Dari hasil pengukuran berat molekul protein masing-masing isolat diatas menunjukkan bahwa berat molekul yang dihasilkan oleh tiap isolat bervariasi, yaitu antara isolat 06, 76, 85, 261 dan 287 masing-masing mempunyai gambaran ukuran pita yang berbeda (Tabel 1). Pada penelitian ini kami tidak menemukan adanya protein yang bersifat spesifik yang mengacu pada derajat patogenitas dari strain masing-masing *T. evansi* yang digunakan dalam penelitian kami. Isolat yang memiliki darajat patogenitas tinggi menunjukkan profil protein yang beragam, sama halnya dengan isolat yang memiliki derajat patogenitas moderat dan rendah [3].

Simpulan

Dari hasil penelitian dapat disimpulkan bahwa karakterisasi profil protein *Trypanosoma evansi* dengan SDS PAGE menunjukkan pola profil protein yang beragam.

Ucapan Terima Kasih

Ucapan terima kasih diucapkan kepada Badan SDM Kementerian Pertanian yang telah mendanai penelitian ini sehingga dapat terlaksana.

Daftar Pustaka

[1] Ronohardjo R., Wilson A. J., Partoutomo S., Hisrts R. G. 1986. Some aspects of epidemiology and economics of important diseases of large ruminants in Indonesia. In: Proceeding of the fourth International Symposium on Veterinary Epidemiology and economics, Singapore, 303-305.

[2] Lanham S. M., Godfrey D. G. 1970. Isolation of salivarian Trypanosomes from man and other mammals using DEAE – Cellulose. Exp. Parasitol., 28, 521–534.

[3] Wardhana, A. H. 2014. Profile Protein *Trypanosoma evansi* isolat lokal dengan patogenitas yang berbeda pada mencit. Laporan akhir penelitian. Bblitvet: Bogor.

O-099

Identification of Parasites in Vegetables and Fruits in Local Market Cibeureum, Dramaga, Bogor

Lee Shinh Nian ,[1]Vania Kusuma Oktavia Sitorus , Risa Tiura , Arffin Budiman Nugraha . [2]

[1]Student of Bachelor's Degree Program of Faculty of Veterinary Medicine, Bogor Agricultural University,
[2]Lecture of Division of Parasitology and Entomology Health, Department of Veterinary Public Health and Animal Diseases, Faculty Veterinary Medicine, Bogor Agricultural University
*Correspondent: shinhnian@gmail.com

Key word: foodborne disease, fruits, parasite, vegetables.

Introduction

Fruits and vegetables are very important for health so that people routinely consume them as daily food. Recently, the arising of foodborne disease cases are getting higher because of fruits and vegetables consumption [1]. Foodborne disease can be defined as a disease caused by consuming food or water that contains infectious agents or toxic. According to [2], the consumption of raw vegetables in West Asia leads to food-borne disease that increased drastically in recent years.

Developing countries still don't have good knowledge and system for diagnosing and monitoring foodborne diseases by didn't of consuming contaminated fruits and vegetables. Parasites contamination in fruits and vegetables can occur from faecal contamination and unhygienic cultivation, transportation, processing, and presentation [3]. Besides that, the postharvest handling of fruits and vegetables in local markets is still very modest where the is no washing, sorting, and refrigeration. Therefore, it is important to indentify parasites that contaminate fruits and vegetables due to the food security.

Materials and Methods

The fruits and vegetables samples were apple (*Malus domestica*), strawberry (*Fragaria virgiana*), spinach (*Amaranthus gagenticus*), green mustard *(Brassica rapa),* and pohpohan leaves *(Pilea melastomoides)*. The materials used were aquadest, lugol, dino-eye camera 2.0, and binocular microscope CH30. The samples were examined by using sedimentation and centrifugation techniques.

Results and Discussion

The results showed that the highest contamination of parasites was recorded in spinach while parasites were not discovered in apple. Examination of samples revealed there were free-living protozoa (*Tetrahymena* spp., *Prorodon* spp., and *Colpoda* spp.), helminthes, ectoparasites, and Rotifers identified. The most parasite encountered in samples was *Tetrahymena* spp. (35.71%), followed by helminths (11.11%), *Prorodon* spp. (10%), Rotifers (5.56%), ectoparasites (3.33%) *Colpoda* spp. (2.22%). All parasites found in samples were not pathogenic, but the recent study proved that free living protozoa and Rotifers experimentally would play a role as vectors or reservoirs of foodborne pathogens, such as *Eschericia coli, Salmonella enterica,* and *Cryptosporodium parvum.* Therefore, the presence of protozoa and Rotifers in fruits and vegetables may potentially cause foodborne diseases.

Samples	Parasites found in samples	Size (µm) (length x width)	Amount	Percentage (%)
Strawberry	*Tetrahymena* spp.	9.68-15.90 x 7.69-12.50	10	83.33
	Rotifer	14.21-17.31 x 6.30-6.33	2	16.67
Total			*12*	*100*
Apple	-	-	-	-
Green mustard	*Tetrahymena* spp.	15.49-18.33 x 9.25-13.53	5	25
	Rotifer	84.96-89.60 x 27.05-27.98	2	10
	Helminth	80.77-319.03 x 4.68-12.28	8	40
	Prorodon spp.	22.40-28.52 x 18.43-19.38	3	15
	Colpoda spp.	19.89-25.40 x 14.25-19.00	2	10
Total			*20*	*100*
Spinach	*Tetrahymena* spp.	22.63 x 10.87	46	93.87
	Ectoparasite	5517.9 x 3589.7	2	4.08
	Helminths	112.74 x 6.28	1	2.04
Total			*49*	*100*
Pohpohan leaves	*Prorodon* spp.	21.38-27.80 x 16.52-17.34	5	71.43
	Rotifer	64.57 x 21.98	1	14.29
	Ectoparasite	4631.53 x 2205.93	1	14.29
Total			*7*	*100*

Parasites	Amount	Percentage (%)
Tetrahymena spp.	61	67.78
Prorodon spp.	9	10
Colpoda spp.	2	2.22
Rotifer	5	5.56
Helminth	10	11.11
Ectoparasite	3	3.33
Total	*90*	*100*

Conclusion

The presence of parasites in vegetables and fruits naturally are not harmful, but the interaction between parasites (free-living protozoa and Rotifer) and foodborne pathogens can potentially cause foodborne disease.

Reference

[1] Ebrahimzadeh A, Jamshidi A, Mohammadi S. 2013. The parasitic contamination of raw vegetables consumed in Zahedan, Iran. *J Health Scope*. 1(4):205-209.

[2] Maysa AE, Samia MR, Mona EN, Azza MS, Amera SE. 2014. Parasitic contamination of commonly consumed fresh leafy vegetables in Benha, Egypt. *J Parasitology Research*. 2014. 7 pages.

[3] Siswadi. 2006. *Bertanam Sayuran secara Vertikultur*. Yogyakarta (ID): Citra Aji Parama.