

白肉雞替代性墊料堆肥試驗

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本試驗目的探討曬乾切短後之稻稈與分碎後椰殼之纖維介質，當粗糠墊料替代品，取代白肉雞粗糠墊料使用不足之問題，並測試白肉雞適應性與墊料堆肥化分析。試驗利用稻米收割後曬乾、切短之稻稈（稻稈組）；另以椰殼分碎機分碎後之椰殼纖維介質（椰殼組），作為平飼雞舍墊料；並以傳統粗糠墊料為對照組（粗糠組）。採用白肉雞 1944 隻於出生日齡時分置於前述三個處理組分別為一、稻稈組 二、椰殼組 三、粗糠組，每處理組 3 重複，每重複 216 隻，舖約 5 公分厚之墊料，以平飼方式飼養於 28.5 m² 面積，並供水及供料，飼養期間為初生日齡至出售日齡為止。飼養結束後收集墊料，以箱式堆積發酵，每隔兩週以鏟裝機翻堆，進行兩個月的堆積發酵，分析堆肥後成份。試驗結果顯示：飼養結束後測試苜蓿發芽率，於堆肥前稻稈發芽率達 30.8%，顯著高於粗糠組 5.85% 與椰殼組 5.82% ($P < 0.05$)。經發酵堆肥兩個月，以粗糠組 67% 較優於椰殼組 57.2% 與稻稈組 50%，但未達顯著差異。堆肥成分，各組間無顯著性差異。綜合整體可看出白肉雞可完全適稻稈或椰殼纖維來替代粗糠當墊料使用。建議以切短並曬乾之稻稈為優先選擇粗糠之替代物，可解決粗糠供貨短缺時替代粗糠當墊料使用。若善加利用稻稈相對可減少田間焚燒稻草空氣污染之問題，亦可增加稻農種稻副產品之利用，而椰殼纖維的利用亦可減輕垃圾掩埋場處理椰殼之負擔。

關鍵語：白肉雞、墊料、堆肥

EFFECT OF REPLACEMENT LITTER ON THE COMPOST COMPOSITION OF BROILER CHICKEN

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The purpose of this experiment was to investigate the replacement of rice hull with rice straw and coconut hull as chicken litters to solve shortage problem of rice hull. The experiment also determined the adaptation of broiler chicken and analyzed litter compost composition. Rice straws were dried and cut into small pieces. Coconut hulls were smashed. The control group was rice hull. A total of 1944 day-old broiler chickens were allotted into three treatment groups. Group 1 was rice straw; group 2 was coconut hull and group 3 was rice hull. Each group had three replicates; each replicate had 216 birds. The average litter height was 5 cm and feeding area was 28.5 m² for each group. Feed and water were supplied ad libitum till the market age. After feeding experiment, litters were collected and composted for 2 months. The compost was stirred every two weeks and its composition was measured. The results indicated that germinating rate of alfalfa was 30.8% in rice straw, 5.85% in rice hull and 5.82% in coconut hull before composting ($P < 0.05$). After two month's composting, germinating rate of alfalfa was 67% in rice hull, 57.2% in coconut hull and 50% in rice straw before composting ($P > 0.05$). In general, broiler chicken can totally adapt rice straw or coconut hull. Dried small pieces rice straws can be the first choice when there is a shortage of rice hull. In addition, usage of rice straw can decrease air pollution of burning rice straw and increase application of rice by-products. The usage can also decrease the processing cost of coconut hull.

Keywords: Broiler chicken, Litter, Compost