summary "Food Safety From Farm to Table: A National Food Safety Initiative" which describes the consolidated multi-agency plan for improving food safety. The URL is:

<http://www.cfsan.fda.gov/~dms/fs-bud99.html>.

"Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables"

On October 2, 1997, President Clinton announced a plan, entitled "Initiative to Ensure the Safety of Imported Fruits and Vegetables", to provide further assurance that fruits and vegetables consumed by Americans imported from other countries meet the highest health and safety standards. In response to this directive, FDA and USDA have issued "Guide to Industry", which addresses microbial food safety hazards on Good Agricultural Practices (GAPs) common to growing, harvesting, packing, and the transporting of most fruits and vegetables that are sold to consumers in an unprocessed or minimally processed (raw) form. The URL is:

<http://www.cfsan.fda.gov/~dms/prodguid.html>

HACCP for Juices: The FDA is proposing to adopt regulations to ensure the safe and sanitary processing of fruit and vegetable juices and juice products. Available in Adobe Acrobat PDF, the URL is:

<http://www.cfsan.fda.gov/~lrd/fr98424a.html>

Labeling for Juices: The FDA is proposing to require warning statements on packaged fruit and vegetable juice products that have not been processed to destroy pathogenic microorganisms that may be present. Available in Adobe Acrobat PDF, the URL is:

<http://www.cfsan.fda.gov/~lrd/fr98424b.html>

MEETINGS, WORKSHOPS & COURSES

See the ATVPHPM Web site at <http://www.cvm.uiuc.edu/atvphpm/> for the most current listings.

International Conference on Risk Analysis in Aquatic Animal Health

Paris, 8-10 February 2000

Office International des Épizooties
World organization for animal health

The OIE has the pleasure to announce that a conference is to be organized on risk analysis in aquatic animals. It will be held at the headquarters of the Office International des Epizooties (OIE) in Paris from 8-10 February 2000 and will represent the first opportunity to bring together experts in this increasingly important field. Keynote presentations will be made by invited speakers from international agencies, national government departments, academic institutions and the aquatic animal trade.

The poorly understood aspects of the life-cycles and survival parameters of fish and shellfish pathogens make the application of risk assessment to even the most studied models difficult. In fact there are certain critical areas, such as diagnostic techniques and the environmental impact of pharmaceuticals, in which research is lacking and risk assessment can be a useful approach in highlighting research priorities for these topics. Consequently, since risk analysis is a tool to help decision makers, there is a current need for a supportive forum in order to help solve the problems reported to have been encountered in carrying out existing risk analysis methods.

The OIE facilities will allow for plenary sessions and a series of discussion groups. The main conference languages will be English and French, with simultaneous translation facilities being provided. The formal sessions will be concerned with:

- The need for risk analysis
- Risk analysis methodology
- Areas of application to aquatic animals (including problems, research needs and environmental concerns)
- Case histories and field studies
- Recommendations and future prospects.

Each session will be introduced by one or more keynote speakers, followed by offered papers. The discussion groups are designed for both experts and non specialists to have the opportunity to share knowledge and exchange points of view on specific problems. Topics for discussion will include diagnostic methods, detection, pathogen survival and infectivity parameters, with the possibility of including other more practical areas, such as the use of 'survival' data, dose-infectivity data and technical aspects which create problems during risk analysis. In addition, there will be an experimental "think tank" that will involve experts in a chosen field assigning probability distributions to pre-determined risk factors. Proceedings of the conference will be compiled in order to reflect the content and purpose of the conference by selecting certain presentations for later publication.

It is also envisaged that a course on Risk Analysis for Aquatic Animals will be held immediately before the main conference. This would be a completely

independent fee-paying course in a central Paris location for a limited number of participants which will be designed to deal with more practical aspects of risk analysis appropriate to fish and shellfish.

The content of the conference will be particularly relevant to national and regional authorities concerned with movements of aquatic animals or their processed products. In addition, specialists in aquatic animal health, aquaculture associations and individuals involved in risk analysis will benefit from the varied conference content.

A registration fee of 2000 French Francs will include the abstracts book and a copy of the published proceedings. The second conference announcement and call for papers will be in November 1998. In the meantime, further details can be obtained from:

Dr. K. Sugiura, OIE Secretariat, 12 Rue de Prony, 75017, Paris, France. Tel: +33 1 44 151888; fax: +33 1 42 670987; e-mail: k.sugiura@oie.int.

National Poultry Waste Management Symposium

The National Poultry Waste Management Symposium will be held October 19-21, 1998 in Springdale, Arkansas. The program is international in scope and will address nutrient management and nutrient distribution; toxic dinoflagellates (Pfiesteria); nutrient input/output relationships when creating regulations; animal feeding operations and emerging EPA issues; composting; burning animal and processing residuals for electricity; co-utilization of agricultural and municipal resources; nutrient management planning; food safety and recycle nutrients; influence of HACCP on waste management issues; litter treatments; soil health issues; nutrition issues; production issues; egg and meat processing issues; effluent guidelines and many other topics. The Symposium will enlighten attendees on issues related to poultry production and environmental quality.

The entire program, registration forms, and accommodation information are available on the Web at:

<http://www.uark.edu/depts/posc/WMSPROG.HTML>

From Farm to Table: Safe Food for America A Symposium on Shared Responsibility

Ohio State University Extension is sponsoring two events to celebrate National Food Safety Month. The first event is a satellite program on September 22,

1998 broadcasting at 2:30 pm EDT. The 2nd event is a 2 1/2 day symposium to be held here in Columbus, Ohio.

The titles of both events are "From Farm to Table: Safe Food for America--Shared Responsibility." The purpose of the programs is to promote awareness of the shared responsibility of the food industry and consumers for the safety of the food supply.

On-line registration for the symposium and downlink site information for the satellite program is available via the web at:

<http://www.ag.ohio-state.edu/~nutrext>.

The official e-mail address for both events is safefood@hec.ohio-state.edu.

This symposium's GOAL is to promote awareness of the shared responsibility of the food industry and consumers for safety of the food supply.

Primary Sponsors: The Ohio State University and Ohio State University Extension

When: September 27, 28, and 29, 1998

Where:
Columbus Marriott Northwest
5605 Blazer Parkway
Dublin, Ohio 43016

Interested groups will include:

- Food Producers
- Food Processors
- Food Retailers
- Hospitality and Tourism Professionals
- Food Inspectors and Regulators
- Health Professionals
- Extension Professionals
- Educators
- Consumer Advocates

Registration Fee is \$100 for 2 1/2 days. Fee includes two evening receptions, continental breakfasts, and lunches. To Register On-line and for more information: <http://www.ag.ohio-state.edu/~nutrext>

The official e-mail Address for the Symposium:
<Safefood@hec.ohio-state.edu>

If you have additional questions, please contact
Dr. Lydia C. Medeiros
Voice: 614-292-2699
FAX: 614-292-8880
E-mail: <medeiros.l@osu.edu>

Mary Kershaw
Voice: 614-292-3538
FAX: 614-292-8880
E-mail: <kershaw.2@osu.edu>

Tentative Schedule of Events

Sunday September 27, 1998

1:00pm Registration opens
4:00pm Opening session: From Farm to Table -
Sharing Responsibility for Food Safety
5:30pm Trade Show begins
5:30-7:30pm Opening reception

Monday September 28, 1998

7:30am Continental Breakfast
8:00-9:00am General Session: How Safe is Your
Food?
9:00 - 12:00 Breakout Sessions
Rolling Break beginning at 9:45
10:00am Trade show opens

- Pre-Harvest
- Post Harvest
- Retail
- Consumers
- How Safe is Your Food? - A Look at Problems
and Priorities on the Farm. Meat, Milk, Eggs, Fruits
and Vegetables, Grains, Seafood and Fish Minimally
Processed Fruits and Vegetables Seafood HACCP
- Safety and Cider
- Commit to Food Safety
- Bare Hand Contact
- Streamlining Food Safety Regulation in Ohio
- Teaching Food Safety to Retail Grocery
Employees Understanding Media Messages
- Education Programs that Work
- Food Safety and Cultural Practices
- What's Hiding in Your Grocery Bag?

12:00 Lunch Communicating Food Safety with the
Public: The Kroger Experience
Breakout 1:30-2:15pm

- You Feed Your Animals What?
- What Will it Cost You If You Don't? Responding
to Consumer Concerns
- Consumer Concerns About Biotechnology

Breakout 2:20-3:00pm

- Understanding Guerrilla Tactics of the Media, or
How to Become Media Savvy the Devil in the Deli
- Can Your Kitchen Pass a Food Inspection?

3:15-4:15pm General Session: How One Company
Survived a Food Borne Illness Outbreak
4:30pm Trade Show continues
4:30pm Poster Session
5:30-7:30pm Reception

Tuesday September 29, 1998

7:30am Continental breakfast
8:00-9:30am Mini-symposiums

Session 1: There're Bugs in My Food
Session 2: Working with Media in a Crisis Situation
9:30am Hot beverage break
10:00-11:30am Mini-Symposiums
Session 3: Risk Communication
Session 4: Social Marketing and Food Safety
Education
11:30am Lunch
1:00-2:30pm Mini-Symposiums
Session 5: Food Safety Research Update
Session 6: Designer Food Ingredients
2:30-4:00pm Closing General Session:
Food Safety Practices Along the Food Chain 4:00
End Symposium

Call for Posters

From Farm to Table: Safe Food for America
A Symposium on Shared Responsibility

The goal of the symposium is to promote awareness
of the shared responsibility of the food industry and
consumers for safety of the food supply. Abstracts
for posters are being requested for all topics
surrounding the safety of the food supply from pre-
harvest to consumers. Each poster must fit on a 4" X
8" display board and must be attended by presenters
during a designated presentation period.

Presentation Type

Abstracts will be judged according to these criteria:

- Research: The abstract will be judged on statement
of purpose or objectives, use of theory and prior
research, study design, methods for data collection and
analysis, and potential application of results.
- Program: The abstract will be judged on statement
of purpose or objective, use of theory or research;
description of program intervention (including
materials developed and used), description of
implementation and evaluation, and potential
usefulness to other educators.

Rules for Submission

Postmark deadline must be met. The Abstracts
Review Committee will review and select abstracts
based on the judging criteria under Presentation Type.
The contact author will be notified of acceptance or
rejection by September 1, 1998. Presenters must be
registered participants at the symposium. Presenters
will be responsible for all personal expense related to
the meeting, including registration fees. Authors are
responsible for providing a substitute presenter if the
author is unable to present.
No materials for sale are allowed at any presentation.
(Order forms for materials to be purchased at a later
date may be provided).

Submission Instructions

Abstract must be only one paragraph and no more than 250 words (not including title or authors). All abstracts must include any funding sources. It should be the last sentence of the abstract. Title should be all caps with a period at the end. Presenters name should be underscored. Complete one Abstract Submission Form for each abstract. Submit your abstract one of two ways:

- E-mail Submission. Deadline for all e-mail submissions is August 15, 1998. Send to Kershaw2@postoffice.ag.ohio-state.edu Use a 3.5 inch disk, using Wordperfect or Microsoft Word.
- Postmark deadline is on or before August 15, 1998

Postmark or E-Mail deadline on or before August 15, 1998

Send to: Abstracts
Ohio State University
315 Campbell Hall
1787 Neil Avenue

Columbus, Ohio 43210-1295
<kershaw2@postoffice.ag.ohio-state.edu>

17th European Course in Tropical Epidemiology – Sept 7-19, 1998

The "Seventeenth European Course in Tropical Epidemiology" (ECTE) will take place in Lisbon September 7-19, 1998. The information details of the course are available at :

<http://www.ihmt.unl.pt/epitrop98.htm>

or E-mail: academica@ihmt.unl.pt
(SEE the Spring/ Summer 1998 ATVPHPM Newsletter for details)

Modern Approaches to the Epidemiology and Control of Infectious Disease - September 7-25, 1998

<http://tonsillitis.zoo.ox.ac.uk/course/default.htm>

(See the Spring/ Summer 1998 ATVPHPM Newsletter for details)

Supercourse in Epidemiology, the Internet and Global Health

(See the Spring/ Summer 1998 ATVPHPM Newsletter for details)

ISVEE 2000

From: "Salman Mo" <msalman@vagus.vth.colostate.edu>

(See the Spring/ Summer 1998 ATVPHPM Newsletter for details)

POSITIONS AVAILABLE

See the ATVPHPM Web site at <http://www.cvm.uiuc.edu/atvphpm/> for the most current listings.

Veterinary Epidemiologist/ Statistician

Animal Health Trust, Epidemiology Unit
Centre for Preventive Medicine
(See the Spring/ Summer 1998 ATVPHPM Newsletter for details)

Faculty Position - Epidemiologist

The College of Veterinary Medicine at Michigan State University invites applications for a faculty position in analytical epidemiology.
(See the Spring/ Summer 1998 ATVPHPM Newsletter for details)

SUGGESTED READING

Elwood / Critical Appraisal of Epidemiological Studies and Clinical Trials, 2nd Edition.

Oxford University Press Inc, 1998, \$42.50.
ISBN: 0192627449.

Fairbanks / Case Studies in Community Health.

Sage Publications, 1998, \$19.95.
ISBN: 0761914056.

Krause / Emerging Infections.

Academic Press Inc, 1998, \$84.95.
ISBN: 0124259308.

Rothman / Modern Epidemiology, 2nd Edition.

Lippincott – Raven Publishers, 1998, \$65.00.
ISBN: 0316757802. <<< 3 Stars >>>

Rosner / Evidence-Based Family Medicine.

BC Decker, 1998, \$52.00.
Distributor: Blackwell Science Inc.
ISBN: 1550090534. <<< 4 Stars! >>>

Wilcox / Public Health Sourcebook.

Omnigraphics Inc, 1998, \$78.00.
ISBN: 0780802209.

Herwaldt / A Practical Handbook for Hospital Epidemiologists.

Slack Incorporated, 1998, \$60.00.
ISBN: 1556423020.

Palmer / Zoonoses.

Oxford University Press Inc, 1998, \$250.00.
ISBN: 019262380X.

Veterinary Laboratories for Infectious Diseases: A New Publication

From: "Stu Macdiarmid"
<macdiarmids@maf.govt.nz>

A new publication has just been released by the OIE.

Veterinary Laboratories for Infectious Diseases
Scientific and Technical Review, Vol. 17 (2), August 1998

The Office International des Epizooties (OIE) is currently setting standards for the infrastructure and quality assurance of Veterinary Services in relation to international trade, and one of the key components of the infrastructure, especially as it relates to trade, is the veterinary laboratory. This special issue of the Scientific and Technical Review of the OIE provides an overview of the structure of veterinary laboratories that work with infectious diseases, addresses the role, organization and functions of these laboratories * the activities and role of research, vaccine control and diagnostic laboratories, the functions of national laboratories * and discusses the role of laboratories within the sphere of international trade.

The standardization of laboratory techniques has acquired greater international significance since the OIE was designated to provide the animal health criteria for international trade by the World Trade Organization *Agreement on the Application of Sanitary and Phytosanitary Measures*. Several papers in this volume examine important aspects of standardization, namely: quality assurance, test validation, international reference standards and enzyme-linked immunosorbent assay (ELISA) formats. The guidelines for laboratory quality evaluation, international reference standards for antibody assays and laboratory proficiency testing, developed by the OIE Standards Commission between 1995 and 1998, are also included in this issue. Since the beginning of the 20th Century, most significant achievements in the control of certain infectious diseases of animals, such as new vaccines, vaccination methods, diagnostic techniques for pathogenic agents and antibody detection techniques, have been the result of the work of veterinary laboratories. The work of these laboratories is likely to become even more critical in the future as the development of new technologies strengthens their capacity for diagnostic, vaccine control and research work. Trade-related activities will also expand to include not only the traditional function of testing animals for export but also surveillance and monitoring testing to conform with new international requirements for the recognition of disease-free areas, risk assessment and regionalization.

Volume 17 (2) of the Scientific and Technical Review offers a total of sixteen papers by twenty-one authors and co-authors recognized internationally for their expertise in the field of veterinary laboratories for infectious diseases.

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