

## Skema til afrapportering af ViD projekter

Videncenter for Dyrevelfærd

### 1. Projektitel:

Welfare consequences of weaning age

### 2. Projektstart og afslutning:

1. august 2019 og 1. august 2021

### 3. Projektleder og projektdeltagere (titel, navn, adresse, tlf., e-mail):

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### 4. Baggrund for projektet (Kort beskrivelse af, hvorfor dette projekt blev i gangsat):

Stress at weaning is an important problem in pig production, both from an economical and welfare perspective. Mapping what the effect of delaying the weaning age, or other alternatives for decreasing the weaning stress may give a background for further initiatives.

### 5. Beskrivelse af projektets formål og hypoteser samt materialer og metoder:

The aim of the project is to review the literature to address these aims:

1. the knowledge of the effect of weaning stress
2. the consequences of increasing weaning age on weaning stress
3. the effect of artificial rearing is on stress responses
4. strategies for reducing aspects of weaning stress

### 6. Oversigt over projektets samlede resultater:

Please see the enclosed document

### 7. Diskussion, konklusion og perspektivering (herunder forslag til opfølgende projekter):

Under natural conditions there is little or no weaning stress. Under standard commercial conditions the piglets are exposed to a series of stressors e.g. transition to solid feed, absence of sow, mixing, new environment. In most cases studies have focused on one of these stressors,

but as has become apparent in the text above, they often interact. When pigs are socialised during the lactation phase, the drop in weight gain is reduced, gradual weaning results in lower aggression and so forth. When evaluating strategies for reducing weaning stress it is therefore important that more than one effect is taken into consideration.

In the literature the time for total weaning under natural conditions is often cited: 17-19 weeks. As can be seen in Table 1, not least the work during the last 10-15 years has shown that it is possible to decrease the weaning stress by prolonging the lactation phase with much less, in some instances with only one or two weeks.

The use of intermittent suckling and early socialisation both hold good promise for decreasing weaning stress. It is however obvious that there are severe practical difficulties with both approaches.

#### **8. Populærvidenskabeligt dansk resumé (max 500 ord):**

Stress omkring fravæning er et meget stort problem i svineproduktionen. Fravænningsstress resulterer i mindsket vægtudvikling og hyppigt i diarré. Andre problemer er trynepuffen (særlig ved lav fravænningsalder), aggression og andre adfærdsforstyrrelser. Resultaterne fra den videnskabelige litteratur viser at også en forholdsvis moderat forhøjning af fravænningsalderen ville have en positiv indvirkning på dyrevelfærden.

En vigtig årsag til problemerne er at pattegrisene ikke bliver ordentligt forberedt på at overgangen til fast føde. Der gives i dag krybfoder rutinemæssigt, men det er ikke klart i hvor udstrækning det bliver ædt af den enkelte pattegris. Der findes forskellige muligheder for at øge interessen for krybfodret. En teori er at med de opstaldningssystemer der findes i dag, så kan pattegrisen udmærket klare sig på mælk (indtil fravæning), medens soen under mere naturlige forhold ville nægte dem adgang til yveret i højere og højere grad og derved "tvinge dem" at begynde indtage fast føde. En mulighed ville derfor være at gradvis mindske adgangen til yveret. De eksperimenter der er lavet, viser at det ville resultere i en noget mindre vægtøgning indtil fravæning, men en forhøjet vægtøgning efterfølgende. Desuden mindsker i mange tilfælde fravænningsdiarréen. Der er dog store praktiske problemer med denne metode der derfor skal udvikles videre.

I de fleste tilfælde blandes pattegrisene ved fravæningen sådan at grise fra forskellige kuld bliver sat sammen, hvilket hyppigt resulterer i aggression. Under naturlige forhold ville pattegrise træffe andre, fremmede, pattegrise ved omtrent ti dage, de møder foregår næsten helt uden aggression. Eksperimenter hvor man giver pattegrise i kommercielle besætninger en mulighed for at mødes ved den alder viser at initialt har man et vist niveau af aggression, men at pattegrise der er socialiseret på den måde, løser konflikter hurtigere og at aggressionen derfor er meget mere kortvarig. End en gang så kræves der dog yderligere arbejde inden den idé kan føres ud i praksis.

#### **9. Populærvidenskabeligt engelsk resumé (max 500 ord):**

Stress around weaning is a big problem in pig production. Weaning stress results in checks of the growth rate and often in diarrhea. Other welfare problems are belly nosing (especially at low weaning age), aggression and other behavioural issues. Results from the scientific literature also show that a relatively moderate increase in weaning age would have a positive result on the welfare of the animals.

An important reason for the problems is that the piglets are not properly prepared for the transition to solid feed. It is very common to give creep feed today, but it is not clear as to what extent it is being eaten by the individual piglet. There are different possibilities for increasing the piglets' interest in the creep feed. One theory is that with the housing systems of today it does not "pay" for the piglet to look for food apart from the milk of the sow (until after weaning). Under more natural conditions the sow will gradually refuse access to the nipples and prevent the piglets from suckling thereby "forcing" the piglets to eat solid feed. One possibility under commercial conditions would therefore be to gradually decrease the access to the nipples. The studies done have in general found a slight decrease in the growth rate during the suckling phase, but an increase in the growth rate of the post-weaning phase, as well as in some cases a decrease in the prevalence of diarrhea. There are however major practical difficulties with this approach that therefore needs to be developed further.

In most cases the piglets are mixed at weaning so that pigs from different litters are put together that often results in aggression. Under more natural conditions the piglets will meet unfamiliar piglets at around ten days, and those meetings almost always occur with a minimum of aggression. Experiments where piglets are given the possibility to socialise with piglets from other litters have resulted in an initial increase in aggression, but also that the socialised piglets are better at solving conflicts and that the aggression therefore in most cases lasts for a shorter time. Also in this case there is a need for more work before the idea can be put into practice.

**10. Redegørelse for hvordan projektet og projektets resultater har været eller forventes offentliggjort:**

Vedlagt er en slutrapport, vi planerer at sende ind et abstrakt til ISAE 2022