Safflower (Carthamus tinctorius L.), usually grown as a source of oil crop, can be used as fodder either for hay or ensiling purposes, particularly in semi-arid regions. A 2-year trial was conducted in southern Italy to evaluate the production and forage quality of safflower biomass cv. Centennial, harvested at three different stages: 1, at complete appearance of primary buds (PB); 2, at complete appearance of secondary and tertiary buds (STB); and 3, at 25% of flowering stage (FS). For each stage of growth, 50% of the biomass was ensiled in 4 L glass jars without and with inoculation (Lactobacillus plantarum, LAB), and the other 50% was field wilted for 24 h before ensiling. Dry matter (DM) content and yield (DMY), pH, buffering capacity (BC) and water soluble carbohydrates (WSC) were determined on fresh forage. On safflower silages were also evaluated ammonia-N, crude protein (CP), fibre fractions, fat, lactic and acetic acids, Ca and P, and gas losses. DMY ranged from 4.5 t ha\(^{-1}\) (PB harvesting) to 11.6 t ha\(^{-1}\) (FS harvesting). DM content varied from 129 g kg\(^{-1}\) (PB not wilted) to 630 g kg\(^{-1}\) (FS wilted). The WSC in forage before ensiling with not wilting ranged from 128 (PB stage) to 105 and 100 g kg\(^{-1}\) DM at STB and FS stages, respectively. The wilted safflower forage showed a lower WSC compared to wilted forage. The high sugar substrate allowed lactic acid fermentation and a good conservation quality in all the harvesting stages. Silages quality was strongly influenced by the treatment performed. Wilting practice increased DM, pH and NDF contents but reduced lactic acid, acetic acid and NH\(_3\)-N values. Inoculation reduced DM, pH and NDF contents, but increased lactic and acetic acids, CP and ash. As result, wilting the forage for 1 day was very effective in the early harvesting stage because this practice significantly increased DM, reducing on the same time the intensive fermentation and proteolysis processes of silage. When harvesting is performed at the beginning of the flowering stage wilting is not necessary [Eugenio Cazzato, Vito Laudadio, Antonio Corleto and Vincenzo Tufarelli (Vincenzo Tufarelli, Department of Animal Production, University of Study of Bari, Strada Prov. le per Casamassima, km 3, 70010 Valenzano, Ba, Italy.). Journal of the Science of Food and Agriculture, 2011, 91(12), 2298-2302].

For a long time potatoes were a basic constituent in swine fattering. The changes in market expectations caused changes in the animal production and domination of swine races with high meat yield. This caused marginalization of the potato-fattering. However for native races of swine with lower meat yield and weight gain applying in the fattening the appropriate amount of potatoes has a positive effect on a quality of the meat. Growing interest with the traditional fattening of pigs from the side of breeders induces the prospectings of new solutions in applying and the preservation of potatoes as fodder. During fattering swine with raw potatoes one observes frequent poisonings likewise they are poorly digested. Freshly steamed potatoes are the best form of applying as fodder. Ensilaging of steamed potatoes is an alternative. The silaging of potatoes improves the tastiness and the bio-availability of nutrients. Moreover steamed and silaged potatoes enable supplying sufficient amount of fodder to pigs during all the year at slight losses in the storage. Labour incurred for preparing such fodder is smaller than in case of every steaming. In a dry mass of potato tubers of starch varieties starch constitutes from 70 to 75% depending on the variety. Crude protein constitutes 9% and a half of it is the true protein. Such content causes, that silaging of potatoes is a very effective method of preservation for the long period of time. The potatoes silage has a low nutritional value because of the low protein content. It is recommended to make combined silages, with the addition of green fodder from papilionaceae plants. Bitter lupin seeds can be also an addition enriching potato silages with protein. The high alkaloids content in seeds and their inattractive taste makes possible the cultivation of bitter lupin in the areas with high intensity of wild animals damages. The main purpose of this work was determination of possibility of potatoes silaging with the addition of bitter lupin (Lupinus angustifolius cv. Mirela) seeds with 2, 85% alkaloid content in the
destination of increasing the protein content. Obtained silage of steamed potatoes with 15% addition of the lupin seeds had the higher crude protein content (3.56%) than the control silage (2.54%). Similarly silages with 7.5% and the 15% addition of kibbled seeds had the higher crude protein content (respectively 3.57 and 5.06%) than the control silage. However kibbled bitter lupin seeds addition negatively affected on the potato silage, since a content of the butyric acid increased in compare with control silage and silage with the addition of unribbled lupin seeds [Gulewicz, P.; Mikołajczak, J.; Górska, A.; Nyske, P.; Gulewicz, K., *Biologia i Hodowla Zwierzat*, 2011, 62(580), 177-188].

*NPARR* 3(1), 2012-020, **The cactus effect: an alternative to the lupin effect for increasing ovulation rate in sheep reared in semi-arid regions?**

The present study evaluated the effects of supplementation with cactus cladodes on follicular dynamics and ovulatory response of sheep reared in semi-arid areas. A total of 76 ewes were distributed into two equal groups supplemented with either concentrated feed or cactus cladodes. After 30 days of supplementation, no differences were found between feeding regimens on the final live weight (LW; 41.5 ± 0.6 and 42.1 ± 0.7 kg in the Concentrate and Cactus groups respectively) and body condition score (BCS; 1.8±0.3 and 1.8±0.4 for Concentrate and Cactus group respectively). Moreover, no differences were found between the initial and the final values of both LW and BCS; thus, there were no effects of supplementation on any of both parameters. Analysis of follicular population showed that, during the follicular phase induced by ram effect, the number of follicles reaching ovulatory size increased in both groups. However, the number was always higher in Cactus ewes and, at oestrus, Cactus ewes had 1.6±0.2 and Concentrate sheep had 1.2 ± 0.2 large follicles (p<0.05). Thereafter, ovulation rate was affected by duration of supplementation; being higher in sheep fed with cactus for 6-10 days (1.7±0.1) than in ewes supplied with cactus for more than 11 days (1.3±0.1; p<0.05), in sheep fed with concentrate for 6-10 days (1.2±0.1; p<0.01) and even than in individuals subjected to classical flushing with concentrate (1.3±0.1; p<0.05) [M. Rekik, A. Gonzalez-Bulnes, N. Lassoued, H. Ben Salem, A. Tounsi, I. Ben Salem* and A. Gonzalez-Bulnes (Departamento de Reproduccion Animal, INIA, Avda, Puerta de Hierro s/n. 28040, Madrid, Spain), *Journal of Animal Physiology and Animal Nutrition*, 2012, 96 (2), 242-249].