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MaxiMus product info



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1. Short description

RA-SE Genetics' sires are selected by daily gain, yield and lean meat%, allowing our customers to choose the best boar to produce the desired slaughter pigs.

MaxiMus combines meatiness and meat quality, which results in high slaughter yield of his offspring.

- High lean growth potential
- Potential FCR up to 2
- Highest killing out % among boars with high growth potential
- Exceptional lean meat percentage
- Excellent meat quality through full stress negativity (HH)
- Best choice for production of intact boars
- GENTEC IFG-2 technology



2. BETTERgen® muscle+ - GENTEC IGF-2

All RA-SE Genetics' terminal sires that are carriers of the BETTERgen® muscle+ gene have a name ending in "Mus", which is derived from the word "muscle". These terminal sires are guaranteed homozygous for the BETTERgen® muscle+ gene that is responsible for more lean meat and less back fat, along with uniformity. Enhanced uniformity means less waste, which eventually will lead to further savings and earnings throughout the whole production chain.

GENTEC, the research company of RA-SE Genetics, developed a DNA test enabling screening for the presence of the gene. This invention was patented by GENTEC on a worldwide basis and license agreements were signed with various parties for the application of this technology.

IGF2 effect in finished pigs for slaughter:

BETTERgen® muscle+ has a positive effect on the percentage of ham, loin eye and lean meat. Those effects are as significant as those reported for the Halothane gene (HAL 1843), but without the negative effect on the susceptibility to stress as measured by the Halothane test or the negative impact on meat quality as it decreases the pH of the meat correspondingly increasing its moisture level.

IGF2 effect in young piglets:

Moreover, the effect is already present in young piglets and in early developing muscles such as the masseter muscle. A better developed masseter muscle can improve colostrums intake that positively influences neonatal piglet survival. This effect provides a possible explanation for the increased vitality of piglets sired by boars homozygous for BETTERgen® muscle+ gene (GENTEC IGF2).

Paternal Imprinting:

BETTERgen® muscle+ (IGF2) is characterised by a specific hereditary pattern. Only the gene of the father (sire) determines whether the offspring are less or more meaty (paternal imprinting). BETTERgen® muscle+ boars are homozygous for the positive variant of the allele. Offspring of these terminal sires show less variation in meat percentage and are more uniform.



3. Test results of MaxiMus boars

BELGIAN QUARANTINE FARM WITH 42 TOP QUALITY MAXIMUS BOARS - farm DVA, FEBRUARY 2015

TOP BOARS LM%

| Tag nr. | SEX | DOB | Sire | Dam | Test weight kg | Daily gain life g/day | Daily gain test g/day | BF 1 mm | BF 2 mm | LED mm | LM % | IGF2 | stress |
|------------|-----|------------|-------|--------|----------------|-----------------------|-----------------------|------------|------------|-----------|-------------|------|--------|
| 9306 | M | 20/07/2014 | 23F11 | 237075 | 115 | 710 | 946 | 5 | 5 | 74 | 68,1 | ++ | NN |
| 4159 | M | 6/07/2014 | 23M69 | 232741 | 135 | 767 | 1009 | 6 | 5 | 73 | 67,4 | ++ | NN |
| 9274 | M | 20/07/2014 | 23M74 | 237109 | 125 | 772 | 1054 | 5 | 5 | 68 | 67,3 | ++ | NN |
| 4249 | M | 6/07/2014 | 23F12 | 232742 | 126 | 716 | 925 | 5 | 5 | 70 | 66,6 | ++ | NN |
| 4202 | M | 6/07/2014 | 23F12 | 232743 | 121 | 688 | 877 | 5 | 5 | 72 | 66,4 | ++ | NN |
| 4193 | M | 6/07/2014 | 23M75 | 232638 | 128 | 727 | 943 | 5 | 5 | 69 | 66 | ++ | NN |
| 9327 | M | 19/07/2014 | 23M74 | 237101 | 123 | 755 | 1022 | 6 | 5 | 69 | 66 | ++ | NN |
| 9348 | M | 20/07/2014 | 23M74 | 237102 | 119 | 737 | 993 | 5 | 6 | 69 | 66 | ++ | NN |
| 4309 | M | 5/07/2014 | 23M69 | 232712 | 124 | 701 | 897 | 5 | 5 | 64 | 65,9 | ++ | NN |
| 4295 | M | 4/07/2014 | 23F12 | 232676 | 139 | 781 | 1028 | 6 | 6 | 68 | 65,9 | ++ | NN |
| 4201 | M | 6/07/2014 | 23F12 | 232743 | 132 | 750 | 981 | 6 | 6 | 75 | 65,8 | ++ | NN |
| 9353 | M | 19/07/2014 | 23M74 | 237111 | 123 | 755 | 1022 | 5 | 6 | 71 | 65,8 | ++ | NN |
| 9330 | M | 19/07/2014 | 23M74 | 237101 | 121 | 742 | 1000 | 5 | 5 | 61 | 65,5 | ++ | NN |
| 9299 | M | 20/07/2014 | 23M69 | 237071 | 122 | 753 | 1022 | 5 | 5 | 61 | 65,5 | ++ | NN |
| 4247 | M | 6/07/2014 | 23F12 | 232742 | 129 | 733 | 953 | 5 | 5 | 63 | 65,2 | ++ | NN |
| 9260 | M | 19/07/2014 | 23M74 | 237069 | 118 | 724 | 968 | 6 | 5 | 66 | 65,2 | ++ | NN |
| 4211 | M | 4/07/2014 | 23F12 | 232747 | 147 | 826 | 1102 | 6 | 5 | 78 | 65,2 | ++ | NN |
| 4246 | M | 6/07/2014 | 23F12 | 232742 | 125 | 710 | 915 | 6 | 5 | 74 | 65,2 | ++ | NN |
| 4173 | M | 6/07/2014 | 23M75 | 232745 | 132 | 750 | 981 | 6 | 5 | 71 | 64,9 | ++ | NN |
| 4290 | M | 5/07/2014 | 23M75 | 232645 | 128 | 723 | 935 | 7 | 6 | 71 | 64,9 | ++ | NN |
| 9308 | M | 20/07/2014 | 23F11 | 237075 | 125 | 772 | 1054 | 6 | 5 | 63 | 64,8 | ++ | NN |
| AVG | | | | | 127 | 742 | 982 | 5,5 | 5,2 | 69 | 65,9 | | |

TOP BOARS Daily Gain

| Tag nr. | SEX | DOB | Sire | Dam | Test weight kg | Daily gain life g/day | Daily gain test g/day | BF 1 mm | BF 2 mm | LED mm | LM % | IGF2 | stress |
|------------|-----|------------|-------|--------|----------------|-----------------------|-----------------------|------------|------------|-----------|-------------|------|--------|
| 4211 | M | 4/07/2014 | 23F12 | 232747 | 147 | 826 | 1102 | 6 | 5 | 78 | 65,2 | ++ | NN |
| 9334 | M | 20/07/2014 | 23M74 | 237032 | 132 | 815 | 1130 | 6 | 6 | 69 | 64,1 | ++ | NN |
| 4305 | M | 5/07/2014 | 23M69 | 232712 | 143 | 808 | 1075 | 7 | 6 | 69 | 64,1 | ++ | NN |
| 4171 | M | 6/07/2014 | 23M75 | 232745 | 141 | 801 | 1066 | 6 | 5 | 69 | 64,1 | ++ | NN |
| 4209 | M | 4/07/2014 | 23F12 | 232747 | 142 | 798 | 1056 | 6 | 6 | 63 | 63,8 | ++ | NN |
| 9354 | M | 19/07/2014 | 23M74 | 237111 | 129 | 791 | 1086 | 6 | 6 | 73 | 64,6 | ++ | NN |
| 4182 | M | 4/07/2014 | 23M69 | 232714 | 140 | 787 | 1037 | 6 | 6 | 66 | 64,2 | ++ | NN |
| 4295 | M | 4/07/2014 | 23F12 | 232676 | 139 | 781 | 1028 | 6 | 6 | 68 | 65,9 | ++ | NN |
| 9351 | M | 19/07/2014 | 23M74 | 237111 | 127 | 779 | 1065 | 7 | 6 | 66 | 63,7 | ++ | NN |
| 9308 | M | 20/07/2014 | 23F11 | 237075 | 125 | 772 | 1054 | 6 | 5 | 63 | 64,8 | ++ | NN |
| 9274 | M | 20/07/2014 | 23M74 | 237109 | 125 | 772 | 1054 | 5 | 5 | 68 | 67,3 | ++ | NN |
| 4241 | M | 4/07/2014 | 23M69 | 232708 | 137 | 770 | 1009 | 6 | 5 | 69 | 64,1 | ++ | NN |
| 4159 | M | 6/07/2014 | 23M69 | 232741 | 135 | 767 | 1009 | 6 | 5 | 73 | 67,4 | ++ | NN |
| 4184 | M | 4/07/2014 | 23M69 | 232714 | 136 | 764 | 1000 | 6 | 6 | 66 | 63,7 | ++ | NN |
| 9284 | M | 17/07/2014 | 23M69 | 237076 | 126 | 764 | 1032 | 6 | 5 | 63 | 64,8 | ++ | NN |
| 4240 | M | 4/07/2014 | 23M69 | 232708 | 135 | 758 | 991 | 7 | 6 | 66 | 63,3 | ++ | NN |
| 9353 | M | 19/07/2014 | 23M74 | 237111 | 123 | 755 | 1022 | 5 | 6 | 71 | 65,8 | ++ | NN |
| 9327 | M | 19/07/2014 | 23M74 | 237101 | 123 | 755 | 1022 | 6 | 5 | 69 | 66 | ++ | NN |
| 9299 | M | 20/07/2014 | 23M69 | 237071 | 122 | 753 | 1022 | 5 | 5 | 61 | 65,5 | ++ | NN |
| 9297 | M | 20/07/2014 | 23M69 | 237071 | 122 | 753 | 1022 | 7 | 5 | 72 | 64,5 | ++ | NN |
| 4280 | M | 4/07/2014 | 23F12 | 232675 | 134 | 753 | 981 | 7 | 6 | 62 | 62,8 | ++ | NN |
| AVG | | | | | 133 | 777 | 1041 | 6,1 | 5,5 | 67 | 64,7 | | |

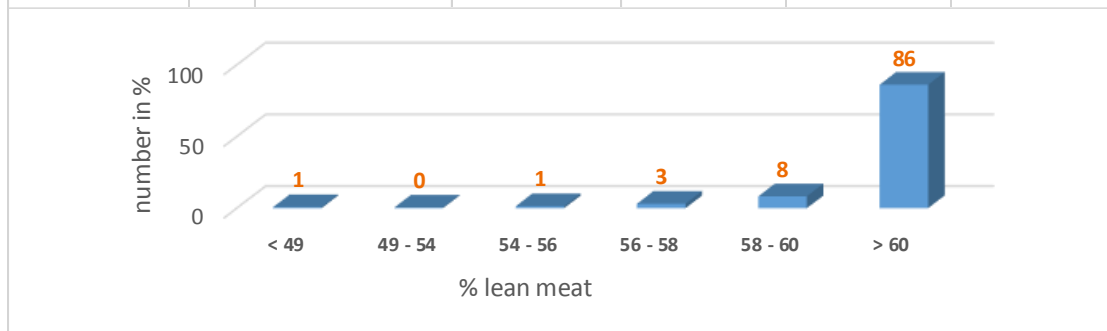


4. Some production and slaughter results of MaxiMus offspring

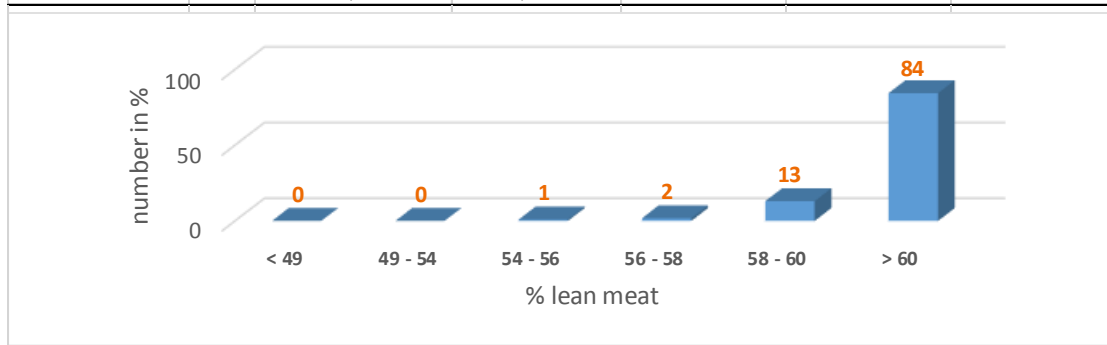
4.1 Slaughter results from Belgian farms - November - December 2014 and January 2015

Farm L., females and castrates mixed

| slaughter house DB | | | | | | |
|------------------------|------------|--------------------------|---------------|--------------|--------------|-------------|
| DATE | # | WARM CARCASS WEIGHT (kg) | LEAN MEAT % | SEUROP | | |
| | | | | S | E | U |
| 4/11/2014 | 114 | 83,28 | 64,30% | 96% | 4% | 0% |
| 22/12/2014 | 125 | 94,4 | 61,40% | 85% | 15% | 0% |
| 6/01/2015 | 439 | 97,83 | 62,60% | 84% | 14% | 1% |
| total / average | 678 | 94,75 | 62,66% | 86,6% | 12,5% | 0,9% |



| slaughterhouse EG11 | | | | | | |
|---------------------|-----|--------------------------|-------------|--------|-----|---|
| DATE | # | WARM CARCASS WEIGHT (kg) | LEAN MEAT % | SEUROP | | |
| | | | | S | E | U |
| 2/12/2014 | 135 | 92,37 | 62,71% | 85% | 15% | - |

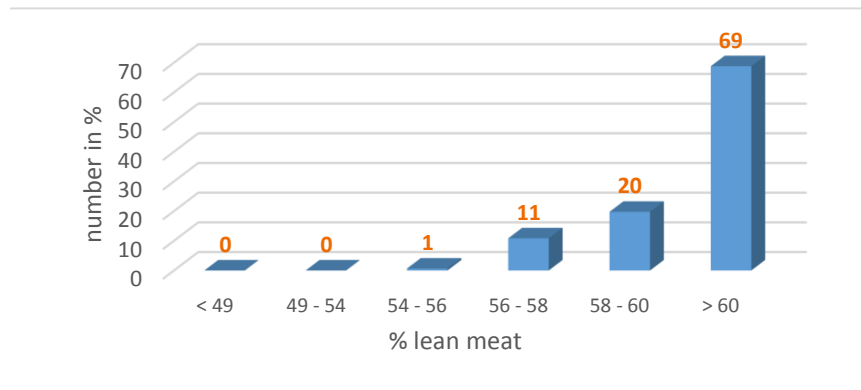




Farm D., females and castrates separated

slaughter house EG11

| DATE | # | WARM CARCASS WEIGHT (kg) | LEAN MEAT % | SEUROP | | TYPE |
|------------------------|------------|--------------------------------|---------------|--------------|--------------|-----------|
| | | | | S | E | |
| 17/11/2014 | 100 | 97,52 | 61,44% | 65% | 35% | castrates |
| 24/11/2014 | 100 | 99,65 | 62,44% | 79% | 21% | females |
| total / average | 200 | 98,59 | 61,94% | 72,0% | 28,0% | |





4.2 Production results from Belgian farm, December 2011

| | BARROWS | SOWS |
|------------------|---------------|---------------|
| # | 382 | 386 |
| MORTALITY | 0,52% | 1,04% |
| STARTING WEIGHT | 24,31 | 25,01 |
| SLAUGHTER WEIGHT | 120,33 | 120,78 |
| GROWTH (GR/DAY) | 871 | 840 |
| FCR (20-100KG) | 2,24 | 2,20 |
| LM % (WESTVLEES) | 59,68 | 61,08 |

4.3 Slaughter results from Slovenian farm, 2010

Following table contains slaughter results of CORA x MaxiMus offspring. This slaughter pigs have been produced and slaughtered in Slovenia.

| slaughter date | # pigs | av. LED (mm) | av. Fat (mm) | av. Carcass Weight (kg) | av. Lean meat % |
|----------------------|------------|--------------|--------------|-------------------------|-----------------|
| 10-5-2010 | 96 | 72,6 | 11,6 | 93,3 | 61,2 |
| 19-5-2010 | 83 | 77,7 | 12,9 | 102,7 | 60,8 |
| 21-5-2010 | 96 | 75,0 | 13,4 | 98,4 | 60,1 |
| 25-5-2010 | 94 | 74,6 | 14,2 | 96,7 | 59,5 |
| 28-5-2010 | 100 | 71,9 | 12,3 | 95,7 | 59,4 |
| 7-6-2010 | 99 | 72,0 | 11,6 | 89,8 | 61,1 |
| total # pigs: | 568 | 74,0 | 12,7 | 96,1 | 60,4 |



4.5 Production indexes Hungarian farm, 2011.

CORA x MaxiMus offspring

| | Year 2011 |
|--------------------------------|-----------|
| Lactation period | 24 days |
| Weaning weight | 7,14 kg |
| Preweaning mortality | 10,09 % |
| Nursery period | 49 days |
| Daily gain in nursery | 470 g/day |
| Weight at the end of nursery | 30,17 kg |
| FCR in nursery | 1,72 |
| Mortality in nursery | 1,98 % |
| Fattening period | 107 days |
| Daily gain in fattening unit | 839 g/day |
| Slaughter weight | 119,94 kg |
| FCR | 2,86 |
| LM% | 58,7 |
| Age at slaughtering from birth | 179 days |
| Daily gain from birth | 660 g/day |

5. Comparison with other genetics

5.1 Trial done in integration Farm, South-East-Europe – 2013 - 2014

MaxiMus offspring vs PIC 337 offspring

| | |
|--------------------------|-----------------|
| Killing out % | +0.9 % |
| Lean meat % | +2.1 % |
| Life time daily gain: | -15 g/day |
| Lean meat daily gain: | +10 g/day |
| Meat Quality difference: | not significant |



6. Picture CORA x MaxiMus offspring, UK, 2012

