

RESULT 2: OPEN PLATFORM FOR SHARING KNOWLEDGE

WP 1: Learning Environment for SMEs

CASE STUDIES DEVELOPMENT

Application of Automatic Calf Feeders

(topic)

Part 1: General information for the enterprise

1. Owen Brodie
2. Virginia, Co. Cavan, Ireland
3. Subject of activity: Dairy farming
4. Legal status: Private Limited Company.
5. Management
 - a. Gender: **Male** / Female / Other
 - b. Age: up to 35 / 36-45 / **46-55** / 56-65 / over 65
 - c. Education: primary / secondary / **higher**
6. Farm size
 - a. cultivated land: 24.92 ha owned
 - b. species and numbers of animals: 200 dairy cows (Holstein Friesian Cattle)

Part 2: Smart technologies used on the farm

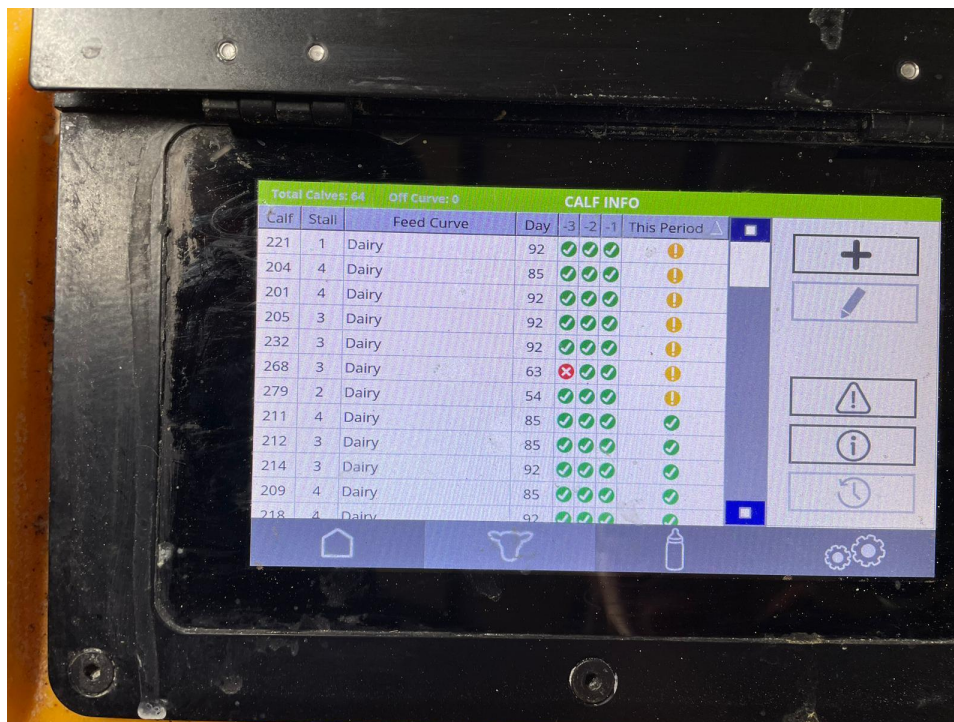
The Evolution Automatic Calf Feeder – EVO S4

<https://jfcagri.com/cattle/evolution-calf-feeder/evo-s4/>

Part 3: Owners' satisfaction with the use of smart technologies

1. Utility assessment

The Evolution Automatic Calf Feeder – EVO S4 – is a feeding instrument which can feed and monitor up to 140 calves. The technology is comprised of an integrated touch screen, dual hoppers and mixing bowls. Feeding stalls are also used with this technology to support the feeding of calves.



The farmer is very satisfied with the Evolution Automatic Calf Feeder as it provides him with daily performance reports on his animals. Through a screen on the feeder, the farmer is able to examine the tag number of the calf, the stall in which they came for their feed, their age in days, the last three feeds and it shows a warning if there were any difficulties for the calf. From the image above, it is evident that calf number 268 failed to eat in the third last meal cycle and shows a warning for some of the calves.

The technology has supported the farmer to reduce the time needed to manually feed the calves as the system holds milk powder which is converted into milk. The farmer does not need to bring buckets of milk from the milking parlour to feed the calves, and has found that he has reduced his labour hours needed with thanks to the technology.

To use the technology, calves walk into feeding pens which read their RFID tags. The system determines whether the animal has already eaten, and if not, provides the required amount of feed to the animal. The farmer is happy with the technology as, if the calf has not eaten, they receive a text message to their phone signaling that there is an issue.

The farmer is also able to make determinations about the health of the calf with thanks to the technology. If they notice that the calf has not eaten, the farmer will be astute to their needs and will assess whether it needs veterinary assistance prior to showing physical symptoms of distress.

2. Observed difficulties and problems

The farmer has not indicated that they have found major difficulties or problems with the equipment. However, they have pointed out that although the technology is self-cleaning, a buildup of old and expired

milk powder occurs within the main device. As it is located on the slats, cleaning is not a major problem as the spoiled milk goes into the surrey tank.

3. Potential risks

The farmer has only noticed one risk with the technology, but has noted that it has not yet occurred on the farm. If the technology fails to work, calves will be left without feed until arrangements are put in place by the farmer. This will increase their labour cost as they will be manually required to feed the calves.

The farmer also recognizes that they are tied to one manufacturer for the product, but have not identified any challenges with regard to this.

Part 4: Financing the investment in smart technologies

The cost of one Evolution Calf Feeder and four feeding stations is approximately €15,000 plus VAT. Since 2021, calf rearing equipment such as these computerized calf feeders are available under the TAMS grant.

The only challenge associated with the TAMS grant for farmers is that equipment cannot be purchased until the funding has been approved, which means that many farmers do not have time to spend waiting for the approval of grant aid. For this reason, many farmers, use cash on hand to purchase the equipment. In addition, the associated products such as teat wash are not available through TAMS, so the farmer must purchase these.

For this farmer in particular, they have identified that the cost is affordable for farmers in Ireland.

Part 5: Future intentions towards smart technologies

The farmer is happy with this technology and does not plan on replacing it in the near future. There is an application (<https://ifcevolution.com/mobile-app>) that supports the farmer to use the technology from afar, and he plans on continuing to use it as it has reduced the required effort on the farm.

Part 6: Some photos



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Total Calves: 64		Off Curve: 0		CALF INFO			
Calf	Stall	Feed Curve	Day	-3	-2	-1	This Period
221	1	Dairy	92	✓	✓	✓	!
204	4	Dairy	85	✓	✓	✓	!
201	4	Dairy	92	✓	✓	✓	!
205	3	Dairy	92	✓	✓	✓	!
232	3	Dairy	92	✓	✓	✓	!
268	3	Dairy	63	✗	✓	✓	!
279	2	Dairy	54	✓	✓	✓	!
211	4	Dairy	85	✓	✓	✓	✓
212	3	Dairy	85	✓	✓	✓	✓
214	3	Dairy	92	✓	✓	✓	✓
209	4	Dairy	85	✓	✓	✓	✓
218	4	Dairy	92	✓	✓	✓	✓



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