

# THE SAVANNAH GOAT IN NORTH AMERICA

HISTORY AND FUTURE PERSPECTIVES

BRIAN PAYNE, EXECUTIVE DIRECTOR

NORTH AMERICAN SAVANNAH ASSOCIATION

To Brian Payre  
Regards  
Quentin Campbell

**ORIGIN AND DESCRIPTION  
OF THE  
WELL-ADAPTED INDIGENOUS FAT-TAILED  
AND  
FAT-RUMPED SHEEP BREEDS  
AND  
INDIGENOUS GOAT BREEDS  
OF  
SOUTH AFRICA**

QUENTIN PETER CAMPBELL  
14 DERSLEY STREET  
BAYSWATER  
BLOEMFONTEIN 9301



Quentin's Quest and  
Lubbe's Legacy:  
The Savannah Goat  
in  
North America



Goats have universal  
appeal



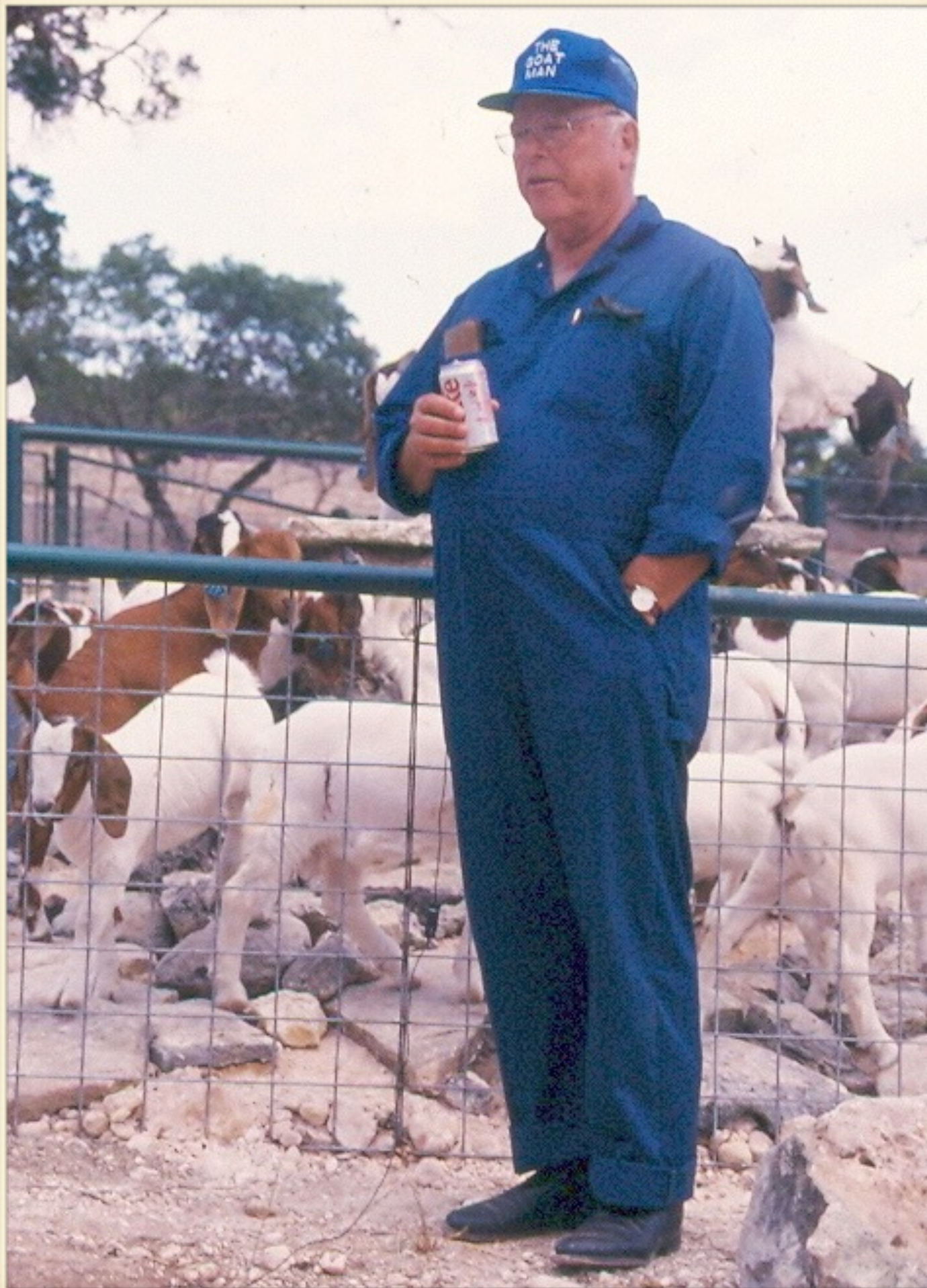
LET'S START AT THE BEGINNING







# The Goat Man Revealed 1995, 2003







2014 AND STILL  
GIVIN'ER





# SHARING FRIENDS AND INFORMATION

BUILDING A  
DEVELOPMENT TEAM  
FOR THE MEAT GOAT  
INDUSTRY

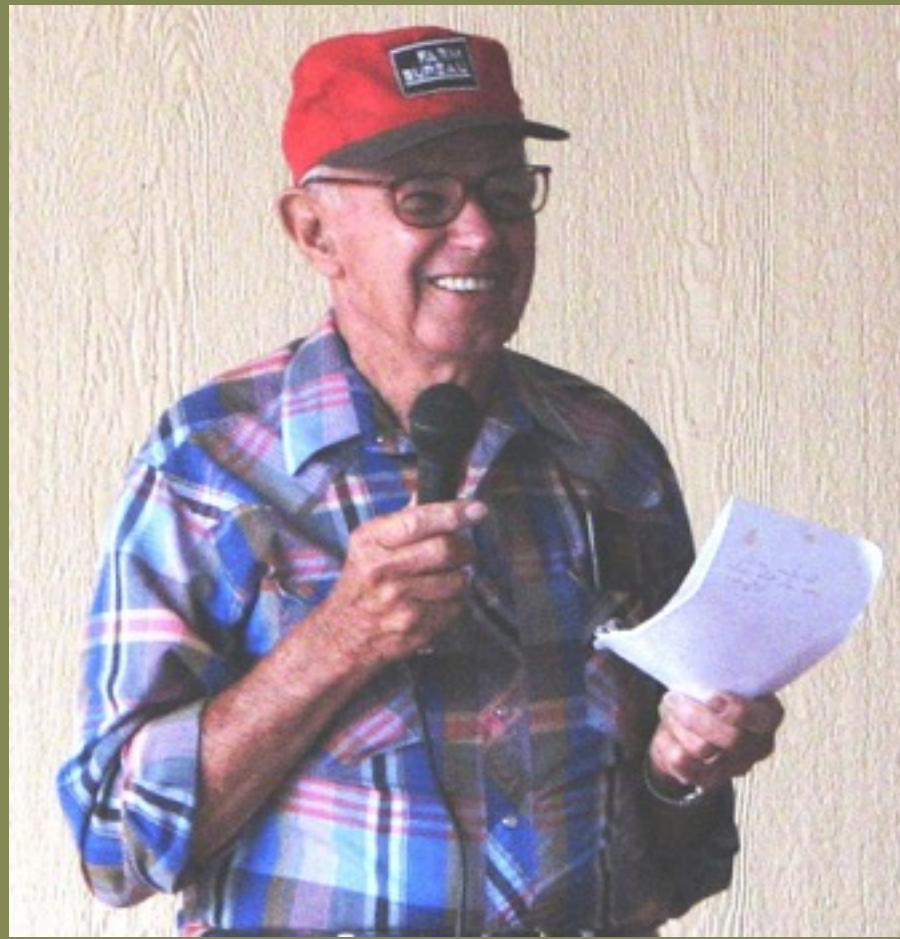






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Elgin Pape, A true pioneer







**NASA WAS CREATED IN RESPONSE TO THIS:  
WHITE GOATS OF DUBIOUS ORIGIN WERE  
BEING REGISTERED AS AUTHENTIC SAVANNAHS**





**AUTHENTIC SAVANNAH GOATS COME  
FROM SOUTH AFRICA**





**NASA IS COMMITTED TO PRESERVING  
THIS HERITAGE**



# **SAVANNAH CHARACTERISTICS**

**(Q. CAMPBELL)**

**THE “ULTIMATE EASY CARE  
GOATS”**

- ✦ YEAR ROUND BREEDING**
- ✦ LOW NUTRITIONAL  
REQUIREMENTS**
- ✦ EXCELLENT MOTHERING  
ABILITY WITH HIGH MILK  
YIELDS**



## THE PROBLEM:

NASA WAS CREATED YEARS AFTER  
THE ORIGINAL SCHULZ (CODI-PCI)  
FOUNDATION IMPORTS HAD BEEN  
MULTIPLIED AND TRANSFERRED.

SCHULZ IMPORTS - 1994

✦ SCHULZ KIFARU DISPERSAL SALE -  
1998

✦ NASA ESTABLISHED - 2003



# THE PROBLEM COMPOUNDED:

- 2000 - Keri-Rose (Brian and Katie Payne) imports South African embryo progeny into the U.S..
- 2002 - Dennise Peterson imports implanted DNAfrica embryos into the U.S..
- New genetics with verifiable documentation are competing in the market with "white goats" with poor documentation.
- **Diverse interests** could not agree on a common registry.
- NASA was created to 'develop and promote the Savannah goat...by establishing a Breed Registry and **by encouraging seed stock performance recording.**'



# **DIVERSE INTERESTS: PEDIGREE INTERNATIONAL**

- ✦ECONOMICS - \$25.00 PLUS  
DNA**
- ✦COMPROMISED BY  
ILLEGITIMATE “WHITE  
GOATS”**
- ✦CONTROL OF DATABASE**



# **DIVERSE INTERESTS:**

## **WWSGA**

- ✦ NO DEMOCRATIC FORUM TO DISCUSS BREED STANDARD OR RULES OF REGISTRATION**
- ✦ PROPOSED STANDARD HAD NO RELATIONSHIP TO SOUTH AFRICAN-TOO MUCH EMPHASIS ON PHENOTYPE RATHER THAN PERFORMANCE**
- ✦ A BREEDER AS THE REGISTRAR RATHER THAN AN OBJECTIVE THIRD PARTY**





# NASA FOUNDING DIRECTORS

BRIAN PAYNE, FRANK PINKERTON, ELGIN PAPE



**NASA'S FIRST PRIORITY:  
A NEW HERD BOOK MONITORED BY  
AN INDEPENDENT, PROFESSIONAL  
REGISTRY SERVICE.**

**“THE INTEGRITY, AND THEREFORE  
LEGITIMACY, OF A BREED IS DEPENDENT  
UPON PROPERLY CONDUCTED BREED  
REGISTRY PROCEDURES...GENETIC STABILITY  
OF ANY BREED IS EVIDENCED BY THE PROVEN  
RELATIONSHIP (UNBROKEN CHAIN) OF ALL  
ANIMALS TO A COMMON FOUNDATION  
POPULATION WITH COMMON ORIGIN AND  
HISTORY.”(CANADIAN NATIONAL LIVESTOCK  
RECORDS CORPORATION)**



# NASA'S SECOND PRIORITY:

PROVIDE THE REGISTRAR WITH  
A CLEAR DEFINITION OF FULL  
BLOOD FOUNDATION STOCK  
AND SPECIFY THE NECESSARY  
DOCUMENTATION FOR  
ACCEPTANCE INTO THE NASA  
FULL BLOOD HERD BOOK.



# **ORIGINAL NASA FULL BLOOD DEFINITION:**

**1. JURGEN SCHULZ 1995 LIVE IMPORTS  
MUST BE ACCOMPANIED BY KIFARU  
SALES DOCUMENTATION AND  
VERIFICATION OF SUBSEQUENT SALES  
OR TRANSFERS.**

**2. KERI-ROSE OR DNAFRICA EMBRYO  
PROGENY MUST BE ACCOMPANIED BY  
GOVERNMENT IMPORTATION  
DOCUMENTS AND VETERINARY  
CERTIFICATES OF ET.**





Embryo Transplant  
documents authenticity  
of South African origin



# WHY IS THIS SIGNIFICANT?

Importer	bucks	does	total
Schulz	12	20	32
Keri-Rose	17	12	29
DNAfrica	1 donor	2 donors	? live kids
Mincey	4	17	21



# **SMALL NUMBERS OF AUTHENTIC SOUTH AFRICAN SAVANNAHS:**

- ✦ **MAGNIFIES THEIR MARKET VALUE**
- ✦ **SUBSTANTIALLY INCREASES THE  
LIKELIHOOD OF FRAUDULENT  
APPLICATIONS**
- ✦ **UNDERScores THE IMPORTANCE OF A  
CREDIBLE REGISTRY**
- ✦ **INCREASES THE NEED FOR BREEDER  
EDUCATION AND COOPERATION**



ONLY THE JURGEN SCHULZ LIVE  
IMPORTATIONS, DISPERSED AT THE  
KIFARU SALE IN 1998, DO NOT HAVE  
GOVERNMENT OR VETERINARIAN  
SUPERVISED DOCUMENTATION TO  
AUTHENTICATE THEIR SOUTH AFRICAN  
ORIGINS. **NASA IS THE ONLY  
REGISTRY THAT HAS DEMANDED  
SUCH DOCUMENTATION, OR PROOF  
OF AN “UNBROKEN CHAIN” OF SALES  
AND TRANSFERS FROM KIFARU.**



# THE MORAL OF THE STORY?

IF YOU WANT TO KNOW THE  
BREED, YOU HAVE TO KNOW  
THE BREEDERS. YOU CAN'T  
“KNOW THE BREED” WITHOUT  
KNOWING IT'S HISTORY.



In order to maintain the breed development and expansion process NASA accepts registration paperwork from other registries and offers a breeding up program.



**PARENTAGE VERIFICATION VIA  
DNA WILL BE REQUIRED ON ALL  
FUTURE NASA APPLICATIONS  
FOR REGISTRATION OF ALL  
AMERICAN BUCKS AND DOES  
(FULL BLOOD AND PUREBRED).  
CANADIAN BRED SAVANNAH  
BUCKS WILL ALSO REQUIRE DNA.  
SADLY WE RECOGNIZE THAT  
INTEGRITY CANNOT BE  
LEGISLATED.**

# BREEDING UP TO PUREBRED STATUS

	NASA FB Buck	NASA FB Buck	NASA FB Buck	NASA FB Buck	NASA FB Buck
Commercial Doe	1/2	3/4	7/8	15/16	31/32
Percentage	50%	75%	87.5%	93.75%	96.875%
Purebred Status Doe				American Purebred	
Purebred Status Buck					American Purebred



# WHY BREED UP?

- ✦ ENABLES A COMMERCIAL PRODUCER TO ESTABLISH A PUREBRED HERD AT A LOWER INITIAL COST
- ✦ ADDED ADVANTAGE OF HYBRID VIGOUR
- ✦ INFUSION INTO THE SAVANNAH GENE POOL OF SELECTED TRAITS FROM OTHER BREEDS
- ✦ BOERS AND MYOTONICS CAN ADD MUSCLING
- ✦ KIKOS AND SPANISH CAN ADD HARDINESS, MATERNAL CHARACTERISTICS AND PARASITE RESISTANCE
- ✦ GREATER BREED NUMBERS REGISTERED WITH GHIP MEANS FASTER GENETIC PROGRESS



**PINKERTON PERFECTION:  
BOER /SPANISH/MYOTONIC**



# A LARGER SAVANNAH GENE POOL REDUCES THE RISK OF INBREEDING DEPRESSION: ALWAYS A RISK WITH A RARE BREED

Trait	Inbreeding Depression
Milk	5%
Growth	3%
Offspring Born	4%
Offspring Weaned	10%

J.Semler, Breeding Better Sheep and Goats, UMD webinar

# INBREEDING DEPRESSION: HOW WOULD YOU EVER KNOW WITHOUT ACCURATE PEDIGREES AND PERFORMANCE RECORDING?

Type of Mating	Inbreeding %*
full brother and sister	25%
father and daughter	25%
half brother and sister	12.5%
Grandmother and Grandson	12.5%
Common Grandparents	6.25%

\*assumes the parents are not already inbred - (Semler)



# ACCURATE PEDIGREES ALLOWS THE TRACKING OF “FLOCK” SAVANNAHS





- If you are concerned about the diversity and scale of the Savannah gene pool, can't afford the expense of Australian imports and forbidden to import new Savannah genetics from South Africa; you adopt the "flock" designation to allow the registration of red headed females.
- At the same time, you do not allow the registration of red headed males in order to reduce the gene frequency of this red headed trait in the national population.
- **If performance is your motivation, the red head becomes a minor, non-economic trait that you ignore while breeding towards "the phenotypic ideal" of a totally white goat.**





**WHY PERFORMANCE TEST?**



**“YOU CAN’T MANAGE WHAT  
YOU DON’T MEASURE”**

**“THIRTY YEARS AGO, MOST OF THE GAINS  
ACHIEVED IN PRODUCTION WERE DUE TO  
IMPROVED MANAGEMENT; WHEREAS MORE  
RECENTLY, GENETICS IS RESPONSIBLE FOR  
80% OF THE INCREASED PRODUCTIVITY”**

**(HOLSTEIN CANADA, CANADIAN HOLSTEIN  
BREED STRATEGY)**



You can't see transmitting  
ability. It must be measured  
Keri-Rose Y8



Mincey 139





# YOU ALSO CAN'T "SEE"

- Parasite Resistance
- Out of Season Breeding Ability
- Maternal Efficiency (Total Weight Weaned/Doe Weight/Year)





“ANY BREEDER WHO  
WANTS TO  
IMPLEMENT  
PERFORMANCE  
TESTING SHOULD  
KEEP PROPER EWE  
RECORDS...HE  
SHOULD USE THESE  
PARAMETERS FOR  
SELECTION  
PURPOSES...SELECT  
FOR PRODUCTIVITY  
AND NOT FANCY  
POINTS”

(QUENTIN CAMPBELL)

Reproduction is the  
trait of greatest  
economic importance

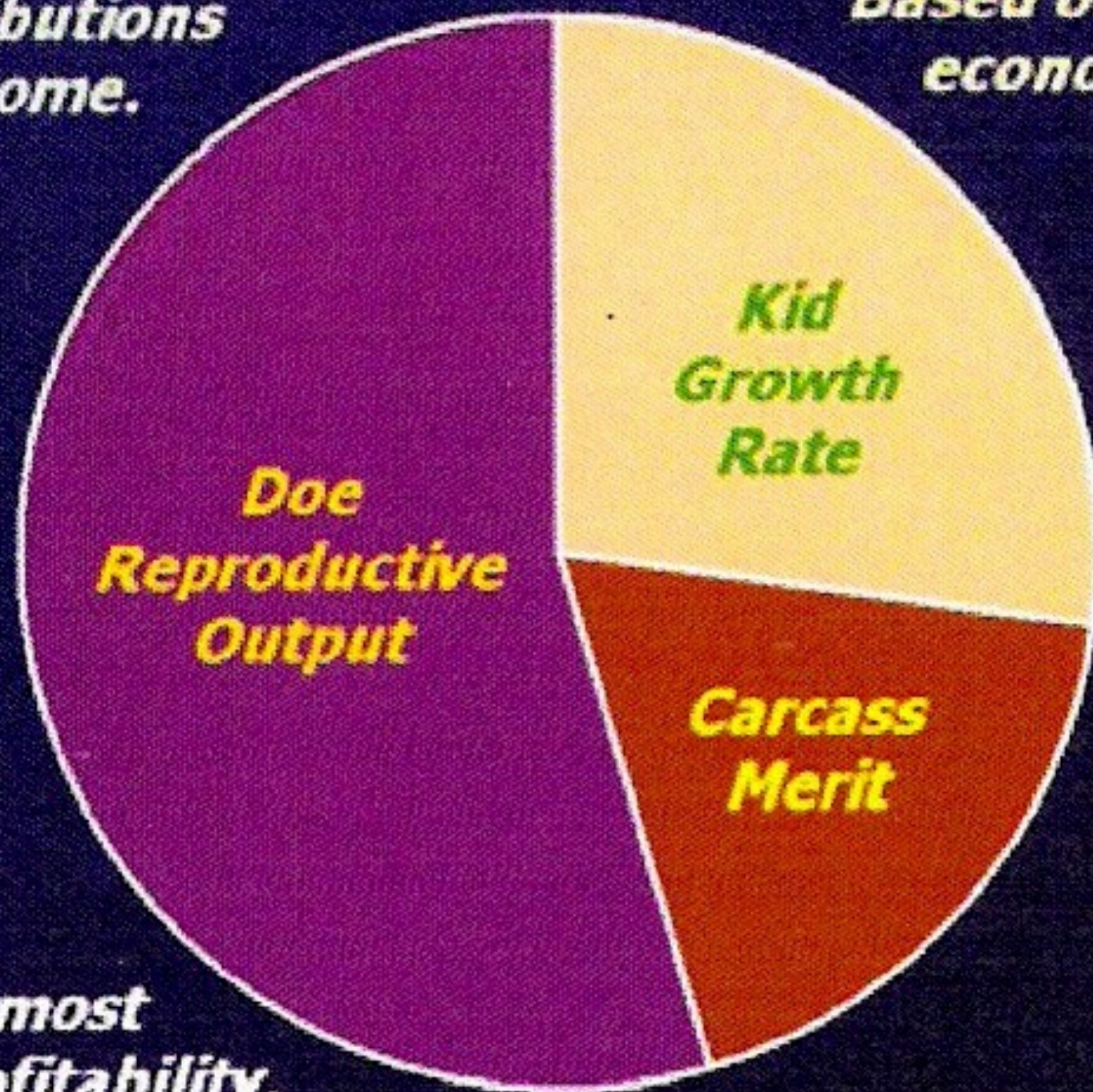




# Relative Economic Value of Traits in a Commercial Meat Goat Herd

*Estimated contributions  
to enterprise income.*

*Based on beef industry  
economic estimates.*



*Reproduction is most  
influential to profitability.*



# Keri-Rose Y8



“INDEXES THWART  
THE HUMAN  
TENDENCY TO  
MAXIMIZE AND  
THEREBY TO LOSE  
BIOLOGICAL  
BALANCE. GROWTH  
RATE IS IMPORTANT  
BUT NOT AT THE  
COST OF LOSING  
MOTHERING  
ABILITY OR OTHER  
ASPECTS OF  
BIOLOGICAL  
FITNESS.”

R.Gilbert, *Sheep*  
Canada, 2009

## How Valuable is Muscularity?



In 1995, SA Boer goat “gurus” were elevated to rock star status. NZ performance focus was forgotten. The show ring dominated development.



In 2003, NASA was created to emphasize the greater relative importance of ‘function over form’.



Visit

[www.savannahassociation.com](http://www.savannahassociation.com)

Dr. Quentin Campbell's  
video interview on adaptability



The Savannah White Goats of  
Olierivier

Selection was aimed at  
breeding a white heat and  
parasite resistant functionally  
efficient meat producing goat.



**ORIGINAL BREED STANDARDS WERE  
DEVELOPED BY ASSESSING THE PHENOTYPE  
OF THE SURVIVORS ON THE VELD**



“The rump must show a reasonable slope just like that of the Gemsbok (oryx gazella)”. African wildlife exemplified the environmental adaptability Dr. Campbell sought.





Nico Botha, SA  
Champion Show doe,  
1996  
**Functional Wedge  
Shape**

Modern American  
Show doe, 2014

## **Tubular Profile**

Will she be able to walk,  
eat roughage, carry kids?





**SELECT REPLACEMENT FEMALES UNDER  
THE CONDITIONS WHICH THEY WILL BE  
EXPECTED TO REPRODUCE**







**SUCCESSFUL BEEF PRODUCERS DO NOT  
SELECT THEIR REPLACEMENT HEIFERS  
AT THE FEEDLOT (MACHEN)**



# NASA'S VISION FOR BUILDING “THE PERFORMANCE BREED”

- Performance Test
- Maintain a balance between reproductive ability, growth and “ideal phenotype”
- Maximize the use of pasture forages and browse in your operations
- Let the “form” of your animals be shaped by their production environment