# 影響 DHI 乳牛健康性狀之主要風險因素

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自 2010 年起，DHI 資料登錄正式啟用新版乳牛群性能改良檢測作業系統，同時亦規劃新的乳牛健康資料收集表單，附加收集有關牛群疾病與淘汰等資料，以作為我國乳牛選育之研究參考。新表單收集的分類項目包括非疾病類、繁殖系統、分娩問題、泌乳系統、體型腿蹄、消化代謝、呼吸系統、雜類疾病、行為意外及傳染病等 10 種，依此建立的 DHI 乳牛異動資料檔統計資料顯示，台灣荷蘭乳牛離開牛群的主要異動分類項目中，以泌乳系統 (41%)、腿蹄問題 (19%) 與繁殖障礙 (11.6%) 等三種因素，為影響 DHI 乳牛健康性狀之最主要的風險原因，資料顯示這三種因素之離群年齡介於 63.6 ± 5.0 至 68.1 ± 3.9 個月之間，最高者為因繁殖障礙而離群的牛群，使用年限長度介於 36.0 ± 4.7 至 40.4 ± 3.4，也以因繁殖障礙因素的淘汰牛群較長，平均 305-2X-ME 乳量則以因泌乳疾病而淘汰牛群表現最少，僅為 7307 ± 50 kg，較 10 項風險因素的平均值低約 107 kg，探究其原因，可能因泌乳因素而淘汰者，多為急、慢性乳房炎之牛隻，乳房炎易導致乳產量降之衝擊所致，因泌乳疾病而淘汰的牛群，其體細胞數 (萬/ml) 平均為 39.8±55，是所有風險因素之最高者。乳業先進國家如以色列，在乳牛離群的淘汰策略中，以屢次配種未懷孕 (38%) 與乳產量低 (30%) 為最主要之淘汰比例，該兩項離群因素通常為低生產效益表現的牛隻，在人為選拔的禽畜淘汰措施中，屬於有利於遺傳改進之育種策略，值得我國延長 DHI 乳牛群使用年限之參考。

關鍵語：DHI 乳牛、健康性狀、風險因素

# THE MAJOR RISK FACTORS AFFECTING HEALTH TRAITS OF DHI COWS

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New DHI recording system, monitor dairy herd performance system, Officially opened since 2010. In this system, a new dairy health data collection scheme was carried out with additional information collection which including the culling reasons and disease data. The new added ten category tables were non-disease class, reproductive systems, birth problems, lactation systems, body conformation, feet and leg, digestion and metabolism, respiratory system, miscellaneous diseases, behavior and accidents and infectious diseases. From analysis statistics of DHI cows transaction data file showed that the main involuntary culling reason of Taiwan Holsteins were lactation system 41%, leg and feet problems 19% and reproductive disorders 11.6% respectively. These three categories are major risk factors affecting the health problem of DHI cows. Culling age of these three factors were 63.6 ± 5.0 to 68.1 ± 3.9 months. The highest one of culling reasons was reproductive disorders and the production life was between 36.0 ± 4.7 to 40.4 ± 3.4. In contrast, the reason of lactation system had the lowest 305-2X-ME with average only 7307 ± 50 kg, which was 107kg lower than average of all 10 reasons. Explore the reasons, culling by lactation system most of them were acute and chronic mastitis which will lowered the total milk production of cows. The somatic cell count (SCC) average was 39.8 ± 55 104/ ml which is the highest SCC of all risk factors. In dairy advanced countries such as Israel, repeated mating not pregnant ( 38%) and low milk production ( 30%) were the most important reasons of culling cows. Culling cows with these two reason which related to low production efficiency can help the genetic improvement policy by artificial volunteer culling. The reference illustration is worth us to learn to increase the production life of our DHI dairy cows.

Key Words: DHI cows, Health traits, Risk factors