

## CONTENTS

<b>1. General introduction</b>	<b>1</b>
<b>2. Thesis structure</b>	<b>5</b>
<b>3. Background</b>	<b>7</b>
<b>4. Major paper:</b> Effect of nitrogen fertilization on chemical composition and rumen fermentation of different parts of plants of three corn hybrids	<b>51</b>
<b>5. Major paper:</b> <i>In vitro</i> starch digestion and predicted glycemic index of cereal grains common utilized in pig nutrition	<b>73</b>
<b>6. Major paper:</b> Plasma glucose response and glycemic indices in pigs fed diets differing in <i>in vitro</i> hydrolysis indices	<b>97</b>
<b>7. Major paper:</b> A comparison of methods to quantify prolamin protein contents in cereals	<b>121</b>
<b>8. Major paper:</b> <i>Technical Note:</i> Quantification of zeins from corn, high-moisture corn and corn silage using a turbidimetric method: comparative efficiencies of isopropyl and tert-butyl alcohols	<b>142</b>
<b>9. Minor paper:</b> Characterization of the starch protein matrix in maize and barley endosperm and quantification of their prolamin content by two different methods	<b>157</b>
<b>10. Minor paper:</b> Enzymatic corn starch degradability in high moisture corn and dried corn grains	<b>160</b>
<b>11. Minor paper:</b> Enzymatic starch hydrolysis potential of raw and processed cereals	<b>163</b>
<b>12. Minor paper:</b> Effect of the stage of maturity on enzymatic corn starch hydrolysis potential	<b>167</b>
<b>13. Minor paper:</b> Degree of starch hydrolysis and predicted glycemic index of corn and barley with different amylose content	<b>172</b>
<b>14. Conclusions</b>	<b>173</b>
<b>15. Visual information</b>	<b>175</b>
<b>16. References</b>	<b>180</b>