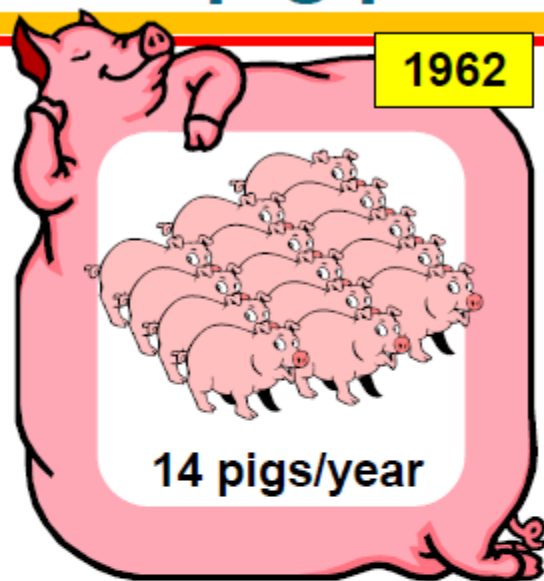


議題五、市場拓展：(二)國內市場

- 1. 種豬產業貢獻度評估及拓展
- 引言人 吳明哲組長

- (1)種豬性能
- 與談人 黃鈺嘉 博士

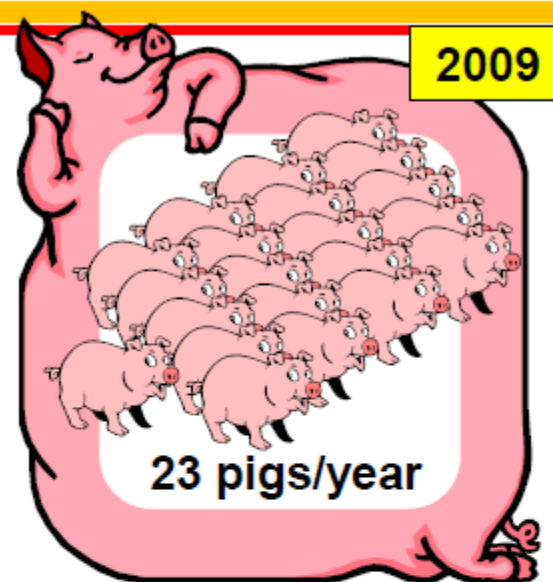
UK pig performance



71% more pigs

38% less feed

39% more lean



410 kg of feed each



34 kg of lean each pig

50% less manure per kg of lean



273 kg of feed each



34 kg of lean each pig

Approximately 60% of improvement has come from genetic improvement



"Pioneering animal genetic improvement to help nourish the world"

中央檢定站北站之檢定成績

品種	年度	隻日增重(公斤)	飼料效率	背脂厚度(公分)	110公斤日齡
藍瑞斯	72	0.84	2.85	2.22	183
	81	0.91	2.41	1.38	167
	84	0.89	2.33	1.32	167
約克夏	72	0.85	2.76	2.20	184
	81	0.89	2.44	1.48	172
	84	0.89	2.35	1.45	169
杜洛克	72	0.89	2.66	2.20	177
	81	0.89	2.44	1.55	172
	84	0.85	2.40	1.39	174

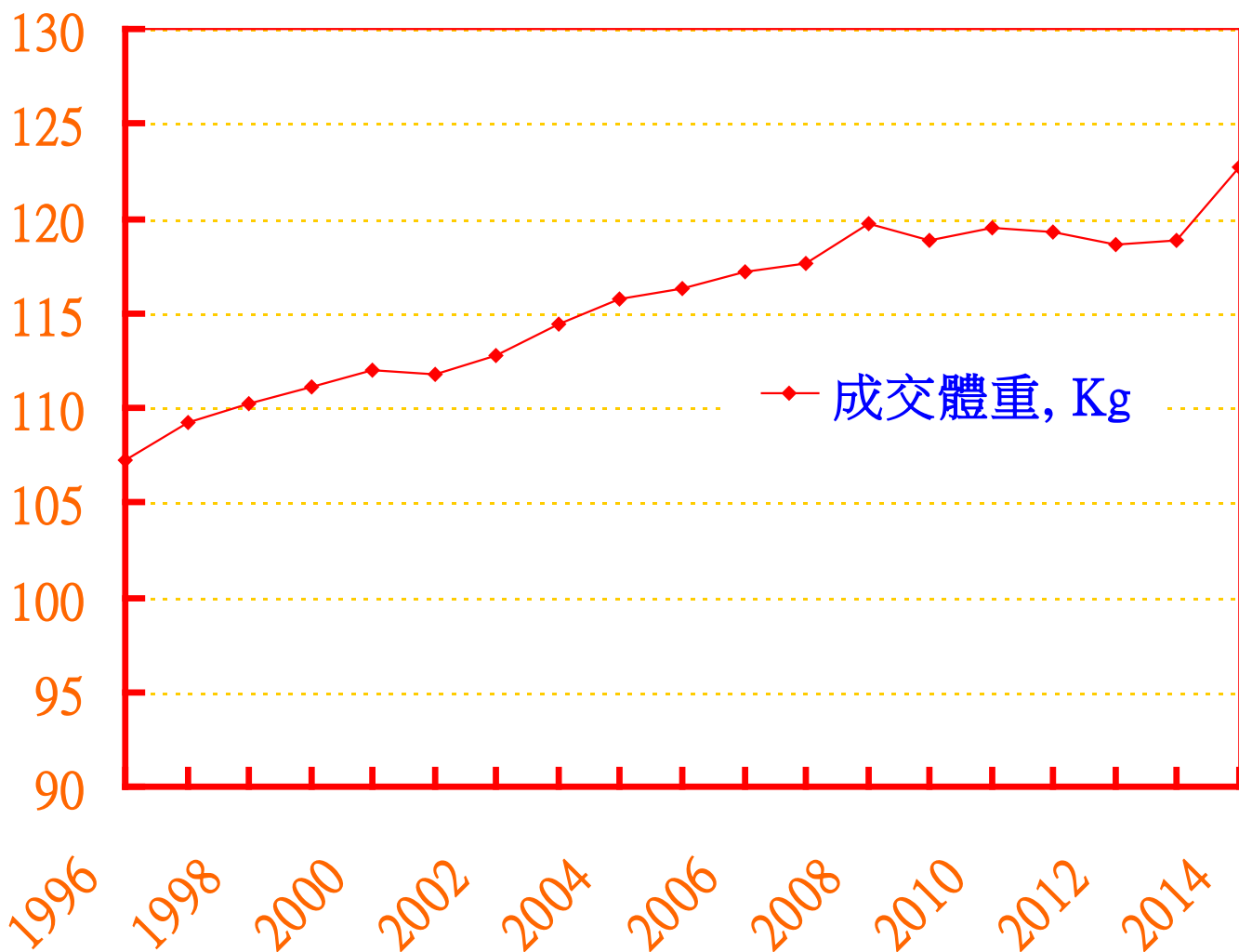
飼料營養雜誌(p.37~45)一張直、九七年五期

102年中央畜產會檢定站種豬完檢平均成績

	隻日增重			飼料效率			修正背脂	110kg日齡	完檢頭數
	平均	最高	最低	平均	最高	最低	平均	平均	
藍瑞斯公豬	1.071	1.393	0.802	2.11	2.32	1.93	1.340	148.2	194
藍瑞斯女豬	0.989	1.377	0.726	2.18	2.38	2.02	1.375	143.8	59
約克夏公豬	1.104	1.390	0.845	2.12	2.49	1.96	1.348	149.6	78
約克夏女豬	1.002	1.182	0.864	2.18	2.35	2.05	1.381	147.0	16
杜洛克公豬	1.073	1.414	0.810	2.10	2.34	1.94	1.315	149.0	445
杜洛克女豬	0.974	1.156	0.842	2.18	2.33	2.09	1.381	148.0	34

種豬-產業現況 -產業現況

台灣畜產-財團法人中央畜產會 王旭昌 2013

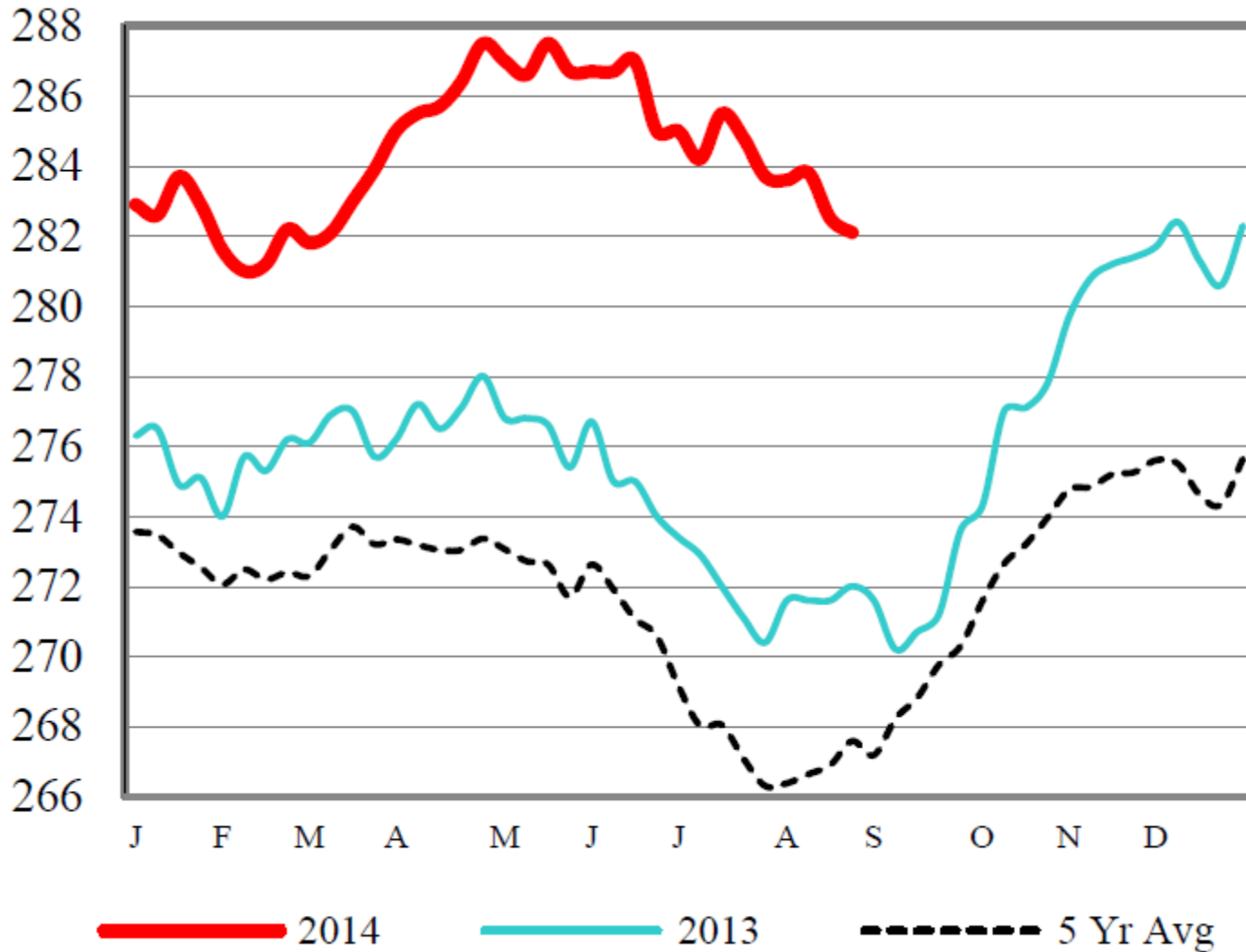


台灣肉豬成交體重變化(農委會 毛豬交易行情)

肉豬上市體重 每年約增 1磅, 近 0.5 公斤

磅

Iowa-So MN Average Hog Weight



Market weight. Hog market weights fluctuated little from the mid-1970s through the mid-1980s, but the average market weight of hogs has been increasing by more than one pound per year since 1986. For example, in 1986 the hog market weight averaged 246lb compared to a 257lb average in 1995. This trend toward heavier market weights is partially attributable to changes in genetics and feeding programs, but the primary force has been packer preferences. The weight at which hogs are slaughtered is determined primarily by packers when they set the weight ranges for which they are willing to pay top prices. Currently, the most common weights that receive top prices are 240-260lb. A few packers pay top prices for lighter weights, and at least one packer buys hogs with no discount up to 280lb, if they are heavily muscled hogs. However, in some markets, price discounts for hogs above 260lb are substantial. The cost of killing a heavier hog is approximately the same as it is for a lighter hog and packers also have higher yields from heavier carcasses when they process the product, such as hams, into boneless portions. Therefore, heavier hogs generally are worth more to packers that can market heavier cuts without selling them at a discount.

There is no single best weight at which hogs should be marketed. When deciding at what weight to market hogs, there are eight key factors to consider in determining sale date: age, space requirements, weight, performance, genetics, buyer's preference, expected price changes, and convenience.

Weight, genetics, performance and buyer's preference combine to determine the general weight at which most producers try to market their hogs. Hog producers must try to match the production performance of their hogs (feed conversion and rate of gain) to the packers desire to buy hogs in a certain weight range with certain carcass traits. Hogs get fatter and feed conversion becomes less efficient as hogs grow older and larger. There is great variation in the genetic ability of hogs to be fed to heavier weights.

[Marketing Slaughter Hogs: Where, When & How – eXtension](http://www.extension.org/pages/27212/marketing-slaughter-hogs:-where-when-how) April 19, 2010
<http://www.extension.org/pages/27212/marketing-slaughter-hogs:-where-when-how>
Marketing Slaughter Hogs: Where, How & When . Originally published as PIH-12.
Authors: Ron Plain, University of Missouri; James Mintert, Kansas State University

1. 育種方面：

台大教授池雙慶博士認為育種的目標可以由需要來決定，即提高肉豬上市體重對生產、屠宰及消費三者有利的話，育種方面是可以做到的。他認為影響豬隻生長變異的因素有30~50%是遺傳因素，50~70%為環境因素，如年度、季節、飼料餵量、飼料品質，以及性別等。年度和季節為自然因素，不像飼料的質和量可以隨價格變動而加以控制，因此飼料的質和量是探討上市體重的一項重要變動因素。性別的差異也存在著，諸如公豬生長最快，閹公豬次之，女豬最慢。屠體品質方面，以公豬背脂最薄，但閹公豬最厚。品種的變異是顯著的，但就國內大多以三品種雜交肉豬為主而言，似可不必加以區分。池博士並對檢定站合格公豬不同結束體重（90kg及110kg）的資料加以分析，顯示毛豬體重自90kg提升到110kg，增重速度幾乎不變，但飼料效率減退，背脂堆積速度增快，這些似乎是提高上市體重的不利徵兆，他雖未對最適上市體重提出明確的結論，但他建議此後探討的重心應放在90kg至110kg之間的效率改變轉折點上。

57



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TECHNICAL AND ECONOMIC ANALYSIS ON THE PERFORMANCES OF COMMERCIAL PIGS SLAUGHTERED AT 120 KG VERSUS 140 KG

[Protocol](#)

[Trials 32-33](#)

110 Kg 是否是適完檢體重？

種豬腳蹄評選

顏念慈、劉桂柱、林克育





顏念慈 博士提供

淘汰公豬之理由

	頭數	百分比
精液不良	25	29.5
疾病	19	22.6
無性慾	13	15.5
腳弱	27	32.1
總計	84	100.0

腳蹄問題是種豬淘汰的三大主因之一

顏念慈 博士提供

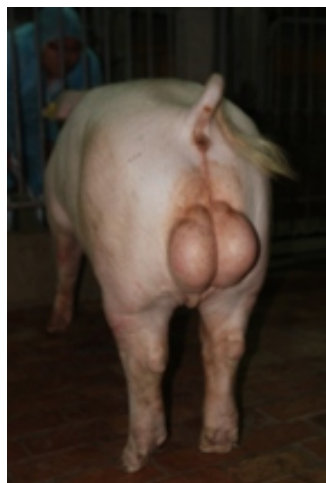
優良腳蹄



全觀



前腳



後腳



後腳側觀

顏念慈 博士提供

腳蹄結構

- 檢測結果，有不少種豬場有多頭種公豬腳蹄結構性狀評分等級入前三名，顯示他們對種豬腳蹄結構的重視。
- 民國98年所檢測之每次前三名腳蹄評分之藍瑞斯種公豬平均售價高過藍瑞斯種公豬總平均(55167元VS 39253元)，已成為種豬拍賣資訊的一部分。

顏念慈 博士提供



- 畜禽繁育中心
- 杜洛克公系影響豬肉生產品質
- 宮崎縣牧場 Yumesakura 系統豬發展良好，提供種豬和豬精液供應。（二月認證，2005年）
- 宮崎縣牧場 2010年發展優肉質杜洛克新品系。

系統造成

ランドレース



- 多産
- 子育て上手

大ヨークシャー



- 多産
- 強健

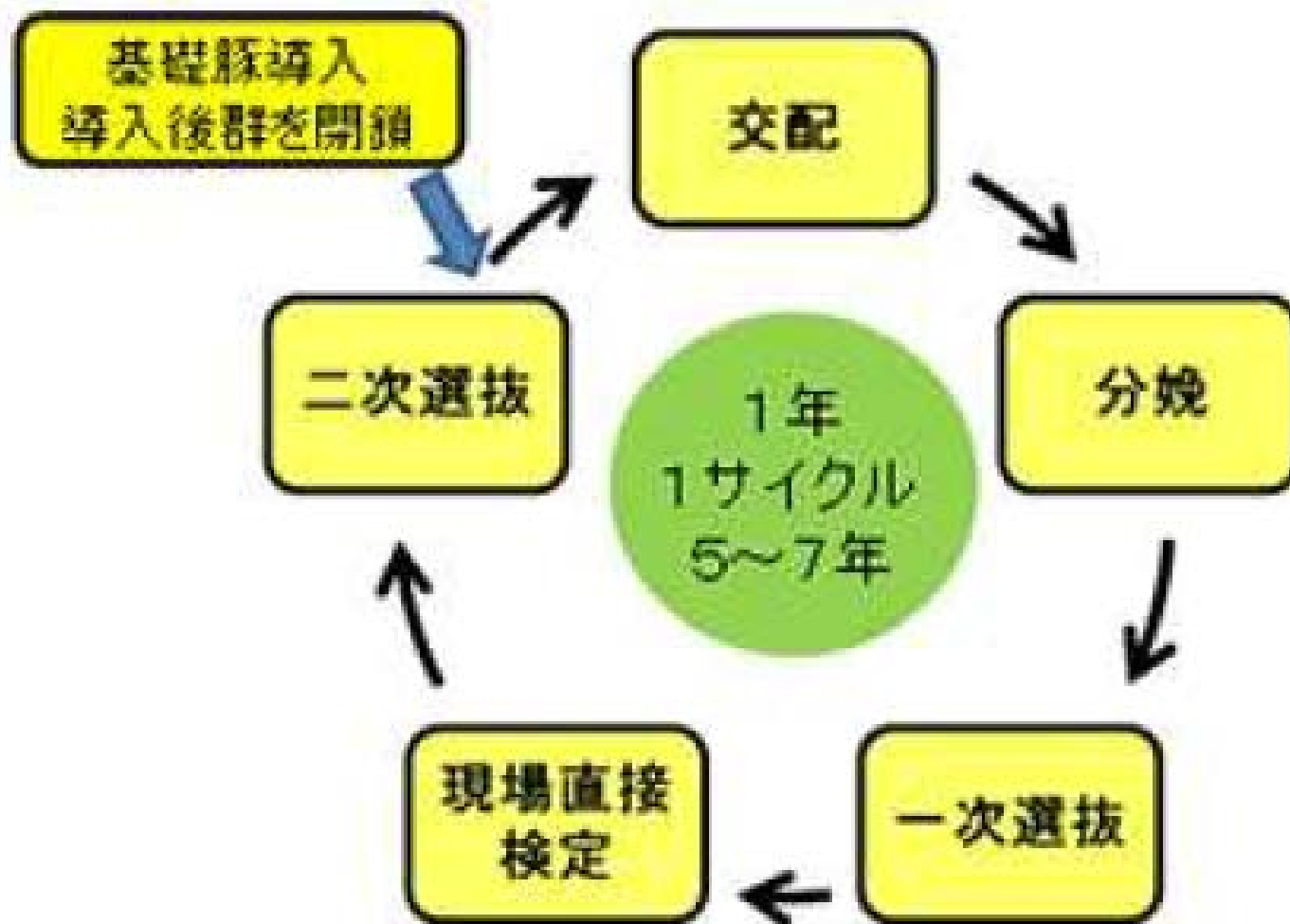
デュロック



- 優れた肉質



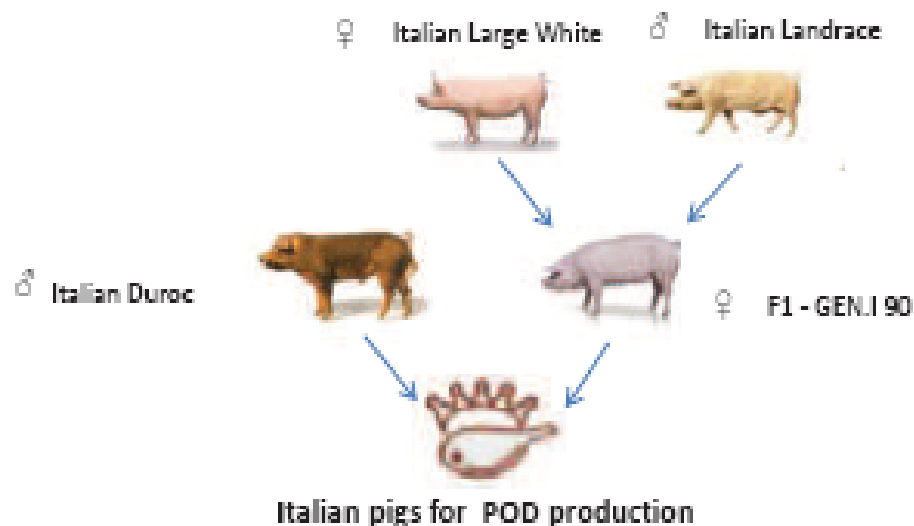
三元交配による斉一性に富む肉豚生産



Requirements of pigs for the production of «Prosciutto di Parma» DOP

- Breeds and crossbreds must ensure the achievement of heavy weights, good efficiency and an average live weight per batch of 160 kg +/- 10%.
- The minimum age at slaughter: 9 months.
- The use of boars and sows: Excluded.
- Pigs are slaughtered in an excellent health status and fully drained of blood.

HEAVY PIG BREEDING SCHEME



義大利帕瑪火腿 體重 160Kg 年產 900萬隻

Nedap Velos种猪性能测定系统 工作原理

Nedap Velos种猪性能测定系统是搜集大群饲养中的个体猪只信息及数据，从而筛选出最好的用于繁育仔猪的种猪。

测定生长速度——是指猪只日增重。根据大群饲养中个体猪只采食量，对其配料。

测定饲料转化率（FCR）——是指饲养的猪只增重一公斤所消耗的饲料量。



猪只自动进入采食槽



对猪只自动称重



猪只开始采食



自动下料



记录采食量和生长速度



通过生长速度和饲料转化率
筛选出优良种猪

<http://www.jeida.com.tw/>

傑達國際實業有限公司

電腦自動餵飼站





FIRE[®] Performance Testing System



**FIRE Performance Testing
Key to Unlocking
Osborne's All New...**

Single Source

FIRE® System Components

Each FIRE single-space feeder serves about 12 to 15 animals without measurable feed restriction. They have free access to the trough at all times. Refilling and feed weighing never interrupt eating as with other testing systems. The FIRE feed trough, made of durable Osborne RTM-Glas™ fiberglass, is suspended on a sensitive load cell that weighs the trough and feed. The feed hopper holds approximately 108 lbs. (49 kg)* of feed.

The trough mount and load cell are protected by an isolation mechanism and a sturdy enclosure that houses a highly accurate feed dispensing system. FIRE automatically stores the time and duration of each visit, along with the weight of feed consumed. This information can then be transferred to your computer and used to generate management reports or studied in relation to environmental, genetic, and nutritional variables.



Catalog #: FR-000FD4

Choose the Type of Protective Race

While the FIRE Feeder can be used as a stand-alone feeder, we offer optional protective races to eliminate the chance dominant animals might produce atypical results. These races help FIRE Feeders simulate commercial multi-opening feeders more accurately. Race width is adjustable to match the size of your animals.



The **Shoulder Race** permits moderate competition by shielding the head and shoulders.

Catalog #: FR-000RC3



The **Full-body Race** limits competition further by shielding the animal's entire body.

Catalog #: FR-000RC2



The **ACCU-ARM® Weigh Race** is a full-body race with an integrated animal scale. Daily median animal weights, weight gain, and feed-to-gain efficiencies can be measured daily or averaged over time.

Catalog #: FS-000FS4 (All galvanized)

Catalog #: FS-000FS7 (SS floor, sides and links)



群養個飼，台灣已有 RFID (134.2KHz) 引進 10-20年
以上經驗，是否適合檢定應用？

送貨無人機報你知

1.5公尺寬

0.8公尺高

螺旋槳

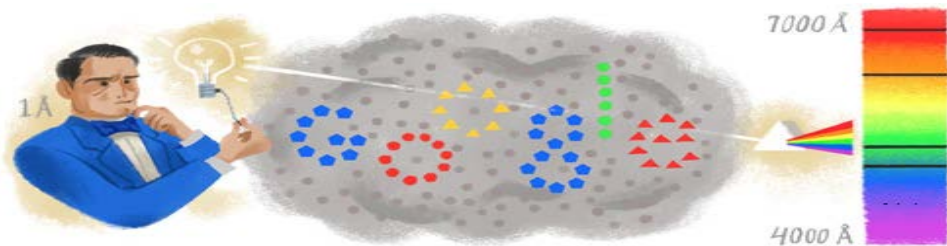
固定翼

- 機身重 8.5公斤
- 最大載重 1.5公斤

包裹



資料來源 / 英國每日郵報 圖 / 美聯社 製表 / 陳韻涵 ■ 聯合報



鴻海搶單特斯拉序曲

特斯拉超級充電站
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有一定專利與技術

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搶攻中低價電動車
定位不到50萬台幣

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昨天 → 今天 → 明天


電腦+BLUP →

網路+基因選種 →

人道+物聯網 ??







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