

Robot washers - an obvious investment for the large pig producer

By Anne Olsen

During the latest years, washing robots at agricultural exhibitions, always attracts a lot of attention. Many farmers probably would like to change the hard high pressure cleaning work for a washing robot. However, until now, it is the fewest pig producers in Denmark, who have brought a robot washer.

With the fast development of farm sizes, Denmark should be considered as an obvious market for washing robots. As the pig production units grow even larger bigger, one could expect the purchase of robot washers to increase in the nearest future. The larger the production unit, the more efficient the robot washers can be utilized, and the faster the return of investment can be. However, until today, only few Danish pig producers have bought a washing robot.

Until now, Skiold Echberg have sold 17 washing robots in Denmark, whereas there are sold eight robots from Ramsta Robotics and Alto al together.

Where Denmark yet haven't recognised the advantages of the washing robots, Sweden have fully accepted the new technology. Considering the relatively small herd sizes in Sweden, it is remarkable, that Ramsta Robotics until now have sold about 60 washing robots to Swedish Pig Producers.

Robot washers improves the working environment

Good farm workers generally don't like the hard work with high pressure cleaning the barns, and good workers are hard to find. Therefore, investing in robot washers are a more obvious choice than ever before.

Moreover, as high pressure cleaning is hard work, robot washers improves the working environment, compared to high pressure cleaning. Actually, high pressure cleaning are one of the most hard working task in modern agriculture; - especially, when performed for many hours a time. By using robot washers, the workers contact with and inn-breath of dust, dirt, microorganisms and high humidity also minimizes.

Robot washers reduces labour with high pressure cleaning by 80 percent

Using robot washer only requires set-up, adjustment, turn-on and turn-off of the robot washer. However, 20 percent of the cleaning job is still left for finishing high pressure cleaning after robot washing.

A test of an early robot washer showed that 75 percent of the time normally used for high-pressure cleaning was saved. This included 10 minutes used for set-up, adjustment, turn-on and turn-off of the robot washer (Meddelse 376, Landsudvalget for Svin, 1989).

According to Skiold Echberg, the dealer of Multi Cleaner, robot-washing saves 80 percent of the time used at the cleaning procedure.

According to Alto, robot-washing saves 85 percent of the time used for cleaning.

The estimated amount of water used, when using robot washers, are about equal to the amount of water used at high pressure cleaning.

The price for a robot washer at the Danish market are about 175.000-220.000 DEK, which is equal to 8-10 months salary or a farm worker, who earns about 150 DEK per hour.

Barn requirements

In general, robot washers requires the barn to be arranged with the pens in two rows along the building walls, separated by a gangway in the middle of the barn, where the robot washer can move forward and back.

The different washing robots requires different wide at the gangway: Skiold Echberg's robot requires 0,7 m, Ramsta Robotics and Alto Robot 02 requires 0,8 m. However, when provided with special wheels, the requirements of Ramsta Robotics and Alto Robot 02 are a gangway with the wide as less as 0,67 m.

Three washing robots at the Danish marked

Today, three different types of washing robots are available at the Danish marked. Skiold Echberg sells the self-propelled washing robot Multi Cleaner. A build-in GSM-function allows Multi Cleaner

to make automatic alarm calls to up to four phone numbers. The function can for instance be used when the robot is finish washing, or if the robot stops unintended.

The Swedish company Ramsta Robotics sells the self-propelled Clever Cleaner though different dealers – among others Yding Maskinforretning and Alto (under the name Alto Robot 2). Where another robots have fixed washing programs, Cleaver Cleaner is the only robot until now, which can be programmed to remember every barn unit. This function is patented world wide.

Alto also sells a stationary type – Alto Robot 03 – which has to be moved manually from pen to pen.

Hot water can be used in all three robots.

Facts about the three robots at the Danish marked

Data	Multi Cleaner	Clever Cleaner / Alto Robot 02	Alto Robot 03
Company	Skiold Echberg	Ramsta Robotics / Alto	Alto
Weight, kg	285	270	45
Pump-pressure, bar	210	150-200	150-200
Water use, l/min	15,2-16,5	15	15-30
Washing reach, m	4,80	4,09-5,5	3
Max water temperature, °C	80	80-90	75-80
Min wide of gangway, m	0,70	0,76-0,80	0,80
Price, DEK	About 200.000	210.000	28.590

Another type of washing robot exists at the North American marked. The robot is sold under the name Wash Hand. See: www.swinerobotics.com/washhandinfo.htm