



1ST EUROPEAN SORGHUM CONGRESS

WORKSHOP

CROP MANAGEMENT TECHNIQUES FOR A BETTER PERFORMANCE

SORGHUM CULTIVATION IN RUSSIA

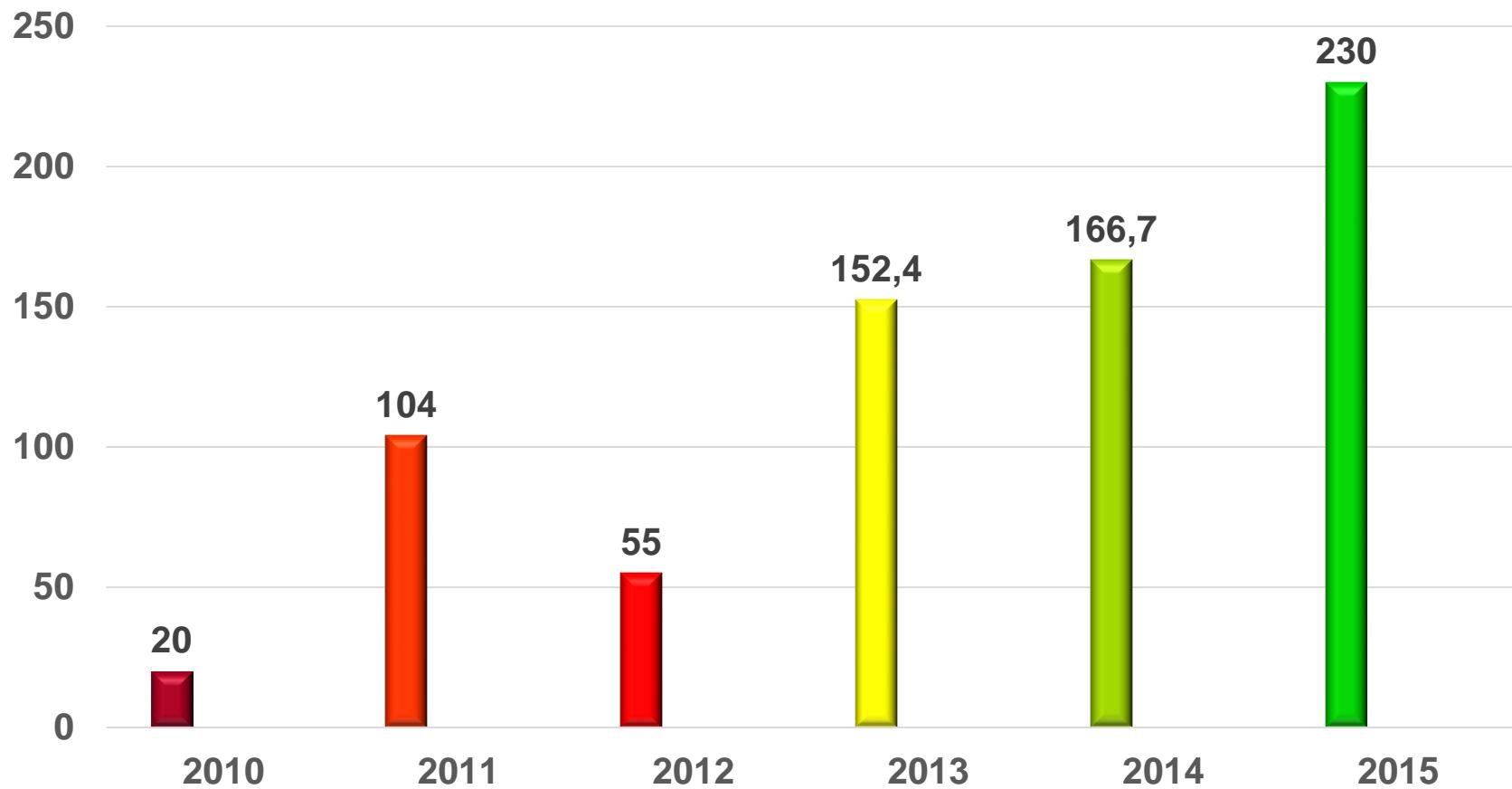
ENHANCING THE AGRONOMIC AND ENVIRONMENTAL ASSETS OF SORGHUM CROPS





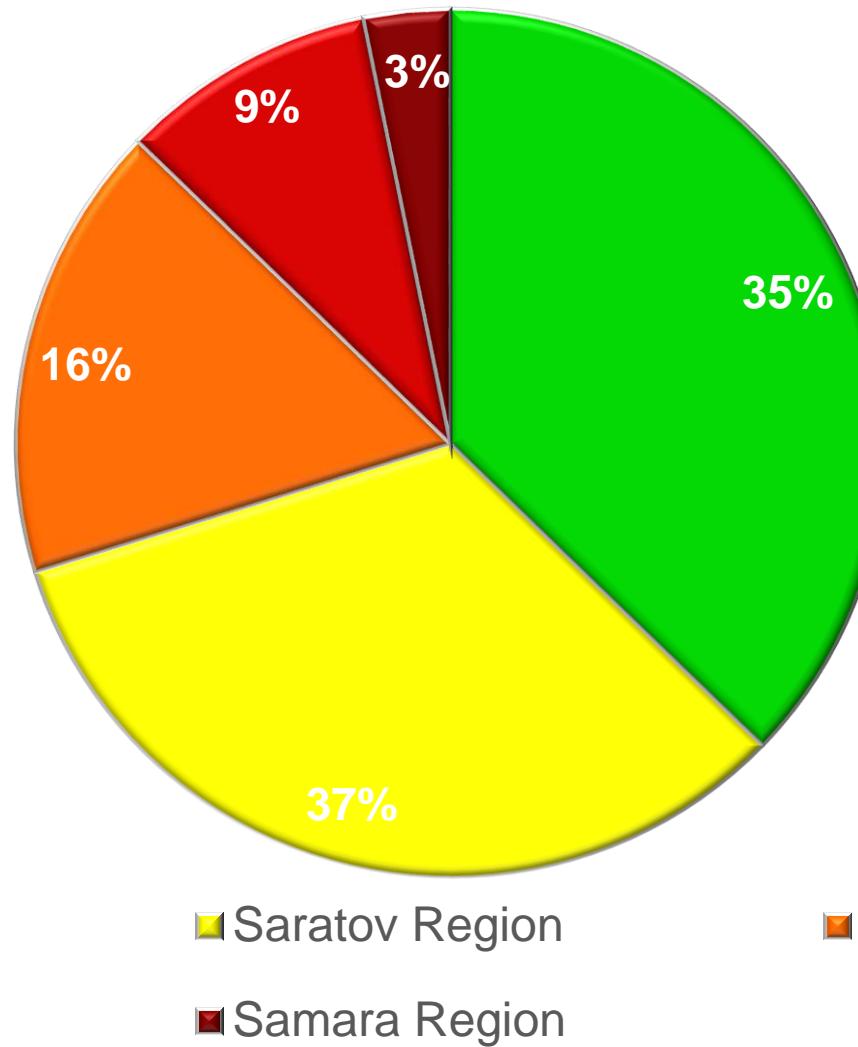
OVER THE LAST 10 YEARS, THE SOWN AREA INCREASED BY 5.5 TIMES

**The sown area of grain sorghum in Russia,
thousand hectares (2010 – 2015)**



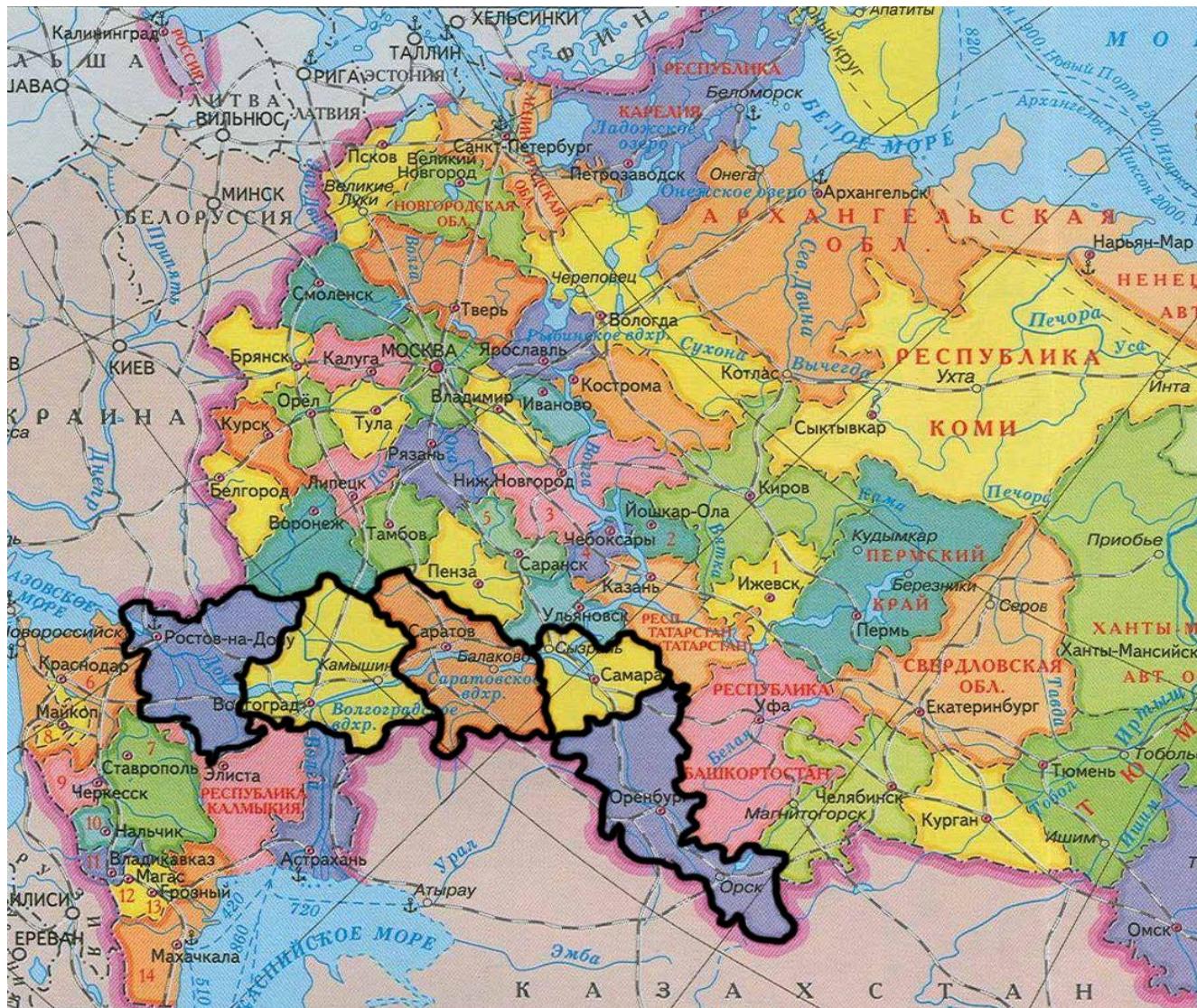


THE SOWN AREA BY REGIONS OF RUSSIA, %:



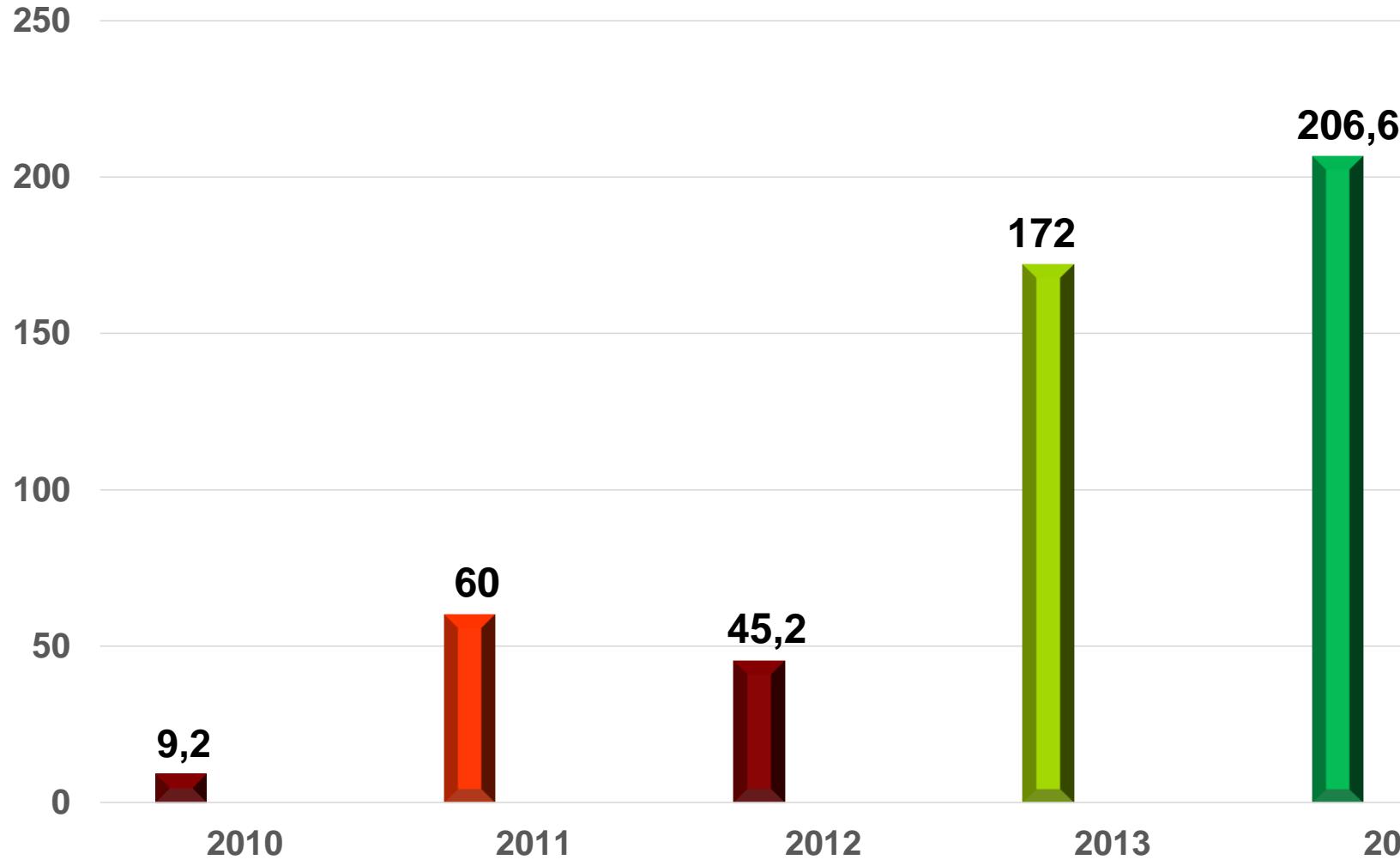


MAP OF MAIN SORGHUM REGION

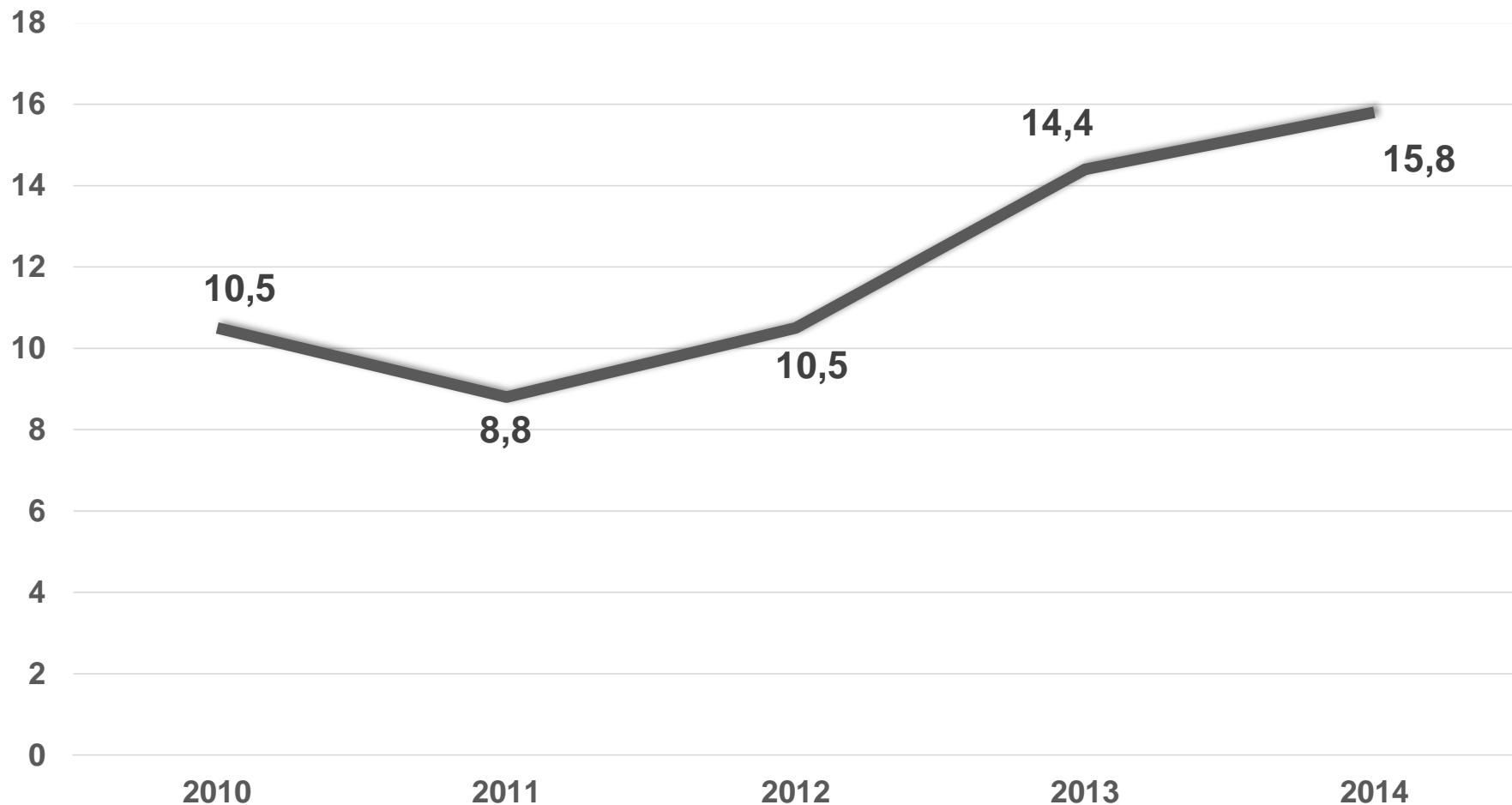




GROSS YIELD OF SORGHUM, THOUSAND TONS (2010 - 2015)



CROP CAPACITY, Q/HA





IN THE ROSTOV REGION, AN AVERAGE OF 5 YEARS,
SORGHUM YIELD EXCEEDS THE YIELD OF CROPS (Q/HA)

40

Sorghum

37

35

Corn
29,1

30

Barley
31,6

25

Oats
33,8

20

15

10

5

0



THE MAIN DIRECTIONS OF BREEDING SORGHUM IN RUSSIA

1. Early maturity

- 1.1 The neutral reaction to photoperiod
- 1.2 There are forms that do not change the length of period of "germination- blooming"

2. Cold resistance (can withstand temperatures up to -3°C)

3. Drought resistance

4. Sweet sorghum - sugar content more than 20% for the production of molasses

5. Selection of on the quality of grain:

- Protein 14-16%
- Lysine > 2%
- Tryptophan > 1.2%
- Low in tannin (polyphenol)



VARIETIES OF SORGHUM IN THE STATE REGISTER OF RUSSIA

Grain sorghum

	Amount
Varieties (lines)	55
Hybrids	39

Sweet sorghum

	Amount
Varieties (lines)	35
Hybrids	10

Sorghum-sudangrass hybrids

	Amount
Hybrids	28

Total amount – 167

Foreign of these – 28



VARIETIES OF SORGHUM IN THE STATE REGISTER OF RUSSIA

The main breeding companies-originators of sorghum varieties:

1. Russian Research Institute of sorghum and maize (Saratov)
2. Research Institute of agriculture of the south-east (Saratov)
3. All-Russian Research Institute of grain crops I.G. Kalinenko (Zernograd)
4. Stavropol Research Institute of Agriculture
5. All-Russian Research Institute of sorghum and soybean “Slavyanskoe pole” (Rostov)
6. Agroplazma (Krasnodar)



TYPICAL TECHNOLOGY OF CULTIVATION SORGHUM IN RUSSIA

- **Previous crops:** wheat, corn
- **Soil preparation:** autumn plowing and pre-sowing cultivation
- **Sowing:** when temperature of soil is 12-14 °C (usually about 10-20 of May)
- **Sowing rate:**
 - **Grain sorghum:** 250-300 thousand seeds / ha
 - **Sweet sorghum:** 200 thousand seeds / ha
- **Row spacing:** Grain sorghum, for silage - 70 cm or 45 cm; sorghum-sudangrass hybrids -15 cm.
- **Cultivations:** Inter-row cultivations
- Processing by **herbicide** (2,4-D-amide salt), **insecticide** (organophosphorous compound + pyrethroid)
- **Dessication and harvesting** with moisture at 13-14%



Projects of Agroplazma company, as a member of "Skolkovo" innovation center:

1. Sorghum - food and fodder supercrop
2. Sweet sorghum, as an alternative to sugar beet in sugar production





THANK YOU!

“AGROPLAZMA” LLC. is interested in cooperation on breeding and seed production of sorghum!