

## **US Dairy Cattle and Germplasm and Constructive ID's**

**Good for dairy operations in  
Uzbekistan**

Gerardo Quaassdorff, DVM

Board of Director

Livestock Exporters Association USA

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


A member of USLGE

[www.uslge.org](http://www.uslge.org)





# How and why?

- Genomic testing has changed the availability and the opportunities to select animals of higher quality genetics and select animals of lower quality genetics
  - There are about 6million genotypes in the national cooperator database
  - There is a population of dairy cattle available to be exported as live cattle or through the creation of embryos or semen
- 



## **Status Of Breeding Cattle Female Population In The USA**

More than 80 % of the U.S. cattle (cows and heifers) are not enrolled with breed associations


Most female cattle data have between 1 to 3 generations available in “on-farm” record systems ( 4,304,250 head of dairy heifers and 9,448,000 head of milking cows) ( year 2021)

Genomic testing has changed the availability and opportunities to select and breed heifers eligible for export

New Program called Constructive ID through genomic testing allows unknown female cattle to have completed pedigrees ( parentage verification)



# Dairy breeding cattle population in the USA

- The US has the largest and diversified population of female cattle of high genetic quality ( cows and heifers) in the world
  - Dairy operations are very organized and advanced planning strategies are used to make the maximum return from their business
- 



**Use Breeding Stock from  
Countries with Developed  
Livestock Industries**

**To**

**Develop Breeding and Management Systems**

**BY**

**Making use of their High Quality Genetics**

**Importing Females**

**Importing Semen and Embryos**



## **Options For Importing Heifers**

### **Open or Non- Pregnant Heifers**

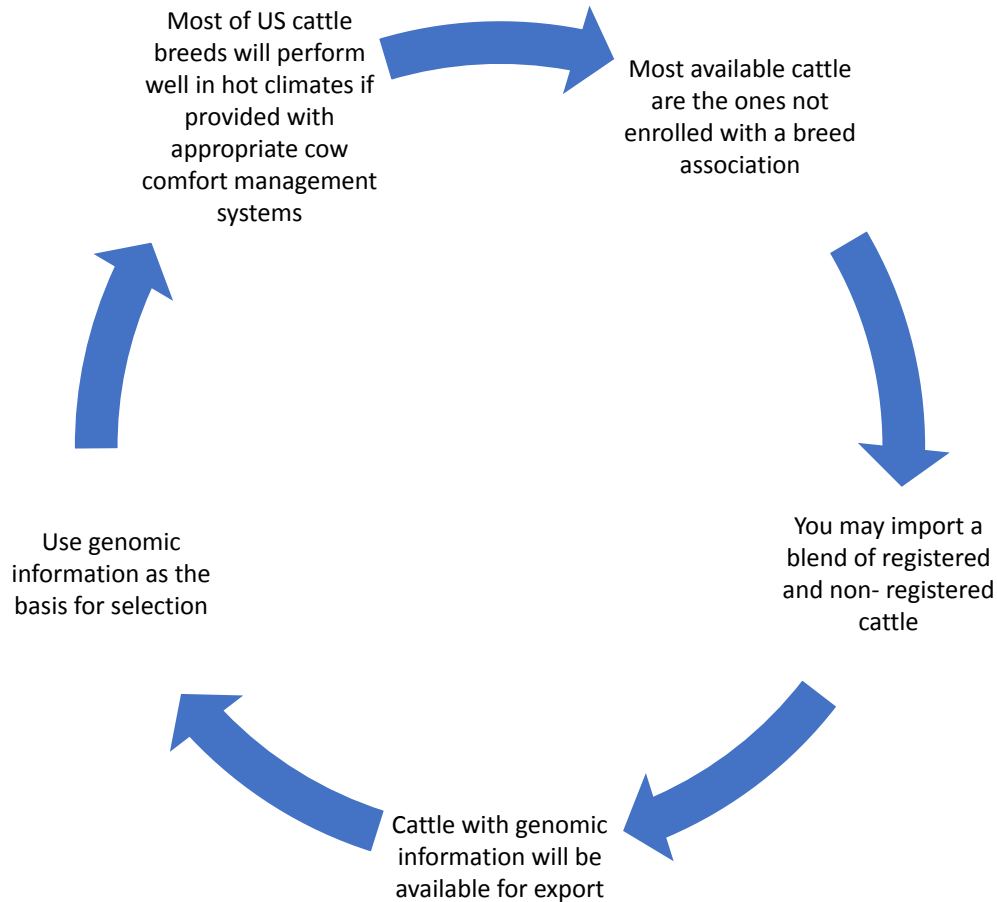
- Age (8 – 12 months old)
- Genomic tested (per agreement with buyer)
- Most efficient and cost-effective way to import high quality genetics
- Option: to breed them with heat tolerant bulls

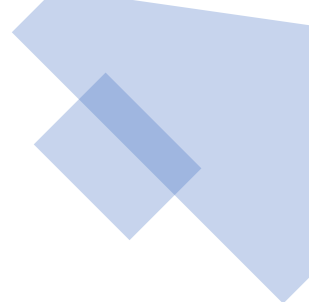

### **Pregnant Heifers**

- Genomic tested (per agreement with buyer)
- Requires a contract agreement with a minimum 4 months in advance to purchase them open (around 8 -11 months) and breed them per buyer's genetic specifications around 12 -13 months of age




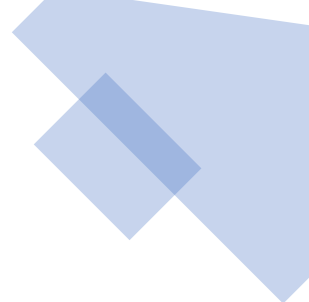

## Summary selection of breeding heifers






# Why US Embryos through IVF program?

- You can set dairy long -term goals to grow your herd
  - You may target a premium market
  - You can make specific genetic improvement goals  
For example, crossbreeding of high genetic quality animals
- 



# What you need to know about embryo export , for example, to Uzbekistan

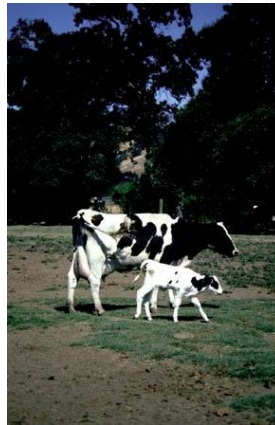
- There are specific requirements from Uzbekistan
  - Only use approved US embryo facilities
  - Only use approved semen from approved US bull stud facilities
  - Testing requirements and regulations for export are set by USDA/APHIS in agreement with its Uzbek counterpart
  - Testing requirements for embryos can change anytime
  - Dairy Producers interested in exporting embryos need to know the country requirements ahead of creating the embryos because requirements for IVF embryos versus in vivo (ET) embryos might be different
- 

# BREEDING CENTERS MODEL

**USA**

Embryos  
/Semen

Technology Transfer



**PRODUCERS FARMS**

Growing, Preparation, Breeding

**Producers**

**DAIRY**

PROGENY TEST  
Identification of  
Top Genetics  
For the Future

**Producers**

**BEEF**

Ministry of Agriculture  
Program Support

**Imported**  
Young Females



**MODEL FOR FAST DEVELOPMENT OF MEAT AND MILK**




## **Marketing Promotional Financial Resources available**

- **USDA/FAS/ MAP ( Market Access Program)**
- **USDA / FAS /Quality Samples Program ( QSP)**
- **USDA/FAS /Cochran Fellowship Program**
- **USDA/FAS/Agricultural Trade Promotion Program (ATP)**
- **USDA/FAS /Emerging Market Program ( EMP)**
- **USDA/FAS/Foreign Market Development Program (FMD)**
- **Export Financing Programs such as :**
  - **Export Credit Guarantee Program ( GSM -102)**
  - **Facility Guarantee Program**




# Summary


- USA has a high quality genetic dairy cattle female population to select and provide high quality , live cattle, semen and embryos
  - Genomic testing has allowed global buyers to select higher genetic quality embryos ( IVF) from high quality genetic donor animals at competitive prices
  - IVF embryos can help to set long term dairy goals by reducing the time to meet market demands
  - Imported US sexed semen or part of an exported US dairy bred heifer are currently the best alternatives to an IVF program if you wish to increase the number of heifer replacements at a lower cost
  - USDA supported programs a open opportunities for importing these commodities with added capacity building
- 



# Thank you

- Livestock Exporters Association USA (LEA)
- [www.livestockexportusa.com](http://www.livestockexportusa.com)

- Cash Flow come from Milk
  - Milk come from fresh cows
  - Fresh Cows come from Pregnancies
  - And Pregnancies are a direct treatment
  - of a sound breeding program”
- 



How to select  
these animals?

use of indexes:  
NM\$ genomic  
values and/or  
GTPI values




Highest genetic value heifers - maybe it should go  
for IVF programs


Second highest genetic value heifers – maybe to be  
bred to AI sexed semen female

Next level of genetic value heifers – maybe to be  
used as recipient for IVF program

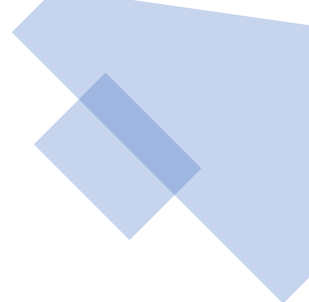

Second –lowest genetic value heifers – maybe to be  
inseminated with higher genetic quality beef semen

Lowest genetic value heifers – to be culled young as  
calves or divert them to beef operations or use as  
recipient





# What is an alternative tool to an IVF program?

- The use of Sexed AI semen from elite dairy bulls purchased in large quantities in large operations producing large number of females at a lower cost
- 
- 



# **Factors Influencing Eligibility Of The Cattle For Export**

## **Animal Health Requirements :**

List of diseases that the exporting country needs to address to make cattle eligible for export to your country

## **Genetic Requirements or Genetic Specifications :**

Production traits with economic value for the buyer that cattle need to meet to become eligible for export