Chapter 2 menjelaskan evaluasi beberapa spesies rumput laut dari pantai di Gunungkidul, Yogyakarta yang diambil empat spesies yang berpotensi sebagai agen mitigasi CH_4 ruminansia. Chapter 3 menjelaskan kandungan nutrien dan senyawa bioaktif dengan metode pengeringan yang berbeda dari satu spesies rumput laut yang paling potensial digunakan sebagai aditif pakan, yaitu *Palisada perforata* (Bory) KW.Nam. Hal ini bertujuan dalam mempersiapkan tahapan uji *in vivo* dengan mempertimbangkan ketersediaan dan potensi rumput laut tersebut dalam upaya mitigasi CH_4 ruminansia.

Chapter 4 menjelaskan hasil evaluasi penambahan *P. perforata* (Bory) KW.Nam pada beberapa level konsentrasi pada pakan basal rumput gajah secara *in vitro.* Chapter ini mejelaskan level terbaik *P. perforata* (Bory) KW.Nam dalam menurunkan produksi CH_4. Chapter 5 menjelaskan evaluasi level terbaik dari *P. perforata* (Bory) KW.Nam yang diujikan pada pakan basal yang berbeda dari Chapter 4, yaitu pakan basal *Total Mixed Ration* (TMR) secara *in vitro.* Chapter 6 dan 7 menjelaskan evaluasi penambahan *P. perforata* (Bory) KW.Nam pada pakan basal TMR secara *in vivo.* Selanjutnya, pada Chapter terakhir, yaitu 8 membahas secara keseluruhan dari Chapter 2 sampai Chapter 7 dan diakhiri dengan Kesimpulan serta rekomendiasi dan implikasi kebijakan dari hasil penelitian.

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