Management of the young horse in the key periods of his life

On the stud farm, a young horse goes through several key periods. Some periods are potentially stressful, and can have immediate negative effects (weight loss, injury, aggressivity…) or they can influence future behaviour (behavioural problems : stereotypies, lack of social adaptability…). Most stereotypical behaviour, or stable vices, appear before the age of 18 months. A study has shown that 18 % of young animals demonstrate signs of cribbing, weaving, or box-walking (Waters *et al.*, 2002). These key periods must therefore be managed as well as possible so as to reduce stress, and avoid compromising their future sports career.

By **Claire NEVEUX - Marianne VIDAMENT** -| 05.03.2019 |

Technical level

Fillies out at grass

Birth

Foaling in a loose box

The first half an hour after birth is considered to be a **critical moment for creating mother-foal ties** (Houpt, 2002). During this period, the mare identifies the foal as hers thanks to exploratory behaviour (by sight, sound and smell). The foal's attachment to his mother is not completed until the second week of his life. It is therefore preferable to keep them seperate from the group, in a small paddock during this period.

A post-natal manipulation technique called « **impregnation »**, is sometimes implemented with a view of making the foal easier to handle by man as he grows (Miller method). However, long and short term relationship to man have been put into perspective by other researchers. It would appear that this method can have damaging consequences on the foal's later social behaviour (over attachment to the mother, lack of playful behaviour, fewer social skills, aggressivity towards other horses) and on the foal's relationship to man (Henri *et al.*, 2010). Other usual human intervention around foaling have also been studied. Thus helping the foal suckle (helping him find the teats, holding his head…), and stroking in his first days have negative consequences on the future man-horse relationship (mistrust) (Henry *et al.*, 2006 et 2010).

Consequently, **any intervention on the foal immediately after birth should be kept to a minimum** (injections, disinfecting the umbilical cord, administering a serum), especially for the first 30 minutes after birth.

Between foaling and weaning

In order to build a trusting relationship with the foal, man should have a positive interaction with him, and not one systematically associated with unpleasant situations. Indirect approaches appear to work best, especially with very young animals. It has been shown that the young foal's behaviour towards man is influenced by his mother's behaviour, and that taming the mother allows to tame the foal. Thus, when the mother is handled (putting on a headcollar), and groomed with the very young foal left free around his mother, he shows a more inquisitive behaviour towards man and allows himself to be approached and touched at the ages of 1 month and 1 year (Henry, 2005). The same is true if the foal is exposed to unknown objects, which his mother was accustomed to before foaling : the foals are usually less apprehensive at the age of 5 months (Christensen, 2016).

Weaning

Percheron foal suckling

In the wild, weaning occurs at around 40 weeks, about a month before the mare is due to foal again. But the ties between mare and foal are not entirely severed, and the foal remains close to his mother until he reaches the age of two approximately. **On the stud farm, weaning usually takes place between the ages of 4 to 6 months, and is a highly stressful situation which can lead to various physical problems** (injuries, weight loss) and **behavioural problems** (this period is often when stereotypical behaviour appears).

Several methods can be used to minimise stress during this period (Houpt *et al.*, 1985 ; Hoffman *et al.*, 1995 ; McCall *et al.*, 1987 ; Wulf *et al.*, 2008). (See the fact sheet : **How to go about weaning the foal?**)

- **Weaning in a group and in a paddock** is preferable to weaning the foal alone in a stable;
- If **weaning in a stable** is the option chosen, the **young animals can be weaned two by two**, but take care to watch out for aggressive behaviour and act in consequence;
- **Partially seperating mare and foal** (they can see, hear and touch over a separation, but the foal cannot suckle), is probably preferable to an abrupt separation (the mare is taken away to another place). Recent studies have shown that partial and gradual separation over a gate or fence, associated with distribution of feed, reduces the foal's stress when weaning (Lansade, 2016);
- **Taking the mares out of the group one by one** with a few days between each removal, appears to create less stress than removing all the mares the same day;
- It is aso advisable to **start giving adapted concentrated feeds** before weaning, with a mineral supplement to help combat the stress of separation.

Obviously, the method chosen for weaning will be adapted to each stud's infrastructure, the type of horse, and breeding practices….

Following weaning, the foal's living conditions are important. For good behavioural development, **it is better to keep foals in groups and at grass** (Heleski *et al.*, 2002).

In practice, young horses are often kept in groups, sometimes mixed sex groups, but of the same age. A study has recenty shown that it is of benefit to **include adult horses** in the groups (chosen for their docility), as this enhances positive social ties right from weaning (Bourjade *et al.*, 2008; Henry, 2012). It is also demonstrated that young males are more aggressive towards other horses after an isolation period (Christensen *et al.*, 2002). It is therefore recommended **to keep them in the group for as long as possible.**


Weaned foals at grass

It is interesting to note, that the day following weaning, or being stabled, the foal is more receptive to being handled, or to learning from man (Lansade, 2012). Moreover, anything learned at weaning appears to have a more lasting effect than anything learned just after birth (Lansade, 2004; Lansade, 2005).

The transition to adulthood

Depending on the breed and usage, the young horse is subjected to **transition periods between breeding and competition**, be it **preparation for the sales**, for **breaking-in**, or for **pre-training.**


Youngster being broken-in, ridden on the lunge

All these periods give rise to stress, and can lead to risks for the young horse, and carers looking after them. To make the transitions easier, the young horse's daily life can be enhanced with **environmental improvements** : **feeding** (changing the feeding area, stimulating taste…) **Changing environment** (accomodation), **stimulating the senses** (sight, touch, hearing and smell) and new situations (isolating the horse when being showered down...) (Lansade *et al.*, 2011).

Thus, a programme of environmental enrichments was implemented for a group of thoroughbred yearlings during their preparation for the sales. Positive results were apparent : lesser stress when socially isolated in an unknown place (stables at the sales) and decrease of dangerous behaviour (rearing, spooking, biting...).

During breaking-in, the way the horses live is very important. They appear better adapted to training when they live in groups (paddocks or group stabling) and less aggressive towards man (Rivera *et al.*, 2002; Sondergaard et Ladewig, 2004).

Remember

The different methods presented in this fact sheet stem from scientific research and enable breeders to **minimise the risks inherent to these key periods, and to better prepare the young horse for his future career.** Different especially stressful key periods are detailed here, but remember that any unusual action (vet, farrier, transport) can give rise to stress. It is important to remain watchful and to adapt to each young horse and to each new situation.

About our writers

- **Claire NEVEUX** Ingénieure de recherche en bien-être équin - Ethonova
- **Marianne VIDAMENT** Docteur vétérinaire - ingénieur de développement IFCE

Bibliography

- **BOURJADE M., MOULINEAU M., HENRY S., RICHARD-YRIS M.A. et HAUSBERGER M.**, 2008. Could adults be used to improve the social skills of young horses, Equus caballus ? *Developmental Psychobiology*, 50, pages 408-417.
- **CHRISTENSEN J.W., LADEWIG J., SØNDERGAARD E. et MALMKVIST J.**, 2002. Effects of individual versus group stabling on social behaviour in domestic stallions. *Applied Animal Behaviour Science*, 75, pages 233-248.
- **HELESKI C.R., SHELLE A.C., NIELSEN B.D. et ZANELLA A.J.**, 2002. Influence of housing on weanling horse behaviour and subsequent welfare. *Applied Animal Behaviour Science*, 78, pages 291–302.
- **HENRY S., RICHARD-YRIS M.A. et HAUSBERGER M.**, 2010. Faut-il manipuler le poulain nouveau-né ? Les effets à court et long termes de l'imprégnation et de l'assistance humaine lors de la première tétée. 36ème Journée de la Recherche Equine, Ifce, pages 153-160.
- **HENRY S., RICHARD-YRIS M.A. et HAUSBERGER M.**, 2006. Influence of Various Early Human–Foal Interferences on Subsequent Human–Foal Relationship. *Dev. Psychobiol.*, 48, pages 712-718.
- **HENRY S., HEMERY D., RICHARD-YRIS M.A. et HAUSBERGER M.**, 2005. Human–mare relationships and behaviour of foals toward humans. *Applied Animal Behaviour Science*, 93, pages 341-362.
- **HENRY S. et HAUSBERGER M.**, 2015. Synthèse sur les influences maternelles de la naissance au sevrage et applications aux conduites d'élevage. 41ème Journée de la recherche équine, Paris.
- **HENRY S., ZANELLA A.J., SANKEY C., RICHARD-YRIS M.A., MARKO A. et HAUSBERGER M.**, 2012. Unrelated adults may be used to alleviate weaning stress in domestic foals (Equus caballus). *Physiology and Behavior*, 106.
- **LANSADE L., LEVY F., YVON J.M., GUETTIER E., REIGNER F., BOUVET G., SOULET D. et VIDAMENT M.**, 2016. Le sevrage : quelles sont les recommandations issues de la recherche équine ? 42ème Journée de la Recherche Equine « Bien-être des équidés », Paris, pages 87-94. Article en accès libre dans la médiathèque de l'Ifce.
- **LANSADE L., BERTRAND M., BOIVIN X. et BOUISSOU M.F.**, 2004. Effects of handling at weaning on manageability and reactivity of foals. *Applied Animal Behaviour Science*, 87(1/2), pages 131-149.
- **LANSADE L., BERTRAND M. et BOUISSOU M.F.**, 2005. Effects of neonatal handling on subsequent manageability, reactivity and learning ability of foals. *Applied Animal Behaviour Science*, 92(1/2), pages 143-158.
- **LANSADE L., NEVEUX C. et LEVY F.**, 2012. A few days of social separation affects yearling horses' response to emotional reactivity tests and enhances learning performance. *Behavioural Processes*, 91(1), pages 94-102.
- **LANSADE L., NEVEUX C., VALENCHON M., MOUSSU C., YVON J.M., PASQUIER F. *et al.***, 2011. Enrichir l'environnement des chevaux permet d'améliorer leur bien-être, de diminuer leur émotivité et d'augmenter la sécurité des manipulateurs. 37ème Journée de la Recherche Equine, Paris, pages 33-41.

- **CHRISTENSEN J.W.**, 2016. Early-life object exposure with a habituated mother reduces fear reactions in foals. *Animal Cognition*, 19(1), pages 171-179.