

()

*

(/ / : / / :)

/ / /

SPSS

/ /

:

Praneetvatakul et al..

()

() Rasul & Thapa

Muller .

()

() Pacini et al.

() Zhen et al.

() Theodore et al.

() Zhang

...

:

() Fernandes & Woodhouse

)

(

Smith & () Hansen

Godman () Dobbs et al. () McDonald

Van der () Hani () Monteith ()

() Andreoli & Tellarini () Werf & Petit

() Zhen et al. () Gomez et al.

Rasul & Thapa () Praneetvatakul et al.

() Karami

() Yuan et al. () Muller ()

Theodore () Pacini et al. () Harrington

() Fernandes & Woodhouse () et al.

() Hosseini & Naderi () Karami

() Hosseini & Nadery

() Ommani & Chizary

()

$$I = \frac{s1}{\mu1} + \frac{s2}{\mu2}$$

(

:

=S1

=μ1

=S2

=μ2

=1

/ / /

SPSS

...

:

()

/ / /

()

/ /

/

()

()

/ / /

/ / /

()

/ / /

/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/

/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/

/ / /

/ /

/ /

/ /

/ ()

/

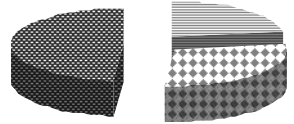
/

()

()

()

■ %



▨ %

◆ %

/

/

...

:

/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/

()	()	()
-----	-----	-----

/
/
/

()

()

(**)

(*)

()

()

/	**	/	/	/	/
/	**	/	/	/	/
/	*	/	/	/	/
/	**	/	/	/	/
/	*	/	/	/	/
/	**	/	/	/	/
/	**	/	/	/	/
/	**	/	/	/	/
/	**	/	/	/	/
/	**	/	/	/	/
/	**	/	/	/	/
/	*	/	/	/	/
/	*	/	/	/	/

...

:

/	/	**	/	/
/	/	**	/	/
/	/	**	/	/
/	/	*	/	/
/	/	**	/	/
/	/	*	/	/
/	/	*	/	/
/	/	*	/	/
/	/	**	/	/
/	/	*	/	/
/	/	**	/	/
/	/	*	/	/
/	/	*	/	/
/	/	*	/	/
/	/	**	/	/
/	/	*	/	/
/	/	*	/	/
/	/	**	/	/
/	/	**	/	/
/	/	**	/	/
/	/	**	/	/
/	/	**	/	/
/	/	**	/	/
/	/	**	/	/

**

*

Zhen () Muller

() Hosseini & Naderi () et al.

() Praneetvatakul et al.

() Zhen et al.

() Zhen et al.

() Praneetvatakul et al.

() Hosseini & Naderi

() Ommani & Chizari

REFERENCES

1. Andreoli, M., & Tellarini, V. (2000). Farm sustainability evaluation: methodology and practice.
2. Dobbs, T. L., Becker, D. L., & Taylor, D. C. (1991). Sustainable agriculture policy analysis: South Dakota on-farm case studies. *Journal of Farming Systems Research and Extension*, 2, 109-124.
3. Fernandes, L., & Woodhouse, P. J. (2001). The Use of Agri-environmental indicators to Evaluate Peasant Farming. *Frontiers 2. European Applications in Ecological Economics*. Tenerife, Spain. 12- 17 February.
4. Goldman, A. (1995). Threats to sustainability in African agriculture: searching for appropriate paradigms. *Human Ecology*, 23, 291–334.
5. Gomez, A. A., Swete Kelly, D. E., Syers, J. K. & Coughlan, K. J. (1996). Measuring sustainability of agricultural systems at the farm level. In: Doran, J. W., Jones, A. J. 1996 *Methods for assessing soil quality*. SSSA Special Publication no. 49, p. 401-409.
6. Häni, F. (2002). Holistic Sustainability Assessment at the Farm Level, Workshop “Sustainable Food Production”, Open University Subotica, Serbia, October 3 – 5, 2002.

- ...
- :
7. Hansen, J. W. (1996). Is agricultural sustainability a useful concept? *Agric. Syst*, 51, 185–201.
 8. Harrington, L. (1992). "Measuring sustainability: Issues and alternatives." *Journal of Farming Systems Research-Extension*, 3(1), 1-19.
 9. Hosseini, S. M., & Nadery Mahdi, K. (2007), Investigating ecological indices of agricultural sustainable development in Salehabad county, *Iranian Journal of Agricultural Sciences*, 38.(In Farsi)
 10. Karami, A. (1998), Relationship between social- economic factors and technical knowledge and sustainable agriculture among wheat farmers, Institute of planning research and agriculture economic.
 11. Monteith, J. L. (1990). Can sustainability be quantified? *Indian Journal of Dryland Agricultural Research and Development*, 5, 1–5.
 12. Muller, S. (1998). Evaluating the Sustainability of Agriculture, The Case of the Reventado River Watershed, Costa Rica. TÖB Publication No.: TÖB F-V/5e
 13. Ommani, A. R. & Chizary, M. (2006). An Analysis of farming system sustainability among wheat farmers, *Iranian Journal of Agricultural Sciences*, 37-2 (2).
 14. Pacini, C., Wossink, A., Giesen, G., Vazzana, C. & Huirne, R. (2003). Evaluation of sustainability of organic, integrated and conventional farming systems: a farm and field-scale analysis, *Agriculture, Ecosystems and Environment*, 95 (2003), 273–288.
 15. Praneetvatakul, S., Janekarnkij, P., Potchanasin, C. & Prayoonwong, K. (2001). Assessing the sustainability of agriculture, A case of Mae Chaem Catchment, northern Thailand, *Environment International*, 27 (2001), 103–109.
 16. Rasul, G., & Thapa, G. B. (2004). Sustainability of ecological and conventional agricultural systems in Bangladesh: an assessment based on environmental, economic and social perspectives, *Agricultural Systems*, 79 (2004), 327–351.
 17. Smith, C. S., & McDonald, G. T. (1998). Assessing the sustainability of agriculture at the planning stage. *J. Environ. Management*, 52, 15–37.
 18. Theodore, R. K., Rajasekar, D. D., Selvaraj, G. & Jawahar, D. (2001). SUSTAINABILITY OF DIVERSIFIED FARMS IN TAMBIRAPARANI RIVER COMMAND AREA, SOUTHERN INDIA, Agricultural Research & Extension Network.
 19. Van der Werf, H. M. G., & Petit, J. (2002). Evaluation of the environmental impact of agriculture at the farm level: a comparison and analysis of 12 indicator-based methods. *Agriculture, Ecosystems and Environment*. 93, 131-145.
 20. Yuan, W., James, P., Hodgson, K., Hutchinson, S. M. & Shi, C. (2003). Development of sustainability indicators by communities in China: a case study of Chongming County, Shanghai, *Journal of Environmental Management*, 68 (2003), 253–261.
 21. Zhang, B. Z. (2000). Sustainable Agricultural Development in China. Shandong Press of Sciences and Technology, PR China (in Chinese).
 22. Zhang, W. L. (1995). Investigation of nitrate pollution in groundwater due to nitrogen fertilization in agriculture in northern China. *J. Plant Nutr. Fertilizer Sci.* 1, 80–87 (in Chinese with English abstract).
 23. Zhen, L., Routray, J. K., Zoebisch, M. A., Chen, G., Xie, G. & Cheng, S. (2005). Three dimensions of sustainability of farming practices in the North China Plain A case study from Ningjin County of Shandong Province, PR China. *Agriculture, Ecosystems and Environment*, 105 (2005), 507–522.
www.elsevier.com/locate/agee

