Automatic weighing as an animal health monitoring tool on pasture

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The goal of this project is to develop a novel method for animal health monitoring for grazing cattle. It will be based on a system for unmanned automatic precision weighing when kept on pasture, where alarms are obtained for animals with abnormal weight gain curves. The project focuses primarily on the detection of pasture borne parasite infections in calves, but the method could be further developed to include other diseases that impair animal growth performance.

In 2014, two prototypes of weighing stations (Figure 1 and 2) were designed and placed on pasture. A few technical problems arose and led to the weighing stations could not be operational as planned. Therefore, testing of the technology was conducted during the summer of 2015 instead. In May, 15 heifers were introduced to the weighing stations on pasture. After some acclimatization, all 15 animals used the scales as intended. The weighing stations required some further adjustments of the settings and upgrade of batteries and solar panels to make them work optimally. The weighing station which the animals passes through (Figure 1) were placed so that the animals had to pass it to get into a small corral where four animals could drink simultaneously. Hence, this type of cage has a greater capacity.

Figure 1.Weighing station in which the animals get access to water.

Figure 2. Weighing station which the animals pass through.