Distributors and partners of CMF GROUPE will assist you anywhere in the world

# CMF America Latina CMF Varades CMF Monteux CMF Asia Pacific

#### CMF references

#### Over 350 000 m<sup>2</sup>

of experience in innovative technical solutions to the benefits of research (INRA, CIRAD, CTIFL, CNRS, international seeds companies ...).

#### 1 977 m<sup>2</sup>

#### **MEXICO**

Biotechnology and Biosafety research greenhouses.

International Maize and Wheat Improvement research Center

One fully equipped research complex consisting of 21 separate compartments with 2 distribution corridors and 1 entrance cell. Safety level BSL1.

One closed Biosafety greenhouse (without any natural ventilation) with 5 separate compartments. Safety level BSL2.



#### 5 240 m<sup>2</sup>

#### **FRANCE**

PhénoField® ARVALIS platform

8 mobile greenhouses of 650 m<sup>2</sup> each.

8 modules moving on rails (137 m long). Automatic movement and running.

- Selection of drought-resistant plants.
- To bring under control the pluviometry in quantity and interval to study water deficit.
- High throughput phenotyping network, non-destructive measuring using imagery, hyperspectral cameras.





B.P. 10 001 - Varades 44370 LOIREAUXENCE FRANCE

T. 33 (0)2 40 98 34 00 F. 33 (0)2 40 98 34 94 mail@cmf-groupe.com

www.cmf-groupe.com



## Research Greenhouses

**Greenhouse Construction & Equipment** 

Expert in Innovative Technical Solutions



Design, Engineering, Manufacturing, Construction, Maintenance



### Our expertize from the start to the implementation of your project

#### A comprehensive process: From design to handing over the keys

CMF

Plant constraints: containment, viruses, etc

**Customers / Researchers** CMF advises you Customers / Researchers

Level of performance to be achieved, climatic conditions, airtightness

Product definition: Design of the Greenhouse and its Equipment.

**Overall Project** Management, Contracting and Building.

Maintenance & Servicing

**CMF** 

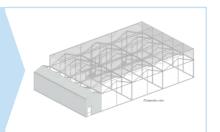
CMF



#### Build your research facility

#### **STUDY**

INNOVATION CALCULATION DESIGN ENGINEERING



#### **MANUFACTURE**

MACHINE **ASSEMBLY** CONTROL LOGISTICS



#### **BUILD**

**PLANNING** METHOD **RECEPTION** TRAINING



#### The opinion of an expert



The technical, biological greenhouse are very high, as is its level of complexity, which is also much higher than that of a commercial greenhouse.

The more numerous interactions between the various parameters contributing to the climate can even prove conflicting.

We go into every detail of the customers' (researchers, project managers, investors...) to find and sometimes invent the optimal technical solution. The knowledge of our staff with agronomic, thermal skills and openmindedness are very precious to walk "the long path of conception" with the customer.

From the very start, we consider the servicing organize their tailor-designed training.»

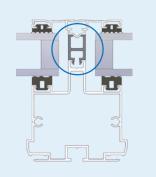
FRANCOIS LUMMERT. 30-year experience in research greenhouses.

#### INNOVATION

#### CMF's technical solution applied to research.

In research greenhouses, climate management is essential. The thermal performance and the level of air tightness of our Eco Klima range of aluminum profiles designed to avoid thermal bridges find the perfect application.

- Optimized thermal performance Eco Klima profile : Uw = 1.2 W/m .K - glass size: 1.80 x 1.00 m with low emission double glazing + argon.
- Improved air tightness: CMF is **the first** greenhouses manufacturer to obtain safety and tightness European certifications.



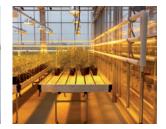
#### Quality of finish and a lot of attention to details, expressions of CMF's technical know how.



Irrigation and water treatment Cooling system









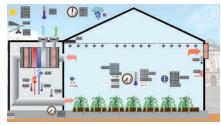
Outdoor screens











Air treatment

Fog system

Global software monitoring