

Therefore, questions that should be asked when designing a bovine vaccination program to get optimal immunity would include the following:

1. What is the earliest age to vaccinate?
2. How often should the first series of vaccinations be administered?
3. Which vaccines are necessary?
4. What type of vaccine should be used?
5. What route of vaccination is most effective?
6. How often does the animal need to be revacci-

7. nated after the primary series of vaccines?
8. What is the efficacy of current vaccines against challenge?
9. What are the risks of the vaccine causing economic loss?
10. Are vaccines being used that aren't needed?
11. What can we expect in the future?

Each of these questions will be addressed in the presentation.

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## Abstracts

### Prognostic indicators for toxic mastitis in dairy cows

**M. J. Green, P. J. Cripps, L. E. Green**  
*Veterinary Record* (1998) **143**, 127-130

During a three-year study, 54 cows with toxic mastitis were examined and a number of clinical and laboratory measurements were taken. Twenty-five (46.3 per cent) of the cows died, and in comparison with those which survived, they had a significantly higher packed cell volume (PCV) ( $P < 0.01$ ), longer eyelid skin tent time

( $P < 0.01$ ) and lower rectal temperature ( $P < 0.01$ ). In a model designed to predict the probability of survival, these variables correctly predicted survival in 84 per cent of cases and death in 73 per cent of cases. The cows with toxic mastitis had a significantly higher PCV than a normal cohort of cows sampled at the end of the study.

### Cattle-to-cattle transmission of *Mycobacterium bovis*

**E. Costello, M. L. Doherty, M. L. Monaghan, F. C. Quigley, & P. F. O'Reilly**  
*Veterinary Journal* (1998) **155**, 245

Twenty steers which were positive to the single intradermal comparative tuberculin test were divided into 10 groups of two, and each pair was housed in an individual loose-box for a year with one steer which was negative in the tuberculin test. Five of the groups were fed a restricted diet for part of the time. All the cattle were then slaughtered and examined postmortem. Four of the in-contact animals became infected; one had a

tubercle on a retropharyngeal lymph node, and *M bovis* was isolated from the other three from lymph nodes which showed no visible lesions. Two of the latter animals showed no detectable cell-mediated immune response. There was no indication that the dietary restriction had any effect on the transmission of the disease.