

## **Indian Institute of Oilseeds Research**



### **ABOUT**

Indian Institute of [Oilseeds Research](#) in Rajendranagar, Hyderabad, Telangana, India in year 1967 and IIOR established on the directions of a special committee formed by ICAR, with a purpose of a systematic and mission-oriented research programme to enhance the oilseed production. Initially there were 5 crops in the ambit of project i.e., [rapeseed-mustard](#), groundnut, sesame, linseed and castor. IIOR established on the AICRP review committee suggestions of 2018, there is an approach to bring AICRP- Sesame & Niger again under IIOR from 01.04.2020. IIOR assists as a centre for supervising and coordinating research on all manner of [groundnut](#), sesame, linseed and castor, etc.

<b>Research Centre Name</b>	Indian Institute of Oilseeds Research
<b>Centre Type</b>	Central
<b>Governed By</b>	Indian Council of Agricultural Research
<b>Location</b>	Rajendranagar, India
<b>Topic Cover</b>	Groundnut, Rapeseed-mustard, Sesame, Linseed and Castor
<b>Application Mode</b>	Online & Offline
<b>Head</b>	Dr. M. Sujatha
<b>How to Reach</b>	<a href="#">Telangana, India</a>
<b>Founded In</b>	1967
<b>Website Link</b>	<a href="#">Click Here</a>

### **MISSION AND VISION**

Indian Institute of Oilseeds Research vision is to support expansion of production and productivity of castor, sesame, [sunflower](#), safflower, linseed and niger by coordinating research to generate, refine, authenticate and propagate technologies through capacity building of shareholders.

Mission is to

1. Fundamental and tactical research to increase the productivity, oil content and standard of castor, sunflower, [safflower](#), sesame, Niger & linseed.
2. Information administration on oilseeds to evolve policy framework for [research](#) and development strategy.
3. Cooperation of applied research on national and regional matters to develop location precise varieties and [technologies](#).
4. Circulation of technology and [capacity building](#).

### **DIFFERENT PUBLICATIONS FROM CENTRE**

Some of the funded research work of centre. Some of the titles are listed in below table.

### 1) Institute Projects

1	Exploitation of inter and intraspecific genetic resources for development of agronomically superior inbred lines and populations in sunflower.
2	Exploitation of safflower genetic resources for development of superior breeding lines with high oil yield and adaptation to stresses.
3	Development of genetic and genomic resources and identification of genes/markers for agronomic traits in safflower.
4	Improvement of safflower for high oil content, biotic and abiotic stress resistance coupled with high seed yield through recombination and heterosis breeding.
5	Exploitation of plant genetic resources for identification of trait specific accessions with resistance/tolerance to biotic/abiotic stresses in castor.
6	Agronomic interventions for increasing productivity and resource use efficiency (nutrient and moisture) of emerging cropping systems involving oilseeds.
7	Assessing safflower based cropping systems productivity and resource use efficiency under different land configurations, crop geometry and IPNM in different Vertisol types and rainfall patterns.
8	Screening and identification of potential sources of tolerance to abiotic stresses and improved physiological efficiency in sesame.

### 2) Externally Funded Projects

1	Mass production of <i>Bacillus thuringiensis</i> (Bt) and <i>Beauveria bassiana</i> , formulation as oil based suspension concentrates singly and in combination and field evaluation.
2	Development of practicable technologies for field level exploitation of consortia of microbial agents as ameliorators of biotic and abiotic stresses in crops.
3	Competitive oilseeds production technologies for improving profitability and socio-economic conditions of small holders in rainfed oilseeds production system of Telangana.
4	Development of distinctiveness, uniformity and stability (DUS) testing guidelines for niger [ <i>Guizotia abyssinica</i> (L.f.) Cass.]
5	Delineating the effector biology of phytoplasma affecting selected crop taxa in India with special emphasis on sesame ( <i>Sesamum indicum</i> L.)
6	Exploitation of genetic and genomic resources for improvement of niger ( <i>Guizotia abyssinica</i> L.F. Cass) through breeding and biotechnological tools
7	Exploiting genetic diversity for improvement of safflower through genomics-assisted discovery of QTLs/genes associated with agronomic traits.

#### 1) Castor

Castor (*Ricinus communis*) is a principal industrial oilseed crop with 45%-55% oil and a specific fatty acid, ricinoleic acid (80%-93% of oil). Castor oil and its consequence are used in the production of several industrial items like medicine, laxatives, nail polishes, paintings etc. India considers for 69% of the world's [castor field](#) and 85% of the production with a maximum productivity of 1.8 t/ha for year 2016 - 2017. Commercial utilisation of heterosis in castor led to a rise in productivity from <0.3 t ha<sup>-1</sup> to 1.8 t ha<sup>-1</sup> throughout the last five decennary in India.

#### 2) Sunflower

Sunflower (*Helianthus annuus* L.) is one of the valuable oilseed crops in country mainly evaluated for high variety of edible oil with thalamus as protein high feed. Due to its wide adjustability, and short period of time and it is cultivated in all extensive crop growing seasons, cropping systems and soil types. The capacity of sunflower is high in northern parts of country viz., Punjab, Haryana, Bihar, etc. in spring/zaid season. The development of hybrids in sunflower has become verified due to innovation of reliable [cytoplasmic male sterility](#) (CMS) and restorer network.

### **3) Safflower**

Safflower is a necessary source of high variety of [edible oil](#). Minor uses incorporate as a human food and as poultry feed, petals as nutraceutical standard. It is cultured in about 20 countries in an area of 84 lakh hectare with a development of 2.2 lakh tonnes. Kazaksthan, Russia and India together promote about 70% of [safflower field](#) and 60% of production.

### **4) Sesame**

Sesame ([Sesamum indicum L.](#)) is an antique oilseed crop and is an origin of high variety edible oil with pharmaceutical and nutraceutical worth for sesamin and sesamolin. It is traditionally produced in all regions in country. Different varieties of seed coat like white, black and shades of brown are regularly cultivated for its use as oil and confectionery needs. It is essentially a self-pollinated crop, but to some area of cross-pollination happens due to [honeybees](#).

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