

題目	環境管制下之養豬場生產效率及影響因素分析
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摘要	台灣養豬業近年來因廢水排放及加入 WTO 等議題而面臨嚴格的競爭考驗，在此激烈的競爭市場下，如何提高業者的生產效率，是值得探討的課題。由於毛豬生產將伴隨廢水的排放，因此分析養豬業的生產效率，宜將廢水排放納入考慮。本文使用 DEA （ Data Envelopment Analysis ）方法，同時考慮毛豬生產及廢水排放以分析養豬場之生產效率。結果發現， 61.3% 的養豬場是位於規模報酬遞減下生產，顯示其單位生產投入是過大的。而飼養規模愈大者，其平均技術效率（ technical efficiency ）及規模效率（ scale efficiency ）均顯著較高，反應現行的產業結構下，大型飼養戶較具競爭優勢。以 Tobit 迴歸式探討影響效率表現的其他可能因素，結果發現，業主最近五年曾參加與畜產經營相關訓練，及採用電腦軟體管理的養豬場，其純技術效率（ pure technical efficiency ）是相對較高的。本文的相關分析結論，可提供為業者調整經營策略之參考，亦可提供為農政單位輔導產業發展之參考。
關鍵字	養豬場、生產效率、資料包絡分析法
Title	The Analysis on Productive Efficiency of Pig Farm and Its Affecting Factors under Environmental Regulation
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Abstract	The Taiwan's pig raising industry was subjected to a harsh condition resulted from wastewater emission and the fact that Taiwan has affiliated with WTO (World Trade Organization). With facing a more competitive market, it is a considerable issue how a pig farm could upgrade its productive efficiency. Since the pig production will accompany with wastewater emission, which should be included when to measure the productive efficiency of pig farm. This paper uses DEA (Data Envelopment Analysis) to analyze the productive efficiency of pig farm while considering wastewater emission. The results show that, the greater the pig farm was, the higher their average technical and scale efficiencies were, which imply that the larger pig farms, under the present industrial construction, will have an advantageous position of competition. Further analyzing the other possible factors influencing pig farms' performance by using a Tobit regression model, we find that farmers who had participated training about administration in livestock products in past five year and who had managed pig farm by using computer program have higher pure technical efficiencies. The results could help pig farmers in adjusting management strategy and provide government reference materials in guiding the industry for further developing.
Key Words	Pig farm, Productive efficiency, Data envelopment analysis