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“Dissertation abstract”

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<b>CHEMICAL AND MICROBIOLOGICAL PROPERTIES OF HARD CHEESE (RAS CHEESE) FROM COW'S MILK FED ON SILAGE</b>		

DISSERTATION ABSTRACT (ONE PAGE A4)

Introducing Silage feeding for cattle and buffaloes may cause the problem of late-blowing in Ras cheese, since *Clostridium* may contaminate Ras cheese milk causing defects during the six month of ripening.

The aim of this study, therefore is to answer the following questions:

- What is the effect of silage feeding on physicochemical, microbiological and organoleptic properties of Ras cheese?
- What is the effect of heat treatment (63<sup>0</sup>C/30min) of milk on the Ras cheese quality produced from cows fed on Silage diet?
- What is the effect of adding 0.5% Potassium sorbate to the heat treated milk on the quality of produced cheese?
- What is the effect of adding yoghurt starters and its inoculum ratio on the quality and microorganical properties of the resultant cheese?
- What is the effect of inoculation of Ras milk cheese with different pure *Clostridium* cultures on the late-blowing defect?

**Part I:**

To answer the first question, Ras cheese was processed from milk produced from milk of cows fed on Silage diet and compared with cheese produced from milk of cows fed on the traditional feeds.

- Milk from cows fed on Silage diet was divided into three portions, raw milk, heat treated to 63<sup>0</sup>C/30 min, cooled to 37<sup>0</sup>C and 0.5% Potassium sorbate being added to the heat treated milk. While milk produced from traditional feeding was divided into two portions, raw and heat treated. The five heat treatments were inoculated with 1% yoghurt culture, and processed into Ras cheese and stored for 6 months at 16± 2<sup>0</sup>C and 85% humidity.

**Part II:**

To study the effect of the adding yoghurt culture (0.5% and 1%) on the quality of Ras cheese, the milk from cows fed on Silage divided into four portions:

- Raw milk without starter.
- Raw milk with 0.5% starter.
- Heat treated milk with 0.5% starter.
- Heat treated milk with 1.0% starter.
- - The four treatments were processed into Ras cheese, stored for six months at 16 ±2<sup>0</sup>C.

**Part III:**

The effect of inoculating raw milk cheese used for making Ras cheese with two separate pure *Clostridium* cultures on the quality of cheese, and the possibility of appearing the late-blowing defect were examined. The raw milk was divided in to three equal portions. The first is regarded as control, to the second 1.5% MERCIN culture of “*Clostridium acetobutyricum*” was added while to the third portion 1.5% isolated pure *Clostridium* culture were inoculated 1% yoghurt starter was added. The Three portions were processed into Ras cheese.



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		Late-blowing	
		(Silage)	•
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	:	(% - , )	-
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		%	-
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		%	-
			:
			:
<i>Clostridium</i>	-	<i>Clostridium</i> % ,	-
		(control)	-
		<i>.acetobutyricum</i>	-
		<i>Clostridium</i> % ,	-
		%	-
			•
			•
	(control)	Macconkey, MRS, T.C	•
		.spore forming , RCM	•
		.MacConkey, MRS	•

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