To have a healthy and well-developed heifer come into milk production, correct organization during raising is critically important. The first three months of life are formative for good health. It begins with the provision of sufficient colostrum. What are the next steps in realizing a healthy growth? In its management series this month, HI focuses on different methods and products which promote strong development of heifers.

O n the dairy farm of Roderick Chung in Sabah, East Malaysia, 80 cows are being milked. In East Malaysia, there are about 100 dairy farms, and the average number of milking cows is between 20 and 30. ‘In terms of knowledge, there is still a lot of room for gains among dairy farmers here,’ begins Chung. ‘In 2010, with the support of the government, a good start was made.’ Jeanette Fisher from the Australian advisory office Heifermax worked in Sabah for a week. She provided dairy farmers with a lot of practical information in the form of workshops. The period from calving to breeding was covered during these workshops. ‘The mortality rate among calves was especially high. This was caused, for the most part, by lack of knowledge. Scientifically based advice which was explained very practically, made it clear that especially the first few hours need to be carefully managed,’ explains Chung. ‘Providing a clean maternity area, feeding colostrum immediately, and disinfecting the navels, all contributed right away to better results. Especially improvement in the mortality rate of the calves was soon evident. Investing in calves may not have immediate results, but it certainly has an impact over the long term,’ comments Chung.

In 2007, Jeanette Fisher established the on-farm advisory service Heifermax and offers her services internationally. ‘I noticed that there was a lack of up-to-date information among farmers and there was clearly a lot of demand,’ says Fisher. ‘The larger the dairy farm, the more important it becomes to organize and manage the entire young stock unit as a whole. From the very beginning, it involves having a clean maternity area and sufficient colostrum intake. But where I often also see opportunities for improvement is the period directly after weaning. Often the calves experience a major setback. To save time, a lot of changes are made in the span of one day. Such as moving the calves, feed changes, vaccinating, and dehorning. For the young animals, this is too much change in a short amount of time. Farmers need to accept that their animals become sick,’ explains Fisher. ‘Ensuring gradual transitions, and not weaning too young, have positive impacts on the lifetime production of the animals.’

TOP QUALITY FEED
That many calves have a difficult time after weaning is confirmed by Herbert Bouwens, general manager of Alpuro Breeding. ‘On about 40% of dairy farms, calves struggle after weaning. They no longer receive any milk and thus take in less energy. Abrupt weaning also has negative effects on the rumen. It gets upset and calves become thin and lose their shine,’ explains Bouwens. ‘Our advice is to gradually reduce the amount of milk when the calves consume 2 kg of concentrate daily. Once the calves eat about 3 kg of concentrate (calf starter), they can be weaned completely. For the period after 3 weeks, we provide a follow-up pellet. This works well with coarse hay and ensures healthy rumen flora. Once the calves are 6 months old, it is important not to feed them too much energy anymore, to prevent them from becoming too heavy. So no more concentrate, but high-quality forage instead.’ Dairy farmer Wim Pauw, in the Danish Ventonbaek, has 385 milking cows and about 300 head of young stock. ‘Young stock and dry cows require the best care. If you want well-developed two-year-olds, then you need to provide top quality feed,’ emphasizes Pauw. ‘From birth to the first calving, optimal conditions are necessary. That is the case for feed, but excellent housing is also very important. My experience is that calves that have had problems with their lungs or intestines experience permanent damage. To treat diarrhoea, I use Axitol and Alprotect from Alpuro Breeding and the calves respond really well. Alprotect is a vitamin booster on a herbal basis as an aid against Cryptosporidium and Coccidiosis. Last year, of the calves born alive, 2 died, and this year, so far, 1; to me, an indication that it is working well,’ says Pauw.

PREVENTIVE VACCINATING
Immediately after birth, calves are exposed to pathogens but their immunity still needs to develop. For that reason it is very important to have high levels of hygiene around calving and the period thereafter. The air-borne illness bovine respiratory disease (BRD), is one of the most severe diseases among animals. BRD is a general term for air-borne diseases and can be caused by different factors. One way of reducing risk is vaccinating the calves. ‘We vaccinated the calves immediately after birth to prevent BRD,’ says Barb Ziemba from Woodcrest Dairy in New York, US. The 2700 heifers that are raised stay at 6 different locations. ‘In order to manage everything well, we have an established schedule with fixed ages for vaccinating the calves. All the vaccinations that we use are from Zoetis. On the second day of life, calves receive the vaccine Inforce 3 against BRD. When the calves are moved to individual calf hutches, they are vaccinated with Draxxin. We do this a second time before weaning.’ This vaccine helps protect against three viral pathogens that cause lung infections. ‘When the calves are 4 to 5 months old, we vaccinate with Bovi-Shield, which is repeated at 7 months. Preventative vaccinating seems to work well for our animals. In any case, it helps to control respiratory problems. But in addition to vaccination, we ensure a good and clean start, and feeding remains the most important aspect of all,’ shares Ziemba.

To fully realize the genetic potential of young stock, good and sufficient feeding is critically important. At Zoetis, it is not just about providing a wide range of products, it is equally important to provide good information and support to the customer. ‘We want farmers to have the knowledge to make good management decisions,’ explains Matthew Nelson, senior marketing manager of the Calf & Heifer Division at Zoetis. ‘A calf is born with her genetic potential. But to have this potential come to full expression it is necessary from the time of birth to have everything in good order. Today farms are a lot larger and knowledge in the area of calf-raising is much more specialized. In addition, the focus on calf-raising among dairy farmers is substantially improved compared to 20 years ago. Farmers maintain much better records: For example, disease recording, stature, weight, and feed intake (kg) by the animals. This data provides us with feedback on the raising of calves. With this insight, it becomes possible to make well-informed decisions,’ emphasizes Nelson.

HIGHER FEED CONVERSION
Dr. Gene Boomer, Manager of Field Technical Services at Arm and Hammer Nutrition, also mentions that during the last 2 years he has seen more awareness of the necessity of good feeding for young stock. ‘If you want the full genetic potential of the calf to be utilized, then you need to invest in high quality and sufficient feeding,’ underscores Boomer. ‘Investing in good and sufficient nutrition in the first 50 to 60 days of life for calves, gives better results in the long term. For stimulating rumen development, Arm and Hammer Nutrition has developed a support product. The product Fermenten provides the building blocks needed for rapid and optimal bacterial protein production in the rumen. This boosts feed conversion in growing heifers. In addition, the product helps animals realize growth potential faster. Calves that grow faster often reach the desired weight and stature for breeding earlier. From experience, we know of dairy farms where the heifers are calving at 22 months of age. The younger a heifer starts milking, the lower the raising costs. These results clearly indicate that investing in raising calves and heifers helps utilize the genetic potential,’ concludes Boomer.